

## Chapter 2

# The current situation of data on the quality of the working environment

*This chapter provides an overview of various policy initiatives that have focused on the broader notion of job quality and at how the concept of the quality of the working environment features in them. It then describes existing data sources and measurement initiatives in this field, identifying a number of gaps.*

## 2.1. Introduction

Labour-market policies have typically focused on creating jobs and reducing the most visible forms of labour under-utilisation (i.e. unemployment). While this obviously remains important, especially in the aftermath of the 2007 financial crisis and in the light of concerns about the impact on work of technology and innovation, there has also been growing recognition that focusing only on the quantity of jobs provides a very partial view of the challenges facing societies. Increasingly, access to paid employment fails to provide the means to a successful career and often leads to jobs that do not pay enough to assure adequate living standards for workers and their families. As a result, a growing number of policy initiatives pursued since the year 2000 have paid attention to the notion of *job quality* and, within this, to the conditions in which workers perform their duties.

This chapter provides an overview of how the concepts of job quality and quality of the working environment have been used in the context of broad policy strategies focused on the labour market and social exclusion. It describes the dimensions and indicators that these strategies have used, and the demand that they have raised for better statistics in this field (Section 2.2). The chapter then describes the current data situation and the various measurement initiatives that have been undertaken to meet this demand (Section 2.3) as well as the persistent gaps that remain in this field (Section 2.4).

## 2.2. Policy initiatives on job quality

### **The European Union's processes**

Concerns about job quality have featured prominently at the European level. The Lisbon and Nice European Councils in 2000 were among the first high-profile policy initiatives recognising the importance of job quality in the context of the European Strategy against poverty and social exclusion.<sup>1</sup> For this purpose, the European Commission and Council developed a set of indicators that were presented at the European Council in Laeken (Belgium) in 2001. The Laeken process defined quality of work as a multidimensional concept involving “the objective characteristics related to employment, both the wider work environment and the specific characteristics of the job; worker characteristics – the characteristics the employee brings to job; the match between worker characteristics and job requirements; and the subjective evaluation (job satisfaction) of these characteristics by the individual worker” (European Commission, 2001). The Commission operationalised the notion of quality of employment along 10 dimensions relating to the characteristics of jobs and workers as well as to the wider socio-economic and labour-market contexts. These 10 dimensions are organised in two major areas: the *characteristics of work* and the *work and wider labour-market context*. The Council recommended a number of indicators to measure each of the 10 dimensions except for social dialogue, for which no agreement was reached (Table 2.1).

The Laeken indicator set was pioneering in measuring the quality of the working environment, as some of its dimensions cover its most important aspects, e.g. intrinsic job quality, lifelong learning and career development, health and safety at work, work

Table 2.1. EU Laeken indicators of job quality, 2001

Dimensions	Indicators
<b>I. Characteristics of work</b>	
(1) Intrinsic job quality*	<ul style="list-style-type: none"> <li>● Transition between non-employment and employment by pay level</li> <li>● Transition between non-employment and employment by contract type</li> <li>● Satisfaction by type of work in present job</li> </ul>
(2) Lifelong learning and career development*	<ul style="list-style-type: none"> <li>● % of working population by age in education and training</li> <li>● % of the labour force using computers in work</li> </ul>
<b>II. Work and wider labour-market context</b>	
(3) Gender equality	<ul style="list-style-type: none"> <li>● Ratio of women's gross hourly earnings to men's for paid employees</li> <li>● Gap in employment rates between men and women</li> <li>● Gender segregation in sectors</li> </ul>
(4) Health and safety at work*	<ul style="list-style-type: none"> <li>● The evolution of the incidence rate of accidents</li> </ul>
(5) Flexibility and security	<ul style="list-style-type: none"> <li>● No. of employees working part-time or with fixed-term contract</li> </ul>
(6) Inclusion and access to the labour market	<ul style="list-style-type: none"> <li>● Transitions between employment, unemployment and inactivity</li> <li>● Transitions between non-employment, employment and training</li> <li>● Total employment rate, by age group and education</li> <li>● Total long-term unemployment rate, by gender</li> <li>● Percentage of early school leavers</li> <li>● Youth unemployment ratio</li> </ul>
(7) Work organisation and work-life balance*	<ul style="list-style-type: none"> <li>● Differences in employment rates for individuals aged 20-50 with or without children aged 0-6</li> <li>● Children cared for as a proportion of all children in the same group</li> <li>● Employees who over the last year left their job for family duties but intend to go to work</li> </ul>
(8) Social dialogue and workers' involvement*	(No indicator was agreed upon)
(9) Diversity and non-discrimination*	<ul style="list-style-type: none"> <li>● Gap in employment rate between workers aged 55-64 and those under 55</li> <li>● Gaps in employment and unemployment rates for ethnic minorities and immigrants</li> </ul>
(10) Overall economic performance and productivity	<ul style="list-style-type: none"> <li>● Growth in labour productivity (per hour worked and per person employed)</li> <li>● Total output (per hour worked and per person employed)</li> <li>● Percentage of the population having achieved at least upper secondary education (by gender, age group and employment status)</li> </ul>

Note: \* denotes dimensions and indicators that refer to the quality of the working environment.

Source: Authors' elaboration from: European Commission (2001), "Employment and Social Policies: A Framework for Investing in Quality", Brussels.

organisation and work-life balance, social dialogue and workers' involvement, and non-discrimination. However, the indicators selected for these dimensions were either only weakly related to the quality of the working environment itself or were only measured at the aggregate level. For instance, the key policy objective of the *intrinsic job quality* dimension of the Laeken indicators is to ensure that jobs are intrinsically satisfying and compatible with workers' skills and abilities and that they provide appropriate levels of income. However, upon inspection, neither skill match nor earnings levels are directly linked to the *intrinsic characteristic of the job*; moreover, none of the proposed indicators captured the non-pecuniary aspects of jobs, focusing instead on labour-market transitions (i.e. transition rates between non-employment and employment by pay levels and contract type). This dimension also includes a subjective measure of overall satisfaction with the job, alongside objective indicators of some of the key drivers of job satisfaction, which implied some double counting.

Similarly, the *lifelong learning and career development* dimension of the Laeken indicators aimed at capturing the extent to which the work environment provided workers with opportunities for development and career progression. However, the indicators proposed for this dimension captured this important aspect only to a limited extent. For

instance, one of the proposed indicators was the *share of the labour force using computers at work*, which – while capturing the skills level of the workforce – says little by itself about the conditions in which computers are used in the workplace.

Finally, some of the indicators used for measuring *work organisation and work-life balance* and *non-discrimination* were also designed to account for the distribution of job quality across population groups (e.g. differences in employment rates for people aged 20-50, with or without children below the age of 7; or employment and unemployment gaps for minorities and migrant groups). However most of these indicators are about access to the labour market rather than the quality of the working environment *per se*.

The main rationale for the selection of the Laeken indicators is in the fact that they were drawn from information that happened to be available (e.g. the European Commission Household Panel and the European Labour Force Survey) rather than on reflection about what should have been measured in order to adequately describe the quality of the working environment. In addition to the inability to measure what should have been measured, the set of indicators included both outcomes and contextual variables, covering too many items at once and lacking a coherent conceptual framework (e.g. work and worker characteristics, subjective evaluations, worker-job fit, etc.). At the same time, other critical aspects of the quality of the working environment, such as hours worked and the nature of work tasks, were simply not included among the Laeken indicators. Despite these shortcomings, this EU initiative marked an important step for raising the profile of the quality of the working environment in the policy debate and generated follow-up initiatives by social partners aimed at better measuring some of its key aspects (Box 2.1).

#### Box 2.1. Job quality indicators proposed by EU social partners

Following the adoption of the European Union's Lisbon agenda, both EU employers' and trade unions' associations have put forward their own set of job quality indicators. With respect to employers, in 2001 BusinessEurope (the former Union of Industrial and Employers' Confederation of Europe, UNICE) proposed the set of job quality indicators shown in Table 2.2. While expressing broad support for the EU's policy agenda, the employers' confederation also stressed the importance of focusing on a *limited* number of objectives, relying on comparable and up-to-date indicators drawn from available data (UNICE, 2001). The nine indicators proposed by UNICE focus on health and safety at work, productivity and skills, and overall labour-market performance. Only two of these indicators, however, relate

Table 2.2. Business Europe indicators of job quality, 2001

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|--|
| (1) Number of fatal and serious accidents*                             |
| (2) Rate of occupational diseases*                                     |
| (3) Number of days lost due to sickness                                |
| (4) Labour productivity  |
| (5) Proportion of working population by levels of education            |
| (6) Proportion of population by levels of ICT literacy                 |
| (7) Average time taken to find first or new job                        |
| (8) Employment rate and unemployment rate                              |
| (9) Proportion of working-age population creating their own enterprise |

Note: \* dimensions and indicators that refer to the quality of the working environment.

Source: Authors' elaboration from the Union of Industrial and Employers' Confederation of Europe (UNICE) 2001 report, UNICE position paper on the Commission Communication: "Employment and social policies: A framework for investing in quality".

### Box 2.1. Job quality indicators proposed by EU social partners (cont.)

to the quality of the working environment *per se*, i.e. those pertaining to physical health risks at work (number of fatal and serious accidents at work, and occupational diseases). An indicator on the number of days lost due to sickness was also recommended by UNICE as capturing other characteristics of work that may affect workers' well-being, such as psychosocial risks or job content.

