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Handbook
on Measuring
Quality of Employment
A Statistical Framework

Prepared by the Expert Group on Measuring Quality of Employment



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NOTE

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PREFACE

Employment is at the centre of most people's lives, and the quality of an individual's employment is an important element of his or her well-being. At the same time, labour markets are evolving and the conditions of employment are continuously changing, which affects the lives of individual workers and members of their households. This development has been accompanied by growing interest in quality of employment and demands from policy makers, governments and researchers for more systematic information on quality of employment to complement the well-established quantitative labour market indicators.

To assist statistical offices in meeting user demands, the Bureau of the Conference of European Statisticians established the Expert Group on Measuring Quality of Employment to develop a set of internationally agreed upon guidelines for compiling quality of employment statistics. The *Handbook for Measuring Quality of Employment, A Statistical Framework* is the result of its efforts.

The statistical framework provides a coherent structure for measuring quality of employment. It approaches quality of employment as a multidimensional concept, identifying seven dimensions and twelve sub-dimensions and introducing a number of statistical indicators for measuring each. The indicator sheets, located in Annex 2, provide operational definitions and guidelines for compiling and interpreting the indicators. The statistical framework and its set of indicators are intended as a statistical toolbox that can be applied flexibly, according to the specific requirements and institutional background of each country.

The statistical framework acknowledges other international efforts that have been undertaken in the area of measuring quality of employment, in particular the ILO Decent Work Agenda, two sets of indicators that have been developed within the EU (under the European Commission and Eurofound), as well as recent research on job quality at the OECD. These organizations actively participated in the work of the Expert Group to ensure consistency amongst the different frameworks to the greatest extent possible.

It is hoped that this framework will be useful for national statistics offices in compiling statistics on quality of employment.

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SUMMARY

Quality of employment is an important issue for society, policy makers, governments and researchers. Employment is key to the social and economic advancement of workers and provides them with a sense of identity, but it may also be associated with risks for health and well-being. The dynamic development of labour markets can be accompanied by challenges concerning the quality of employment that call for statistical measurement.

The *Handbook for Measuring Quality of Employment, A Statistical Framework* was prepared by the Expert Group on Measuring Quality of Employment, established by the Bureau of the Conference of European Statisticians (CES). It aims at providing a clear and coherent structure for measuring quality of employment. Quality of employment is approached as a multidimensional concept, characterised by different elements, which relate to human needs in various ways. To cover all relevant aspects, the framework identifies seven *dimensions* and twelve *sub-dimensions* of quality of employment:

- 1) Safety and ethics of employment
 - a. Safety at work
 - b. Child labour and forced labour
 - c. Fair treatment in employment
- 2) Income and benefits from employment
 - a. Income
 - b. Non-wage pecuniary benefits
- 3) Working time and work-life balance
 - a. Working hours
 - b. Working time arrangements
 - c. Work life balance
- 4) Security of employment and social protection
 - a. Security of employment
 - b. Social protection
- 5) Social dialogue
- 6) Skills development and training
- 7) Employment-related relationships and work motivation
 - a. Employment-related relationships
 - b. Work motivation

For each dimension and sub-dimension, the framework presents a number of *statistical indicators* that may be produced. The annexes of the statistical framework include the full list of indicators for measuring quality of employment together with detailed *indicator sheets* for the indicators, which provide operational definitions and suggest guidelines for compiling and interpreting the indicators. The framework is intended to allow flexibility to meet the needs of countries that wish to analyse quality of employment, according to specific national policy requirements and institutional backgrounds of countries. The framework also includes suggestions for *context information* that should be considered to facilitate the interpretation of the indicators on quality of employment. Context information may include statistical indicators on the economic and social context of employment, employment opportunities (e.g., employment-to-population ratio,

unemployment rate) as well as information regarding the legal and institutional context of employment.

The statistical framework defines quality of employment from the point of view of the employed person. It refers to the entirety of aspects of employment that may affect the well-being of employed persons. This may differ from the point of view of the employer or the society as a whole. The framework acknowledges that different aspects of quality of employment may be perceived differently by different individuals. The proposed indicators are defined in a way that allows assessment for specific subpopulation groups, such as women compared to men, young or older workers compared to middle aged workers, lower compared to higher-educated persons, migrants compared to nationals or inhabitants of different regions.