A few years later, in 2008, the European Trade Union Institute (ETUI), the research arm of the European Trade Union Congress, proposed a job quality index in order to monitor progress in creating *more and better jobs* – the goal of the European Employment Strategy. This index has six sub-indices pertaining to: 1) wages; 2) non-standard forms of employment; 3) working-time and work-life balance; 4) working conditions and job security; 5) skills and career development; and 6) collective interest representation (Table 2.3). Half of these sub-indices are related, at least partly, to the working environment, which makes the ETUI's index one of the first initiatives to measure the working environment at the international level. The *working time and work-life balance* sub-index included indicators of long work hours, shift work and unsocial work hours, as well as satisfaction with work-life balance. The *working conditions and job security* sub-index considered indicators on how the work is done (i.e. intensity, autonomy and physical conditions) as well as on the perceived likelihood of job loss. The *skills and career development* sub-index included measures of career prospects and participation in education and training (although without distinguishing whether training is work-related or not or is provided by employers or by general educational institutions). These various indicators mainly relied on individual-level observations, using micro datasets such as the European Union Labour Force Surveys and European Working Conditions Surveys,<sup>2</sup> with each dimension reported at the country level with gender breakdowns. While planned to be updated annually, these indicators were compiled only for 2008 and 2012, due to data limitations (the European Working Conditions Survey being conducted only every five years). Beyond gathering data on the various indicators, the ETUI also presented composite measures for the six dimensions as well as a synthetic index obtained by summing the un-weighted and normalised scores from the sub-indices.

Table 2.3. The ETUI job quality index

Dimension	Indicators
(1) Wages	<ul style="list-style-type: none"> <li>Nominal compensation per employee in euros at purchasing power parities</li> <li>In-work poverty rate</li> </ul>
(2) Non-standard forms of employment	<ul style="list-style-type: none"> <li>Percentage of temporary employees (by involuntary status)</li> <li>Percentage of part-time employees (by involuntary status)</li> </ul>
(3) Working time and work-life balance*	<ul style="list-style-type: none"> <li>Share of employees working more than 48 hours a week</li> <li>Share of workers in shift work or unsocial hours schedules</li> <li>Share of voluntary part-time workers</li> <li>Share of workers who are satisfied with their work-life balance</li> </ul>
(4) Working conditions and job security*	<ul style="list-style-type: none"> <li>Work intensity</li> <li>Work autonomy</li> <li>Physical work factors</li> <li>Perceived work security</li> </ul>
(5) Skills and career development*	<ul style="list-style-type: none"> <li>Share of population participating in education and training (aged 25-64)</li> <li>Perceived career prospects from current job</li> </ul>
(6) Collective interest representation	<ul style="list-style-type: none"> <li>Collective bargaining coverage</li> <li>Trade union density</li> <li>Whether the worker is consulted about changes in work organisation</li> </ul>

Note: \* dimensions and indicators that refer to the quality of the working environment.

Source: Authors' elaboration from: Leschke, J. and A. Watt (2008), "Job quality in Europe", *ETUI-REHS Working Paper*, No. 2008/07, [www.etui.org/Publications2/Working-Papers/Job-quality-in-Europe](http://www.etui.org/Publications2/Working-Papers/Job-quality-in-Europe).

As a follow-up to the Lisbon and Nice European Councils in 2000 and the Laeken indicators, and in an effort to help overcome the economic crisis, the EU Employment Committee (EMCO, the main advisory committee for Employment and Social Affairs Ministers in the employment field) released in 2010 a report that stressed the importance of the quality of work (encompassing both job and worker characteristics) and the adaptability of the workforce. The EMCO defined the quality of work along four dimensions and proposed a set of indicators for monitoring purposes, which included: 1) socio-economic insecurity (measured by adequate earnings, and measures of job and career security); 2) education and training (skills development and employability); 3) working conditions (health and safety at work, work intensity, autonomy and collective interest representation); and 4) the work-life and gender balance (Table 2.4).

Table 2.4. **EU Employment Committee's quality of work indicators**

Dimension	Sub-dimension	Indicators
(1) Socio-economic security	1a. Adequate earnings	<ul style="list-style-type: none"> <li>● Mean monthly earnings in Purchasing Power Parities, companies with 10 employees or more</li> <li>● In-work at-risk-of-poverty rate</li> <li>● Transitions by pay level (fraction of individuals with at least the same pay)</li> <li>● Am well paid for the work I do</li> </ul>
	1b. Job and career security	<ul style="list-style-type: none"> <li>● Involuntary temporary employment</li> <li>● Labour transition – employment security</li> <li>● Labour transition temporary to permanent</li> <li>● Job offers good prospects for career advancement</li> </ul>
(2) Education and training	2a. Skills development*	<ul style="list-style-type: none"> <li>● Continuing vocational training (CVT) hours per participating person</li> <li>● CVT participation</li> <li>● Main paid job involves learning new things</li> <li>● Tasks do require different skills</li> <li>● On-the-job training over last 12 months</li> <li>● Present skills correspond well with my duties</li> </ul>
	2b. Employability	<ul style="list-style-type: none"> <li>● Participation in lifelong learning employed people (Labour Force Survey, LFS)</li> <li>● Participation in lifelong learning, unemployed people (LFS)</li> <li>● Early leavers from education and training, share of the population (LFS)</li> <li>● Percentage of the population aged 25-64 having completed at least upper secondary education (LFS)</li> <li>● E-skills of adults – Computer skills. Persons with at least medium computer skills</li> </ul>
(3) Working conditions	3a. Health and safety at work*	<ul style="list-style-type: none"> <li>● Serious accidents at work per 100 000 persons in employment</li> <li>● Non-exposure to unhealthy environment</li> <li>● Healthy physical conditions</li> <li>● Well informed on health and safety risks</li> <li>● Think that health or safety is NOT at risk because of your work</li> <li>● Work does NOT affect health</li> <li>● Non-exposure to harassment, humiliation, etc.</li> </ul>
	3b. Work intensity*	<ul style="list-style-type: none"> <li>● Work when sick over last 12 months/not sick</li> <li>● NOT working at very high speed</li> <li>● NOT working to tight deadlines</li> <li>● Enough time to get the job done</li> <li>● NO experiencing of stress in your work</li> </ul>
	3c. Autonomy*	<ul style="list-style-type: none"> <li>● Work pace NOT dependent on automatic speed of a machine or movement of a product</li> <li>● Work pace NOT dependent on the direct control of your boss</li> <li>● Occasionally/never interrupt a task in order to take on an unforeseen task</li> <li>● Self-responsibility</li> <li>● Team members decide by themselves on the division of tasks</li> <li>● Team members decide by themselves the timetable of the work</li> </ul>
	3d. Collective interest representation	<ul style="list-style-type: none"> <li>● Union density</li> <li>● Collective pay agreement, share any</li> <li>● Have raised work-related problems with an employee representative over last 12 months</li> <li>● Employee is acting as an employee representative</li> <li>● Management holds meetings in which you can express your views about what is happening in the organisation</li> </ul>

Table 2.4. **EU Employment Committee’s quality of work indicators** (cont.)

Dimension	Sub-dimension	Indicators
(4) Work-life and gender balance	4a. Work-life balance*	<ul style="list-style-type: none"> <li>● Inactivity due to family or personal responsibilities</li> <li>● Part-time work due to family or personal responsibilities</li> <li>● Lacking formal care for small children: % of children &lt;3 years not formally cared for</li> <li>● Employment impact of parenthood – men</li> <li>● Employment impact of parenthood – women</li> <li>● Certain possibilities to adapt working time</li> <li>● Taking one or two hours off to take care of personal or family matters is NOT (too) difficult</li> <li>● NO long working hours</li> <li>● Working hours fit with family or social commitments outside work well or very well</li> <li>● Less often/never worked in free time in order to meet work demands</li> </ul>
	4b. Gender balance	<ul style="list-style-type: none"> <li>● Gender pay gap by socio-economic status 2010</li> <li>● Gender employment gap LFS</li> <li>● Immediate boss a woman</li> </ul>

Note: \* dimensions and indicators that refer to the quality of the working environment.

Source: Authors’ elaboration from EMCO (2010), Quality in Work – Thematic Review 2010, Brussels.

Two of these four dimensions, i.e. *working conditions* and *work-life and gender balance*, clearly pertain to the quality of the working environment; however, the indicators used had different units of observation and combined outcome and input measures. The *working conditions* dimension included measures not only of “health and safety at work” (which are important for the sustainability of employment) but also of psychosocial risks (i.e. “work intensity” and “autonomy”). While these are measured at the individual level and through outcome-based indicators, the indicator for *collective interest representation* refers to procedures rather than outcomes. Finally, the *work-life and gender balance* dimension focused predominantly on integrating women in the labour market, ignoring women’s experiences in the workplace.

### **The International Labour Organisation’s decent work agenda**

The International Labour Organisation (ILO) launched its Decent Work Agenda in 1999, adopting a set of indicators in 2012 in order to monitor implementation. The indicators correspond to ten strategic elements of the Agenda: 1) employment opportunities; 2) adequate earnings and productive work; 3) decent working time; 4) combining work, family and personal life; 5) work that should be abolished; 6) stability and security of work; 7) equal opportunity and treatment in employment; 8) safe work environment; 9) social security and social dialogue; and 10) employers’ and workers’ representation (Table 2.5). A number of these elements – such as decent work time, combining work and family life, and safe work environment – relate to the quality of the working environment.

The purpose of these indicators was to allow governments and social partners to assess progress towards decent work and offer comparable information for analysis and policy development. For this reason, the indicators were not used to generate country rankings and synthetic indices. Decent work indicators have one notable strength, i.e. a broader geographical coverage than European initiatives, as they consider the labour-market characteristics of both developing and emerging economies. In order to account for differences in the regulations and labour markets of different countries, these indicators are supplemented by a set of legal framework indicators.<sup>3</sup> The indicators are selected according to the availability of official data and good documentation on the measurement properties of each indicator.

Table 2.5. ILO decent work indicators

Dimensions	Indicators
(1) Economic and social context for decent work	<ul style="list-style-type: none"> <li>● Children not in school (percentage by age)</li> <li>● Estimated percentage of working-age population who are HIV-positive</li> <li>● Labour productivity (GDP per employed person, level and growth rate)</li> <li>● Income (consumption) inequality (percentile ratio P90/P10)</li> <li>● Inflation rate (Consumer Price Index, CPI)</li> <li>● Employment by branch of economic activity</li> <li>● Education of adult population (adult literacy rate, adult secondary school graduation rate)</li> <li>● Labour share of GDP</li> <li>● Real GDP per capita in USD at purchasing power parities (level and growth rate)</li> <li>● Female share of employment by economic activity (International Standard Industrial Classification, ISIC)</li> <li>● Earnings inequality (percentile ratio P90/P10)</li> <li>● Poverty measures</li> </ul>
(2) Employment opportunities	<ul style="list-style-type: none"> <li>● Employment-to-population ratio</li> <li>● Unemployment rate</li> <li>● Youth not in education and not in employment</li> <li>● Informal employment rate</li> <li>● Labour force participation rate</li> <li>● Youth unemployment rate</li> <li>● Unemployment by level of educational attainment</li> <li>● Employment by status in employment</li> <li>● Proportion of own-account workers and contributing family workers in total employment</li> <li>● Share of wage employment in non-agricultural employment</li> </ul>
(3) Adequate earnings and productive work	<ul style="list-style-type: none"> <li>● In-work poverty rate</li> <li>● Low pay rate</li> <li>● Average hourly earnings in selected occupations</li> <li>● Average real wages</li> <li>● Minimum wage as percentage of median wage</li> <li>● Manufacturing wage index</li> <li>● Employees with recent job training (past year)</li> </ul>
(4) Decent working time*	<ul style="list-style-type: none"> <li>● Employment in excessive working time (more than 48 hours per week)</li> <li>● Employment by weekly hours worked (hours in standardised hour bands)</li> <li>● Average annual working time per employed person</li> <li>● Time-related underemployment rate</li> </ul>
(5) Combining work and family life*	<ul style="list-style-type: none"> <li>● Asocial/unusual hours</li> <li>● Maternity protection</li> </ul>
(6) Work that should be abolished	<ul style="list-style-type: none"> <li>● Child labour rate</li> <li>● Hazardous child labour rate</li> <li>● Rate of worst forms of child labour other than hazardous work</li> <li>● Forced labour rate</li> <li>● Forced labour rate among returned migrants</li> </ul>
(7) Stability and security of work	<ul style="list-style-type: none"> <li>● Precarious employment rate</li> <li>● Job tenure</li> <li>● Subsistence worker rate</li> <li>● Real earnings of casual workers</li> </ul>
(8) Equal opportunity and treatment in employment	<ul style="list-style-type: none"> <li>● Occupational segregation by sex</li> <li>● Female share of employment in senior and middle management</li> <li>● Gender wage gap</li> <li>● Share of women in wage employment in the non-agricultural sector</li> </ul>
(9) Safe work environment*	<ul style="list-style-type: none"> <li>● Occupational injury frequency rate, fatal</li> <li>● Occupational injury frequency rate, non-fatal</li> <li>● Time lost due to occupational injuries</li> <li>● Labour inspection (Inspectors per 10 000 employed persons)</li> </ul>
(10) Social security	<ul style="list-style-type: none"> <li>● Share of population above the statutory retirement age (65+) benefiting from an old-age pension</li> <li>● Public social security expenditure (percentage of GDP)</li> <li>● Health expenditure not financed out of pocket by private households</li> <li>● Share of economically active population contributing to a pension scheme</li> </ul>
(11) Social dialogue, workers' and employers' representation	<ul style="list-style-type: none"> <li>● Trade union density rate</li> <li>● Enterprises belonging to an employers' organisation</li> <li>● Collective bargaining coverage rate</li> <li>● Days not worked due to strikes and lockouts</li> </ul>

Note: \* denotes dimensions and indicators that refer to the quality of the working environment.

Source: Authors' elaboration from ILO (2012), *Decent Work Indicators: Concepts and Definitions: ILO Manual*, International Labour Office, Geneva.



However, these indicators also have their weaknesses. First, some of the most important aspects of the working environment are not covered, such as work intensity, work autonomy and psychosocial risks. Second, some indicators pertain to both procedures and outcomes: for instance, for the dimension *safe work environment*, the indicator on the number of injuries relates to outcome, whereas that on the number of labour inspectors focuses on procedures. Third, as most indicators are defined at the aggregate level, they do not allow assessing the quality of the working environment for population sub-groups. These limitations mainly reflect the limited availability of data, especially for non-European countries.

### **UNECE's Handbook for measuring the quality of employment**

Starting from the 2000s, two expert groups from the United Nations Commission for Europe (UNECE) worked towards producing a statistical toolbox on the quality of employment that could be used in various country contexts. The second 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<sup>4</sup> – developed a *Handbook* that takes, as its point of departure, the perspective of individual workers (as opposed to that of firms or of society as a whole) in defining employment quality (UNECE, 2015). Employment quality was defined as the conditions, ethics, working-time arrangements, and monetary and non-pecuniary benefits associated with the employment and work-life balance of an individual. Like other frameworks, it acknowledges that employment quality is a multidimensional concept that relates, in different ways, to human needs. These dimensions are related to one another, but also separate and with no hierarchy among them (Table 2.6).

Table 2.6. **UNECE Job Quality Framework**

Dimension	Sub-dimension	Indicators
(1) Safety and ethics of employment*	(1a) Safety at work*	<ul style="list-style-type: none"> <li>● Fatal occupational injuries</li> <li>● Nonfatal occupational injuries</li> <li>● Exposure to physical health risk factors</li> <li>● Exposure to mental health risk factors</li> </ul>
	(1b) Child labour and forced labour	<ul style="list-style-type: none"> <li>● Child labour rate</li> <li>● Hazardous child labour rate</li> <li>● Forced labour rate</li> <li>● Forced labour rate among returned migrants</li> <li>● Other worst forms of child labour</li> </ul>
	(1c) Fair treatment in employment*	<ul style="list-style-type: none"> <li>● Pay gap</li> <li>● Access to managerial occupations</li> <li>● Discrimination at work</li> </ul>
(2) Income and benefits*	(2a) Income	<ul style="list-style-type: none"> <li>● Average earnings</li> <li>● Employees with low pay</li> <li>● Earnings by decile</li> <li>● Employment related income of selfemployed</li> </ul>
	(2b) Nonwage pecuniary benefits	<ul style="list-style-type: none"> <li>● Paid leave entitlement</li> <li>● Days of paid leave entitlement</li> <li>● Actual days of paid leave</li> <li>● Sick leave entitlement</li> <li>● Days of sick leave entitlement</li> <li>● Actual days of sick leave</li> </ul>
(3) Working time and worklife balance	(3a) Working hours*	<ul style="list-style-type: none"> <li>● Mean weekly working hours</li> <li>● Long working hours</li> <li>● Involuntary parttime work</li> <li>● Distribution of weekly working hours</li> <li>● Multiple job holders</li> </ul>

Table 2.6. **UNECE Job Quality Framework** (cont.)

Dimension	Sub-dimension	Indicators
	(3b) Working time arrangements*	<ul style="list-style-type: none"> <li>● Night work</li> <li>● Evening work</li> <li>● Weekend work</li> <li>● Flexible work schedules</li> </ul>
	(3c) Work-life balance*	<ul style="list-style-type: none"> <li>● Employment rate of mothers and fathers</li> <li>● Possibility to work at home</li> <li>● Commuting time</li> <li>● Care leave entitlement</li> <li>● Parental leave</li> <li>● Child care use</li> </ul>
(4) Security of employment and social protection	(4a) Security of employment	<ul style="list-style-type: none"> <li>● Fixed-term contracts</li> <li>● Job tenure</li> <li>● Own account workers</li> <li>● Self-employed with one client</li> <li>● Perceived job security</li> <li>● Temporary employment agency workers</li> <li>● Lack of formal contract</li> <li>● Precarious employment rate</li> <li>● Informal employment rate</li> </ul>
	(4b) Social protection	<ul style="list-style-type: none"> <li>● Pension insurance coverage</li> <li>● Unemployment insurance coverage</li> <li>● Medical insurance coverage</li> </ul>
(5) Social dialogue		<ul style="list-style-type: none"> <li>● Collective bargaining coverage</li> <li>● Trade union density rate</li> <li>● Days not worked due to strikes and lockouts</li> <li>● Employer organisation density rate</li> </ul>
(6) Skills development and training*		<ul style="list-style-type: none"> <li>● Training participation</li> <li>● Volume of training</li> <li>● Usefulness of training</li> <li>● Learning at work</li> <li>● Employability</li> <li>● Skills match</li> </ul>
(7) Employment-related relationships and work motivation*	(7a) Employment-related relationships	<ul style="list-style-type: none"> <li>● Relationship with co-workers</li> <li>● Relationship with supervisor</li> <li>● Employment-related violence</li> </ul>
	(7b) Work motivation	<ul style="list-style-type: none"> <li>● Job autonomy</li> <li>● Feedback from supervisor</li> <li>● Intrinsic rewards</li> <li>● Work intensity</li> <li>● Organisational participation</li> </ul>

Note: \* denotes dimensions and indicators that refer to the quality of the working environment.