In the process of reviewing the dimensions and developing the indicators (as well as the indicator sheets), the Expert Group has drawn on the relevant international standards and the existing international research. In particular, the standards adopted by the International Conference of Labour Statisticians (ICLS) and the International Labour Conference (ILC) served as important references in developing the framework and indicator sheets. The relevance of the indicators is well established on these grounds, although the statistical framework avoids value judgement, for example, regarding the distinction of “high quality” and “low quality” employment. The presentation of the statistical framework, together with the indicator sheets, elaborates further on why the indicators have been selected and their importance in the context of measuring quality of employment. Still, any value judgement is left to the users of the statistics.

The framework acknowledges other international efforts that have been undertaken in the area of measuring quality of employment. Both the ILO and the EU have developed indicators for related purposes. In contrast to other indicator sets, the proposed statistical framework is not linked to a particular policy agenda. The framework is considered a statistical toolbox that provides practical guidance to countries that wish to compile statistics on quality of employment. Despite the different objectives of other international frameworks, the former Task Forces and the current Expert Group on Measuring Quality of Employment have reviewed the underlying concepts and variables used in other frameworks in order to ensure conceptual consistency to the greatest extent possible. The ILO, Eurostat and the OECD contributed actively to the development of the statistical framework to achieve this objective.

The framework stresses the need for continued research and exchange of experience at the international level to keep it up-to-date. Changes in labour markets may necessitate the development of additional indicators or make existing ones obsolete. A few indicators are earmarked as experimental, as the Expert Group felt the need to develop these further, based on future experiences. The document identifies a list of research areas that are recommended to be considered for further research.

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I. INTRODUCTION

1. Quality of employment is an important issue for society, policymakers, governments and researchers. In many countries, the heterogeneity of employment types has increased over the last few decades. Non-standard types of employment have grown substantially, while the share of standard full-time jobs with open ended contracts has decreased. These issues underscore the importance of collecting more systematic information on quality of employment in order to complement the well-established quantitative labour market indicators.

2. Countries have established labour laws and regulations that prohibit or limit certain forms of labour. Some laws abolish certain types of work, such as forced labour and child labour, while other rules regulate the workforce. Maximum working hours and worker safety regulations are examples of such measures.

3. Employment is central to the life of people in many countries, not only in terms of providing income. Employment influences quality of life in many respects: it is often the key to social and economic advancement, it provides one with a sense of identity and it offers opportunities to socialise with others. At the same time, employment is not without risk. Some types of employment can have negative implications on health and also restrict opportunities in non-working life.¹ Quality of employment may play an important part in countries that are faced with the problem of an ageing labour force, as it is a key factor to enhance sustainability of employment.²

4. In many countries, employment situations differ significantly across demographic and social population groups, as well as across (national) regions. For example, the characteristics of employment of men and women differ in many respects. Hence, quality of employment needs to be measured not only for all employed persons, but also for relevant sub-groups, such as men and women, young and old workers or natives and migrants.

5. Many international organizations emphasise the importance of quality of employment in their work. The main purpose of the work of the International Labour Organization (ILO) is “to promote opportunities for men and women to obtain decent and productive work”³. The ILO’s work goes beyond a concern for the quantity of employment to include a focus on worker rights; employment creation; social protection; and social dialogue between workers’ organizations, employers’ organizations and governments. In Europe, the Europe 2020 strategy identified employment and job quality as essential elements for smart, sustainable and inclusive growth.⁴ The promotion of quality of work is a “guiding principle” in the Social Policy Agenda of the

¹ See, e.g., Stiglitz, Joseph; Sen, Amartya; Fitoussi, Jean-Paul, 2009: *Report by the Commission on the Measurement of Economic Performance and Social Progress*. At www.stiglitz-sen-fitoussi.fr, p. 49

² See, e.g., Europfound, 2008: *Working conditions of an ageing workforce*. Luxembourg: Office for Official Publications of the European Communities 2008.

³ Juan Somavia, former ILO Director-General, as stated at <http://www.ilo.org/global/about-the-ilo/mission-and-objectives/lang--en/index.htm>, October 25, 2012.

⁴ European Commission: *Employment and Social Developments in Europe 2011*. At http://ec.europa.eu/employment_social/esde/2011.