Source: Authors' elaboration from: UNECE (2015), *Handbook on Measuring Quality of Employment – A Statistical Framework*, United Nations, New York and Geneva, [www.unece.org:8080/fileadmin/DAM/stats/publications/2015/ECE\\_CES\\_40.pdf](http://www.unece.org:8080/fileadmin/DAM/stats/publications/2015/ECE_CES_40.pdf) (accessed on 1 February 2017).

Based on these principles, the UNECE *Handbook* defined the quality of employment in terms of seven dimensions, which are divided into sub-dimensions: 1) the safety and ethics of employment; 2) the income and benefits from employment; 3) working time and work-life balance; 4) security of employment and social protection; 5) social dialogue; 6) skills development and training; and 7) employment-related relationships and work motivation. These dimensions include a number of indicators on the quality of the working environment, such as physical health risk factors, discrimination and intimidation at the workplace, training and learning at work, work intensity, work autonomy, organisational participation and social support at work.

The UNECE *Handbook* also provided indicator sheets for each item, explaining how the concept should be measured, the available data sources, recommended metadata and

disaggregation, how the item should be interpreted, and how it relates to other indicators in the framework. The *Handbook* is comprehensive and provides an essential toolbox for national statistical offices around the world wishing to measure the quality of the working environment, while it does not define which indicators to prioritise when resources are limited.

### The OECD's Job Quality Framework

Building on the work pursued by researchers and other international organisations, the OECD Job Quality Framework identifies three key dimensions of job quality that shape workers' well-being, i.e. earnings quality, labour-market security and the working environment (Table 2.7). This framework follows two of the principles of the broader agenda recommended by the Stiglitz-Sen-Fitoussi Commission and used in the OECD Better Life Initiative, notably: to focus on outcomes as experienced by workers, as opposed to drivers; and to look at people, implying that all OECD indicators are measured using micro-data to go beyond country averages (OECD, 2014). The OECD framework relies on measures of objective features of job quality (i.e. objective and self-reported outcomes, rather than individual perceptions of job satisfaction). Finally, the OECD framework recommends using job quality indicators that can be produced for different socio-demographic groups and countries so as to maximise their policy relevance. This stems partly from the possibility of tailoring the building blocks of the OECD framework to specific features of certain countries (including data availability), while retaining the same conceptual foundations.

Table 2.7. OECD Job Quality Framework, 2015

Dimension	Headline indicator	Sub-indicators
(1) Earnings	Earnings quality	<ul style="list-style-type: none"> <li>● Average earnings</li> <li>● Earnings inequality</li> </ul>
(2) Labour-market Security	Labour-market security against unemployment	<ul style="list-style-type: none"> <li>● Unemployment risk</li> <li>● Unemployment insurance</li> </ul>
	Labour-market security against extremely low pay	<ul style="list-style-type: none"> <li>● Probability of falling into extremely low pay</li> <li>● Probability of getting out of extremely low pay</li> </ul>
(3) Quality of the Working Environment*	Job strain	<ul style="list-style-type: none"> <li>● Excessive job demands               <ul style="list-style-type: none"> <li>❖ Time pressure at work</li> <li>❖ Physical health risk factors</li> </ul> </li> <li>● Insufficient job resources               <ul style="list-style-type: none"> <li>❖ Work autonomy and learning opportunities</li> <li>❖ Social support at work</li> </ul> </li> </ul>
	Supplementary indicator: Working very long hours	

Note: \*denotes dimensions and indicators that refer to the quality of the working environment.

Source: Cazes, S., A. Hijzen and A. Saint-Martin (2015), "Measuring and assessing job quality: The OECD Job Quality Framework", OECD Social, Employment and Migration Working Papers, No. 174, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jrp02kpw1mr-en>.

In the OECD framework, the quality of the working environment captures the non-economic aspects of job quality, such as the nature and content of the work performed, working-time arrangements and workplace relationships. Further, the OECD argued that the combination of high *job demands* – e.g. time pressure or physical health risk factors – and low *job resources* – e.g. work autonomy or social support at work – prevents workers from being able to successfully accomplish their requires duties, and constitutes a major threat to their well-being. Therefore, it proposed that the quality of the working environment could be measured by an (individual level) measure of the incidence of job strain, i.e. the share of workers in a situation combining high job demands and limited job resources.

Taking into account data availability, two types of job demands were used in OECD (2014) to compute this job strain index: 1) time pressure, which encompasses long working hours, high work intensity and working-time inflexibility; and 2) physical health risk factors, such as carrying and moving heavy loads or working in painful and tiring positions. Similarly, two types of job resources were considered: 1) work autonomy, which includes workers' freedom to choose and change their work tasks and methods, as well as learning opportunities such as formal (i.e. training) and informal learning opportunities at work; and 2) social support at work, which measures the extent to which workers can get support from managers and colleagues. A composite Job Strain index was presented in OECD (2014) that measures the prevalence of jobs in which workers face an imbalance between demands and resources.<sup>5</sup> The methodology underpinning the OECD Job Strain index is currently being revisited in light of the changes that have been introduced into the ISSP and EWCS, in the perspective of including a larger number of job demands and job resources.

When detailed micro data are lacking, as is typically the case for many emerging countries, the quality of the working environment dimension was proxied by an indicator on the incidence of very long working hours (OECD, 2014). Numerous studies on occupational health have investigated the impact of long working hours on workers' well-being: while the evidence is mixed regarding the relationship between long working hours and life satisfaction (Hewlett and Luce, 2006; Gray et al., 2004), results suggest that working very long hours impairs workers' physical and mental health, in particular when employees have little control over the number of hours that they work and/or that are on their work schedules (Bassanini and Caroli, 2015; Frijters, Johnston and Meng, 2009; Dembe et al., 2005; Burke et al., 2009; Caruso et al., 2004). Ultimately, using long hours as a proxy for working conditions in emerging economies seems to be reasonable, as it allows a broad coverage of emerging economies as well as a breakdown between formal and informal jobs. The analysis supports this approach, as it shows a strong positive correlation between job strain and long hours across a broad group of countries where both measures are available.

### **2.3. Data sources on the quality of the working environment**

To review the available information on the quality of the working environment, the OECD has undertaken a stocktaking exercise aimed at compiling relevant questions from a number of existing surveys. This inventory draws on the majority of the cross-country surveys providing information on the characteristics of people's jobs<sup>6</sup> conducted since the early 1990s. All these surveys are based on individuals' self-assessment of their current job. The survey questions are grouped into 19 fields, with binary codes (1 and 0) for each field showing whether indicators are available for the various countries and years. The inventory, which covers 160 countries over 25 years, also provides users with detailed documentation on the questions used in the various surveys for measuring these indicators.

This inventory of survey questions serves several purposes. First, it gathers information covering all aspects of the quality of the working environment, which permits gauging the availability of comparable information across countries.<sup>7</sup> Second, it helps to identify data gaps, notably in terms of geographical and thematic coverage as well as in the periodicity of available information. Third, the inventory documents all the relevant questions that have been used to measure the various aspects of the quality of the working environment, thus providing guidance to researchers, international organisations and national statistical offices in operationalising the concept at hand. This section summarises the key characteristics of

the main data sources that include comparative information on the quality of the working environment based on this OECD inventory.

**Table 2.8. Selected international frameworks for measuring job quality: Features and purpose**

	Geographical coverage	Level of observation	Outcomes or procedures	Nature of the indicators	Composite index	Progress monitoring	Provision of methodological guidance
<b>EU Laeken (2001)</b>	European Union	Individual and aggregate	Both outcomes and procedures	Objective and subjective	No	Yes	No
<b>Business Europe (2001)</b>	European Union	Mostly aggregate	Both outcomes and procedures	Objective	No	No	No
<b>ETUI (2008)</b>	European Union	Mostly individual	Mostly outcomes	Mostly objective	Yes, equal weights	Yes	No
<b>EMCO (2010)</b>	European Union	Mostly individual	Mostly outcomes	Objective and subjective	No	Yes	No
<b>ILO (2012)</b>	Global	Aggregate	Both outcomes and procedures	Objective	No	Yes	Yes
<b>Eurofound (2012)</b>	EU28, Norway, Former Yugoslav Republic of Macedonia (FRYOM), Turkey, Albania, Kosovo and Montenegro	Individual	Outcomes	Objective and self-reported	Yes	Yes	Yes
<b>UNECE (2014)</b>	Global	Individual and aggregate	Outcomes	Objective and subjective	No	No	Yes
<b>OECD (2015)</b>	OECD countries and selected emerging economies	Individual	Outcomes	Mostly objective	No	Yes	Yes

Source: Authors' elaborations from: European Commission (2001), *Employment and Social Policies: A Framework For Investing In Quality*, Brussels; UNICE (2001), *UNICE Position Paper on the Commission Communication "Employment and social policies: A framework for investing in quality"*, Leschke, J. and A. Watt (2008), "Job quality in Europe", *ETUI-REHS Working Paper*, No. 2008/07; EMCO (2010), *Quality in Work – Thematic Review 2010*, Brussels; ILO (2012), *Decent Work Indicators: Concepts And Definitions: ILO Manual*, International Labour Office, Geneva; Eurofound (2012), "Trends in job quality in Europe", Publications Office of the European Union, Luxembourg; UNECE (2015), *Handbook on Measuring Quality of Employment – A Statistical Framework*, United Nations, New York and Geneva; Cazes, S., A. Hijzen and A. Saint-Martin (2015), "Measuring and assessing job quality: The OECD Job Quality Framework", *OECD Social, Employment and Migration Working Papers*, No. 174, OECD Publishing, Paris.

### **European Working Conditions Survey**

The European Working Conditions Survey (EWCS) is the most important international data source on the quality of the working environment currently available. The survey covers a wide range of topics and has been conducted every five years since 1991 in European countries. Among all the international surveys reviewed here, the EWCS is the only one that explicitly aims at collecting information on working conditions (Table 2.9). The focus of the survey is on objective job features as reported by individual workers, providing information on their socio-demographic characteristics, their well-being outcomes and the characteristics of the firms where they work. The survey is designed and conducted by the experts of the European Foundation for the Improvement of Living and Working Conditions (Eurofound), which ensures high comparability among the participating countries. Another advantage of the EWCS is that its methodology is very transparent and that good methodological documentation is available. Finally, since the core questionnaire has not undergone significant change, EWCS data allow examining changes in the working environment for a period covering over a quarter of a century. The survey has improved substantially over time, with poor-quality questions excluded and new questions added.

Table 2.9. **Quality of the working environment in the EWCS**

<b>Countries covered</b>	EU 28, Norway, Turkey, Former Yugoslav Republic of Macedonia (FRYOM), Albania, Kosovo and Montenegro
<b>Years covered, frequency</b>	1991, 1996, 2000/2001, 2005, 2010, 2015* (planned every 5 years)* in progress
<b>Target population</b>	All persons aged 15 and over (16 and over in Spain, the UK and Norway, complying with Labour Force Survey universe definition) whose usual place of residence is in the territory of the countries included in the survey and who were in employment during the reference period
<b>Sample size</b>	Varies between 500 (i.e. Luxembourg and Malta) and 4 000 (i.e. Belgium). Mean sample size: 1 150
<b>Aspects of the quality of the working environment covered</b>	Physical risk factors; Physical demands; Work intensity; Intimidation and discrimination at workplace; Emotional demands and work stress; Subjective job insecurity; Task discretion and autonomy; Training and learning opportunities; Opportunity for career advancement; Opportunity for self-realisation; Organisational participation and workplace voice; Intrinsic rewards; Good managerial practices; Task clarity and performance feedback; Social support and good relationships at work; Work-life balance; Unsocial work schedule; Flexibility of working hours

Source: Authors' elaboration based on information sourced from Eurofound.

EWCS samples are representative of all persons employed and living in private households. One limit of the survey is its small sample size (on average 1 000 respondents per country, but up to 3 300 respondents in countries providing extra funding). This makes it difficult to go beyond country averages to investigate data by socio-demographic groups, occupations or sectors. That said, other surveys discussed in this chapter have similarly small sample sizes once limited to people in employment.

Drawing on a number of questions from the 5th European Working Conditions Survey conducted in 2010, Eurofound published in 2012 various synthetic Job Quality Indices for 34 European countries. These indices, normalised so that they range between 0 and 1, include: 1) Earnings index; 2) Prospects index; 3) Intrinsic Job Quality index; and 4) Working-time index (Table 2.10). The internal validity of the items included in each index is assessed through statistical methods (Cronbach's alpha), and items are aggregated with equal weights. All four indices are strongly associated with workers' well-being, as measured by questions on the number of health problems that they experienced, health issues caused by work, subjective well-being, the work-life balance and the meaningfulness of work. These indices are based on a framework focused on job features, which defines a good job as one that offers workers opportunities to influence their work while at the same time allowing them to pursue their personal work-related goals. The framework focuses on job characteristics that overall, or on average, meet workers' needs, while omitting personal preferences and characteristics, based on indicators that unambiguously contribute to

Table 2.10. **Eurofound job quality index**

Dimension	Indicators
(1) Earnings	<ul style="list-style-type: none"> <li>Hourly earnings</li> </ul>
(2) Prospects	<ul style="list-style-type: none"> <li>Job security</li> <li>Career progression</li> <li>Contract quality</li> </ul>
(3) Intrinsic Job Quality*	<ul style="list-style-type: none"> <li>Skills and discretion (skills and autonomy)</li> <li>Good social environment (social support, absence of abuse)</li> <li>Good physical environment (low level of physical or posture-related hazards)</li> <li>Work intensity (pace of work, work pressure, emotional/value conflict demands)</li> </ul>
(4) Working-time Quality*	<ul style="list-style-type: none"> <li>Duration</li> <li>Scheduling</li> <li>Discretion</li> <li>Short-term flexibility over working time</li> </ul>

Note: \* Dimensions and indicators that refer to the quality of the working environment.

Source: Authors' elaboration from Eurofound (2012), "Trends in Job Quality in Europe", Publications office of the European Union, Luxembourg, [www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef1228en\\_0.pdf](http://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1228en_0.pdf).

meeting workers' needs, including both positive and negative job features. This framework was updated with the 6th wave of EWCS (Eurofund, 2016): the seven indices are now presented independently, and the intrinsic job quality index is constructed as a combination (with equal weights) of indices on the physical environment, the social environment, work intensity, and skills and discretion. New variables were also included to reinforce the construction of the various indices. All seven indices are strongly and independently associated with workers' well-being, as measured by questions on the number of health problems experienced, health issues caused by work, subjective well-being, sustainable work, work-life balance, engagement, motivation, social climate in companies and meaningfulness of work.

### **European Quality of Life Surveys**

Another survey carried out by the European Foundation for the Improvement of Living and Working Conditions (Eurofound) is the European Quality of Life Survey (EQLS), which takes place every four years. This survey aims at examining the objective circumstances of people's lives and how they feel about those circumstances. It covers key aspects of people's lives, such as quality of accommodation, civic participation, trust, family ties, health status, access to social services and work. The section on work includes a number of questions on the quality of the working environment, covering physical risk factors, work intensity, emotional demands, work stress, job insecurity, task discretion and autonomy, training and learning opportunities, opportunities for career advancement, self-realisation and intrinsic rewards (Table 2.11).

Table 2.11. **Quality of the working environment in the EQLS**

<b>Countries covered</b>	EU28, Norway, Turkey, Former Yugoslav Republic of Macedonia (FRYOM), Serbia, Kosovo, Montenegro
<b>Years covered, frequency</b>	2003, 2007, 2012/3, 2016
<b>Target population</b>	All people aged 18 and over whose usual place of residence is in the territory of the countries included in the survey
<b>Sample size</b>	600 in smaller countries (i.e. Estonia, Slovenia, Malta, Luxembourg); up to 3 000 in bigger countries. Mean sample size: 1 100
<b>Aspects of the quality of the working environment covered</b>	Physical risk factors; Work intensity; Emotional demands and work stress; Subjective job insecurity; Task discretion and autonomy; Training and learning opportunities; Opportunity for career advancement; Opportunity for self-realisation; Intrinsic rewards; Work-life balance; Flexibility of working hours

Source: Authors' elaboration sourced from Eurofound European Quality of Life Survey.

The EQLS survey is particularly useful for assessing the work-life balance because of its household focus and its questions both on the employment and contractual status of household members and on their working-hour arrangements. It assesses not only the work-life balance in different work and family situations, but also the obstacles that people face in balancing work and family life. The survey provides information on a number of aspects of the quality of the working environment, complemented by attitudinal questions. Although its sample size ranges between 1 000 and 3 000 per country, a drawback is that (being a general population survey) the number of respondents who are eligible for the questions on paid work is smaller.

### **The European Union Labour Force Survey *ad hoc* modules**

The European Union Labour Force Survey (EU-LFS), which is co-ordinated by Eurostat, is a cross-sectional micro dataset based on a sample of households, with a longitudinal component. The dataset includes data on the labour-market participation of persons over

the age of 15 for the EU-28 members, three EFTA countries and the EU candidate countries. Since 1999, the EU-LFS has also included so-called ad hoc modules (AHMs), which rotate on a yearly basis and provide more detailed information on specific issues. Several of these AHMs have covered aspects that are encompassed by the broad concept of the quality of the working environment (e.g. physical risk factors, physical demands, work intensity, intimidation and discrimination at the workplace, learning and training opportunities, the work-life balance, unsocial work schedules, and the flexibility of working hours). The combination of core and ad hoc modules provides rich information on a very large number of individuals and households.<sup>8</sup>

Table 2.12. **Quality of the working environment in the EU LFS ad hoc modules**

<b>Countries covered</b>	EU28, Norway, Switzerland, Former Yugoslav Republic of Macedonia (FRYOM)
<b>Years covered and frequency</b>	2003, 2004, 2005, 2007, 2010, 2013, 2018*, 2019*, 2020*
<b>Target population</b>	Household sample of persons aged 15 and over
<b>Sample size</b>	Varies between 3 000 (i.e. Malta and Iceland) and 300 000 (i.e. Germany). Mean sample size: 50 000
<b>Aspects of the quality of the working environment covered</b>	Physical risk factors; Physical demands; Work intensity; Discrimination at workplace; Training and learning opportunities; Work-life balance; Atypical working hours; Flexibility of working hours

Note: \* refers to planned ad hoc modules with a focus on aspects of the quality of the working environment.

Source: Authors' elaboration based on EU Labour Force Survey data.

While the EU-LFS ad hoc modules are an important source of information on some aspects of the quality of the working environment, they also have limits.

- First, as the working environment is a multidimensional concept, it is not possible to obtain an overall assessment of its quality using the various EU-LFS ad hoc modules as each module concentrates on one specific dimension of the quality of the working environment.
- Second, ad hoc modules are not strictly comparable across countries. While concepts are harmonised and explanatory notes support comparability, national statistical offices have some degree of freedom in implementing these questionnaires, e.g. in terms of question wording and placement in the questionnaire. This can be a serious shortcoming when it comes to the quality of the working environment, which relies on individuals' assessments of various aspects of their work characteristics. In general, LFS variables are designed to capture objective information, with subjective elements avoided as far as possible. Still, methodological effects from different national implementation cannot be excluded. For instance, the results may differ between countries where questions about workplace accidents are asked before questions on health status and those where the order of the questions is reversed.<sup>9</sup> Similarly, questions from an ad hoc module might be asked in one block at the end of the LFS interview or be integrated into the interview according to the topic assessed.
- Finally, almost one-third of responses to the EU-LFS questionnaire are provided by proxy respondents, and their composition is typically non-random (i.e. workers with the most demanding jobs are more likely to be absent when contacted for an interview, and thus proxied); ad hoc modules may thus under-sample workers who hold the most demanding jobs, while over-sampling those with less demanding jobs. Even though LFS questions are phrased in a way that allows their use for proxy interviews, questions on job quality are best answered by respondents in person. While the 19th International Conference on Labour Statisticians recommended that LFSs should in the future rely only on direct respondents, this requirement is still not met in many OECD countries.



### European Social Survey

The European Social Survey (ESS) is a research programme co-funded by the European Commission, the European Science Foundation and national research bodies. Representative population surveys are carried out in 36 countries and data are collected via face-to-face interviews. Eight waves of the ESS have been conducted (every two years) between 2002 and 2016, with two of them – Round 2 (2004) and Round 5 (2010) – containing unique modules on the quality of work and well-being (Table 2.13).

Table 2.13. **Quality of the working environment in the ESS**

<b>Countries covered</b>	EU28, Norway, Switzerland, Turkey, Israel, Russia, Ukraine
<b>Years covered, frequency</b>	2004, 2010
<b>Target population</b>	All persons aged 15 and over (no upper age limit) resident within private households in each country, regardless of their nationality, citizenship or language
<b>Sample size</b>	Varies between 600 (i.e. Iceland) and 3 000 (i.e. Czech Republic and Germany). Mean sample size: 1 900
<b>Aspects of the quality of the working environment covered</b>	Physical risk factors; Work intensity; Emotional demands and work stress; Subjective job insecurity; Task discretion and autonomy; Training and learning opportunities; Opportunity for career advancement; Organisational participation and workplace voice; Intrinsic rewards; Social support and good relationships at work; Work-life balance; Unsocial work schedule; Flexibility of working hours

Source: Authors' elaboration based on European Social Surveys.

The ESS Work, Family and Well-being modules include a rich set of questions related to job characteristics, worker preferences and work-related well-being that were designed by an international team of experts. This, together with the Core Scientific Team's rigour in implementing the survey according to the same standards cross-nationally, makes the ESS modules an excellent source of comparative data on the quality of the working environment in a number of European (and some non-European) countries. However, as a general population survey, its sample size is small when restricted to people in paid employment. Moreover, whether these modules will continue to be repeated in the future or not depends on how the ESS Core Scientific Team evaluates the relevance of competing modules; this implies that the ESS cannot be counted on as a timely and recurrent source for information of this type.

### Eurobarometer flash module on working conditions

Eurobarometers are the public opinion polls of the European Commission. Carried out since 1973, Flash Eurobarometers are ad hoc polls collected via phone interviews that enable the Commission to get quick results on specific themes. Flash Eurobarometer number 398 focused on working conditions, and was conducted in April 2014 in 28 EU countries. The survey, covering people aged 15 and over, was undertaken in order to explore Europeans' *actual* experiences of their working conditions, and included general questions about working conditions in the country; satisfaction with working conditions and with specific areas such as working hours, autonomy, and work-life balance; access to paid holidays, rest periods and flexibility at work; information and consultation in the firm; and health and safety at work (Table 2.14).

The Flash Eurobarometer on Working Conditions covered both people currently in employment and those currently looking for a job or out of the labour market. Most of the questions were directed to people who currently do paid work and relate to the characteristics of their jobs. Additionally, the survey included questions asked to all survey participants on their perception of working conditions in the country, based on their

Table 2.14. **Quality of the working environment in the Eurobarometer flash module**

<b>Countries covered</b>	EU-28
<b>Years covered, frequency</b>	2014
<b>Target population</b>	Population of the respective nationalities of the European Union Member States, resident in each of the 28 Member States and aged 15 years and over
<b>Sample size</b>	Varies between 500 (i.e. Iceland, Luxembourg and Malta) and 1 000 (all other countries). Mean sample size: 948
<b>Aspects of the quality of the working environment covered</b>	Physical risk factors; Physical demands; Work intensity; Intimidation and discrimination at workplace; Emotional demands and work stress; Task discretion and autonomy; Organisational participation and workplace voice; Intrinsic rewards; Good managerial practices; Social support and good relationships at work; Work-life balance; Unsocial work schedule; Flexibility of working hours

Source: Authors' elaboration based on Eurobarometer.

personal experience and/or on what they know from their friends and relatives who are currently working.

The survey had a relatively small sample size, on average 1 000 respondents per country. It is a useful one-off source of data to measure the quality of the working conditions in the European Union as well as people's satisfactions with their own jobs and with jobs in general in their respective country. However, as the survey is conducted by phone, most questions have simple response scales, which limits the analytical usefulness.

### **International Social Survey Programme**

The International Social Survey Programme (ISSP) is a continuous programme of cross-national surveys that has been running since 1984, covering various topics related to contemporary society. Over time, its country coverage has broadened from Australia, Great Britain, Germany and the United States to 45 countries (both European and non-European) in 2017. In addition to its core module, rotating modules conducted each year cover different themes. The Work Orientations module, repeated in 1987, 1998, 2005 and 2015/6, provides great consistency in terms of the questions included, thereby enabling time-series comparison across countries, and it is rich in terms of individual preferences on specific work aspects and various job characteristics, as well as job satisfaction. The latest wave included questions on job insecurity, opportunity for career advancement, the work-life balance, intrinsic rewards, task discretion and autonomy, flexibility of working hours, work intensity, learning and training opportunities, physical demands, emotional demands, work stress, physical risk factors, social support, relationships at work and job satisfaction (Table 2.15).

Table 2.15. **Quality of the working environment in the ISSP**

<b>Countries covered</b>	Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States, Latvia, The Russian Federation, South Africa, Bulgaria, Bangladesh, Dominican Republic, Philippines, Chinese Taipei
<b>Years covered, frequency</b>	1989, 1997, 2005, 2015/6** in progress
<b>Target population</b>	Nationally representative random sample of the adult population
<b>Sample size</b>	Varies between 900 (i.e. United Kingdom, Canada, Japan and the Netherlands) and 2 800 (i.e. South Africa). Mean sample size: 1 400
<b>Aspects of the quality of the working environment covered</b>	Physical risk factors; Physical demands; Work intensity; Emotional demands and work stress; Subjective job insecurity; Task discretion and autonomy; Training and learning opportunities; Opportunity for career advancement; Intrinsic rewards; Task clarity and performance feedback; Social support and good relationships at work; Work-life balance; Flexibility of working hours

Source: Authors' elaboration based on information sourced from the International Social Survey Programme.

The ISSP covers the adult population of participating countries, with specific work orientation questions applicable only to employed people. The sample size varies between 900 and 2 800 per country, with work questions applicable only to a much smaller share of respondents (ranging between around 250 respondents in the Philippines and around 950 in Chinese Taipei). The ISSP is a valuable source, since it allows assessing the overall quality of the working environment at the individual level for a large number of countries. One weakness is a lack of full consistency in how the survey is implemented across countries: country teams have some autonomy in how they carry out the survey, which makes cross-country comparison problematic, especially for subjective indicators that are very sensitive to survey methodology.

### **Gallup World Poll**

The Gallup World Poll (GWP) has been conducted yearly since 2005 in over 160 countries, based on samples that are representative of the civilian, non-institutionalised population aged 15 and over. GWP questionnaires include both global and region-specific questions. While the survey mainly measures the public's views on political, economic and social issues, it also includes questions on the jobs of respondents. Thanks to its broad geographical coverage, it is the only international data source currently available that provides comparative information on the working environment for a number of less developed countries (Table 2.16). GWP questionnaires are translated into a large number of languages, which enables interviewing respondents in their own language. Interviews are conducted via telephone (in countries where phone coverage is at least 80% of the population) and face-to-face (in other countries); these differences in survey mode can potentially affect cross-country comparisons. Other weaknesses are that the response scales are often binary, restricting variation in the data, and that sample sizes are limited to around 1 000 respondents per country.

Table 2.16. **Quality of the working environment in the GWP**

<b>Countries covered</b>	Over 150 countries worldwide
<b>Years covered, frequency</b>	2005/6, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014 (yearly)
<b>Target population</b>	Entire civilian, non-institutionalised, aged 15 and older population
<b>Sample size</b>	Varies between 500 and 13 500. Mean sample size: 1 250
<b>Aspects of the quality of the working environment covered</b>	Physical risk factors; Work intensity; Emotional demands and work stress; Subjective job insecurity; Opportunity for career advancement; Opportunity for self-realisation; Organisational participation and workplace voice; Good managerial practices; Task clarity and performance feedback; Social support and good relationships at work

Source: Authors' elaboration based on information sourced from the Gallup World Poll.

### **National surveys**

In addition to participation in the international studies described above, many countries have national measurement initiatives with larger samples and more frequent periodicity. A list of these national surveys as well as a few regional surveys conducted in OECD countries is provided in Table 2.17.

## **2.4. Gaps and challenges in measuring the quality of the working environment**

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.

Table 2.17. **National surveys related to the quality of the working environment**

Country	Name of the Survey	Periodicity
<b>Australia</b>	Household, Income and Labour Dynamics in Australia Survey (HILDA)	Since 2001, annually
	Australian Work and Life Index (AWALI)	2007, 2008, 2009, 2010, 2012
<b>Austria</b>	Work Climate Index	Since 1997, biannually
	Changing Employment Relationships Survey	2000
<b>Canada</b>	Québec Survey on Working and Employment Conditions and Occupational Health and Safety (EQCOTESST)	2007
	Chilean National Survey of Employment, Work and Health and Quality of Life of Workers (ENETS)	2009-2010
<b>Chile</b>	Quality of working life	2005, 2006
	Value of health	2007
	Our society 2008	2008
<b>Denmark</b>	Danish Work Environment Cohort Study (DWECS)	1990, 1995, 2000, 2005, 2010
	Working Environment and Health in Denmark 2012–2020 (WEHD)	2012-2020
<b>Estonia</b>	Estonian Working Life Survey	2009, 2014/2015
	Employment Contract Act Survey	2012
<b>Finland</b>	Finnish Quality of Work Life Survey	1977, 1984, 1990, 1997, 2003, 2008, 2013
	Working Life Barometer (WLB)	Yearly since 1992
	National Finnish Work and Health Survey	1997, 2000, 2003, 2006, 2009, 2012, 2015
	MEADOW	2012
<b>France</b>	Working conditions survey (Enquête conditions de travail)	1978, 1984, 1991, 1998, 2005, 2013
	Medical Monitoring Survey of Professional Risks	1987, 1994, 2003, 2010, 2017
<b>Germany</b>	BIBB/BAuA – Employee Survey	1979, 1985/1986, 1991/1992, 1998/1999, 2005/2006, 2011/2012, 2017/8
	German Socioeconomic Panel Study (SOEP)	Yearly, since 1984
<b>Israel</b>	Working Conditions Survey	
<b>Italy</b>	Quality of work survey	2002, 2006, 2010, 2014
	Survey of changes in work	2002, 2009
<b>Japan</b>	PLUS – Participation, Labour, Unemployment Survey	2005, 2006, 2008, 2010, 2011 and 2014
	Japanese Panel Study of Employment Dynamics	2016
<b>Korea</b>	Working conditions survey*	2006, 2010
<b>Norway</b>	Working Environment, Survey on Living Conditions	Every 3 years (last in 2016)
<b>Slovak Republic</b>	Information System on Working Conditions (ISWC)	1994, yearly
<b>Spain</b>	National Survey on Working Conditions	Every 3 or 4 years (last in 2015)
	National Survey on Quality of Life in the Workplace	Yearly, between 1999-2010
<b>Sweden</b>	The work environment	Every 2 years (last in 2015)
	Work-related disorders	Every year (from 1991 to 2006) every 2 years since 2008 (last in 2014)
<b>United Kingdom</b>	Skills and Employment Survey	1986, 1992, 1997, 2001, 2006, 2012
	Workplace Employment Relations Survey (WERS)	1980, 1984, 1990, 1998, 2004, 2011
	General Social Survey, Quality of Worklife Module	2010
<b>United States</b>	Occupational Requirements Survey	2015
	American Working Conditions Survey*	2015

Note: \* Modelled on European Working Conditions Surveys.

### Comprehensiveness

As shown by the OECD inventory, while there is extensive coverage of some aspects of the quality of the working environment for many countries, other aspects are not covered, or covered less well. For example, all the seven international surveys reviewed in Section 2.3 covered physical risk factors and work intensity, but only two of them (EWCS and GWP) included questions on the opportunities that a job provides for workers' self-realisation or on the quality of management practices. In addition, information on several aspects of the working environment (e.g. physical demands, task discretion and autonomy, training and learning opportunities at work, the intrinsic rewards of one's job, the work-life

balance, unsociable work hours and flexibility of working hours) is available only for European and a few other OECD countries.

### **Comparability**

Comparability is limited both across countries and in terms of different sources available for the same country. With respect to the first aspect, while there are several data sources that enable international comparisons, most of them are limited to European countries. Only a few of these sources (ISSP, GWP and ESS) cover non-European countries.<sup>10</sup> With respect to the second aspect, different agencies currently conduct surveys covering different features of the quality of the working environment: in the European Union, these include national statistical offices (through ad hoc modules of the EU-LFS); private foundations and agencies outside the official statistical system (e.g. Eurofound, through the EWCS and the EQLS); researcher networks (e.g. ESS and ISSP); and commercial providers (e.g. GWP). This heterogeneity of providers leads to differences in the overall assessment of the quality of the working environment, depending on which data sources are used.

### **Timeliness**

The only surveys on the quality of the working environment that are conducted regularly are the EWCS and EQLS, which are repeated every four or five years. Other European surveys are either one-off (e.g. Eurobarometer's Flash module on jobs) or repeated irregularly as a special module of general surveys (e.g. the 2nd and the 5th rounds of the ESS, and the Work Orientation modules of the ISSP). The ISSP, currently the only survey gathering information for a number of non-European OECD countries, is carried out every 8-10 years, leading to data that become out-of-date much too quickly.

### **Sample size**

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. This stems from the fact that most surveys with comprehensive coverage on the quality of the working environment are general population surveys, implying that the relevant sample is significantly lower when restricting attention to employed people. Only the EWCS interviews people who are employed in the reference week, but in most countries the sample size is limited to 500 to 1 000 respondents. While LFSs are based on large samples, most EU LFS ad hoc modules focus on sub-dimensions of working conditions one at a time, which does not allow a comprehensive view of the multidimensional aspects of the quality of the working environment.

## **2.5. Conclusion**

The range of high-profile political initiatives launched since 2000 bears testimony to the growing policy interest in the notion of the quality of the working environment and of the growing consensus on the need for policy makers to look beyond the *quantity* of jobs created to also consider their *quality*.

While all these policy initiatives have relied on frameworks that identify key dimensions of job quality and of the working environment, which are operationalised through various indicator sets, their policy impact has remained limited due to both the diversity of approaches and the paucity of available data. Initiatives to measure the quality of the working environment to respond to this policy demand do exist, but they remain

limited due to a combination of infrequent or one-off surveys, small sample sizes, limited comparability across countries, etc. Responding to this policy demand requires that large-scale official surveys are deployed by national statistical offices, subject to the same quality requirements that apply to other types of official statistics.

### Notes

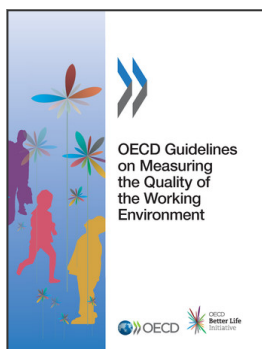
1. With this strategy, the Commission aimed at “defining a clear approach to improve quality of work, establishing a coherent and broad set of indicators on quality in work, and ensuring that the goal of improving quality is fully integrated in employment and social policies through quality reviews” (UNICE 2001).
2. For the “wages” and “collective interest representation” dimensions, macro-level observations are included using the Annual Macro Economic database (AMECO) and the Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ITWWSS) database, respectively.
3. These legal framework indicators pertain to labour administration, government commitment to full employment, unemployment insurance, a statutory minimum wage, maximum hours of work, paid annual leave, maternity leave, parental leave, child labour, forced labour, termination of employment, equal opportunity and treatment, equal remuneration of men and women for work of equal value, employment injury benefits, OHS labour inspection, pension (public/private), incapacity for work due to sickness/sick leave, incapacity for work due to invalidity, freedom of association and the right to organise, collective bargaining rights and tripartite consultations.
4. The national statistical offices of Azerbaijan, Australia, Canada, Finland, France, Germany (chair), Israel, Italy, Luxembourg, Mexico, Republic of Moldova, the Netherlands, Poland, Switzerland and the United Kingdom were members of the UNECE expert group on quality of employment.
5. As no single source is available for all OECD countries, the Job Strain index is obtained by combining two international surveys: the special modules of the European Working Conditions Survey (EWCS) and the Work Orientations module of the International Social Survey Programme (ISSP) collected in 2005 and 2015. Both surveys contain questions on the job demands and job resources discussed above; these questions differ, however, in terms of question wording, response scales and question order, which may result in differences in individuals’ responses across countries. To overcome these problems, the OECD conducted an extended analysis in order to assess the degree of comparability between the two surveys for the 16 common countries: this analysis shows that choosing the most similar questions and applying certain thresholds yields a correlation coefficient of 0.89 between the job strain indices computed from the two surveys. The OECD Job Quality Database provides information on the composite Job Strain index (EWCS and rescaled ISSP indices), as well as the share of workers facing time pressures or physical health risk factors, enjoying work autonomy or learning opportunities, and reporting good workplace relationships.
6. This “Inventory of Survey Questions on the Quality of Working Environment” is available online in the OECD Statistics Database ([http://stats.oecd.org/Index.aspx?DataSetCode=JOBQ\\_I](http://stats.oecd.org/Index.aspx?DataSetCode=JOBQ_I)).
7. Note that the number of sub-dimensions included in the inventory is larger than the number referred to in the OECD Employment Outlook chapters and the Job Quality Database.
8. Themes covered by AHMs so far include: *Accidents at work and occupational diseases*, 1999; *Transition from school to working life*, 2000; *Length and patterns of working time*, 2001; *Employment of disabled people*, 2002; *Lifelong learning*, 2003; *Work organisation and working-time arrangements*, 2004; *Reconciliation between work and family life*, 2005; *Transition from work to retirement*, 2006; *Work-related accidents, health problems and hazardous exposure*, 2007; *Labour-market situation of migrants*, 2008; *Entry of young people into the labour market*, 2009; *Reconciliation between work and family life*, 2010; *Employment of disabled people*, 2011; *Transition from work into retirement*, 2012; *Accidents at work and other work-related health problems*, 2013; *Labour-market situation of migrants and their immediate descendants*, 2014; *Young people on the labour market*, 2016; and *Self-employment*, 2017. Other AHMs are planned in the future: *Reconciliation between work and family life* in 2018; *Work organisation and working-time arrangements* in 2019; *Accidents at work and other work-related health problems* in 2020; and *Labour situation of migrants and their descendants* in 2021.
9. For instance, France did not conduct the ad hoc module on Work accidents because questions relating to exposure to risk factors were recommended to follow questions on health status, thus priming the respondents to overstate risk factors at work.
10. The Gallup World Poll has broad country coverage but not all countries participate in all waves.

## References

- Bassanini, A. and E. Caroli (2015), "Is work bad for health? The role of constraint vs. choice", *Annals of Economics and Statistics*, No. 119/120, pp. 13-37.
- Burke, J.R. et al. (2009), "Work hours, work intensity, satisfactions and well-being among Turkish manufacturing managers", *Europe's Journal of Psychology*, Vol. 2, pp. 12-30.
- Caruso, C.C. et al. (2004), "Overtime and extended work shifts: Recent findings on illnesses, injuries, and health behaviors", Department of Health and Human Services, DHHS (NIOSH) Publication No. 2004-143, Cincinnati.
- Cazes, S., A. Hijzen and A. Saint-Martin (2015), "Measuring and assessing job quality: The OECD Job Quality Framework", *OECD Social, Employment and Migration Working Papers*, No. 174, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jrp02kpw1mr-en>.
- Dembe, A.E. et al. (2005), "The impact of overtime and long work hours on occupational injuries and illnesses: New evidence from the United States", *Occupational & Environmental Medicine*, No. 62, pp. 588-597.
- EMCO (2010), *Quality in Work – Thematic Review 2010*, EU Employment Committee, Brussels.
- Eurofound (2016), *6th European Working Conditions Survey – Overview Report*, Publications Office of the European Union, Luxembourg, [www.eurofound.europa.eu/publications/report/2016/working-conditions/sixth-european-working-conditions-survey-overview-report](http://www.eurofound.europa.eu/publications/report/2016/working-conditions/sixth-european-working-conditions-survey-overview-report).
- Eurofound (2012), "Trends in job quality in Europe", Publications Office of the European Union, Luxembourg, [www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef1228en\\_0.pdf](http://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1228en_0.pdf) (accessed on 1 February 2017).
- European Commission (2017), Annual Macro Economic Database, [https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco\\_en](https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco_en) (accessed on 31 July 2017).
- European Commission (2001), "Employment and social policy: A framework for investing in quality", Communication from the Commission to the European Parliament, the Economic and Social Committee and the Committee of the Regions, COM (2001) 313.
- European Union, Flash Eurobarometer 398, [https://data.europa.eu/euodp/en/data/dataset/S2044\\_398](https://data.europa.eu/euodp/en/data/dataset/S2044_398) (accessed on 31 May 2017).
- Eurostat, The European Union Labour Force Survey (EU-LFS), [http://ec.europa.eu/eurostat/statistics-explained/index.php/EU\\_labour\\_force\\_survey\\_%E2%80%93\\_data\\_and\\_publication](http://ec.europa.eu/eurostat/statistics-explained/index.php/EU_labour_force_survey_%E2%80%93_data_and_publication).
- Frijters, P., D. Johnston and X. Meng (2009), "The mental health cost of long working hours: The case of rural migrants", mimeo.
- Gallup World Poll (2017), [www.gallup.com/services/170945/world-poll.aspx](http://www.gallup.com/services/170945/world-poll.aspx) (accessed on 1 August 2017).
- Gray, M. et al. (2004), "Long work hours and the wellbeing of fathers and their families", *Australian Journal of Labour Economics*, Vol. 7(2), pp. 255-273.
- Hewlett, S.A. and C.B. Luce (2006), "Extreme jobs: The dangerous allure of the 70-hour workweek", *Harvard Business Review*, December.
- ILO (2012), *Decent Work Indicators: Concepts and Definitions: ILO Manual*, International Labour Office, Geneva.
- ISSP (2005), *4th European Working Conditions Survey and 3rd Work Orientations module of the International Social Survey Program*, [www.gesis.org/issp/modules/issp-modules-by-topic/work-orientations/2005/](http://www.gesis.org/issp/modules/issp-modules-by-topic/work-orientations/2005/) (accessed on 1 August 2017).
- ITWWSS, *The Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts Database*, <http://uva-aiaas.net/en/ictwss> (accessed on 31 May 2017).
- Leschke, J. and A. Watt (2008), "Job quality in Europe", *ETUI-REHS Working Paper*, No. 2008/07.
- OECD (2016a), Job Quality Database, <http://stats.oecd.org/Index.aspx?DataSetCode=JOBQ>, (accessed on 1 February 2017).
- OECD (2016b), "Inventory of survey questions on the quality of working environment", [http://stats.oecd.org/Index.aspx?DataSetCode=JOBQ\\_I](http://stats.oecd.org/Index.aspx?DataSetCode=JOBQ_I) (accessed on 1 February 2017).
- OECD (2014), "How good is your job? Measuring and assessing job quality", *OECD Employment Outlook 2014*, OECD Publishing, Paris, [http://dx.doi.org/10.1787/empl\\_outlook-2014-6-en](http://dx.doi.org/10.1787/empl_outlook-2014-6-en).

- Stiglitz, J.E., A. Sen and J.-P. Fitoussi (2009), *Report by the Commission on the Measurement of Economic Performance and Social Progress*, [www.insee.fr/fr/information/2550927](http://www.insee.fr/fr/information/2550927) (accessed on 1 February 2017).
- UNECE (UN Economic Commission for Europe) (2015), *Handbook on Measuring Quality of Employment – A Statistical Framework*, United Nations, New York and Geneva, [www.unece.org:8080/fileadmin/DAM/stats/publications/2015/ECE\\_CES\\_40.pdf](http://www.unece.org:8080/fileadmin/DAM/stats/publications/2015/ECE_CES_40.pdf) (accessed on 1 February 2017).
- UNICE (Union of Industrial and Employers' Confederations of Europe) (2001), *UNICE Position Paper on the Commission communication "Employment and social policies: A framework for investing in quality"*, [www.businessseurope.eu/sites/buseur/files/media/imported/2002-03849-E.pdf](http://www.businessseurope.eu/sites/buseur/files/media/imported/2002-03849-E.pdf) (accessed on 1 February 2017).





**From:**  
**OECD Guidelines on Measuring the Quality of the Working Environment**

**Access the complete publication at:**  
<https://doi.org/10.1787/9789264278240-en>

**Please cite this chapter as:**

OECD (2017), “The current situation of data on the quality of the working environment”, in *OECD Guidelines on Measuring the Quality of the Working Environment*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264278240-5-en>

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