European Union (EU). In 2000, heads of State and Governments of the EU set the “overall goal of moving to full employment through creating not only more, but also better jobs”.⁵ Subsequent meetings of the European Council have also concluded that promoting quality and productivity at work is a priority for the EU.

6. A recent development is the work fostered by the Stiglitz-Sen-Fitoussi Commission on the Measurement of Economic Performance and Social Progress established by the former French President, Nicolas Sarkozy, in 2008.⁶ Based on this Commission’s report on how to improve measures of well-being and progress, the European Commission issued a communiqué “GDP and beyond” in September 2009, which also influenced the monitoring of the EU 2020 Strategy. The OECD has launched important activities to follow up on the Stiglitz-Sen-Fitoussi Commission through the OECD “Better Life Initiative” as well as a project on defining, measuring and assessing job quality. In the report, *How’s Life?*, there are several components of well-being related to the measurement of quality of employment (for example, jobs and earnings and work-life balance) and due reference is given to the UNECE’s work on the topic.⁷ Several initiatives to implement the recommendations of the Stiglitz-Sen-Fitoussi-Commission took the UNECE’s work on measuring quality of employment as the reference frame for this part of their work.⁸ In Australia, a large scale consultation about the indicator set “Measures of Australia’s Progress” (MAP) confirmed the importance of quality of paid work as an essential part of people’s lives. The consultation identified income, job satisfaction, flexible arrangements, safe and healthy working conditions and effective industrial relations environments as elements of quality of employment.⁹

7. To assist countries with monitoring and developing their policies to improve quality of employment, both the ILO and the EU have developed sets of statistical indicators. The ILO indicators for the measurement of decent work are grouped under eleven substantive elements, which cover the four strategic objectives of the Decent Work Agenda: employment creation, guaranteeing rights at work, extending social protection and promoting social dialogue. The Decent Work indicators presented at the 18th International Conference of Labour Statisticians (ICLS) in 2008 include a set of statistical indicators combined with “indicators” on the legal framework. Countries may select from these indicators in order to measure progress towards national strategic objectives of the Decent Work Agenda. Within the EU, two sets of indicators are used. One set of indicators is maintained by the European Commission for monitoring labour market policies. Another set was developed and is in use by the European Foundation for the Improvement of Living and Working Conditions (Eurofound).

⁵ Lozano, Esteban, 2005: *Quality in work: Dimensions and Indicators in the Framework of the European Employment Strategy*, UNECE/ILO/Eurostat Seminar on the Quality of Work, Geneva, May 11 to 13, 2005, p. 2.

⁶ Stiglitz, Joseph; Sen, Amartya; Fitoussi, Jean-Paul, 2009: *Report by the Commission on the Measurement of Economic Performance and Social Progress*. At www.stiglitz-sen-fitoussi.fr

⁷ OECD, 2011: *How’s Life? Measuring Well-Being*. OECD, Paris, 2011. OECD, 2014: *How good is your job? Measuring and assessing job quality*. In: OECD (ed.): *Employment Outlook 2014*, pp. 79-139.

⁸ See, e.g., *Monitoring Economic Performance, Quality of Life and Sustainability*. Joint Report as requested by the Franco-German Ministerial Council. Paris, Wiesbaden 2010.

⁹ Australian Bureau of Statistics: *Measures of Australia’s Progress. Aspirations for our nation: A conversation with Australians about progress*, p. 91. At <http://www.abs.gov.au/ausstats/abs@.nsf/mf/1370.0.00.002>

8. The purpose of UNECE's work on quality of employment, which dates back to 2000, is to develop a statistical framework for measuring quality of employment. In contrast to the other existing indicator sets, the statistical framework is not linked to a particular policy agenda and therefore does not monitor progress towards specified targets. It has been developed as a statistical toolbox that can be applied flexibly and used in various contexts, according to the specific policy requirements and institutional backgrounds of countries. In the development of the framework, two Task Forces were created in 2005 and 2007 under the auspices of the Conference of European Statisticians (CES) in order to work on the methodology for measuring quality of employment. The 2007 Task Force developed a framework for measuring quality of employment with 7 dimensions and over 50 indicators, following a series of implementation studies. The framework was implemented by at least 9 countries by the end of the Task Force's term.¹⁰ A first version of the present document was drafted by the 2007 Task Force.

9. The current Expert Group on Measuring Quality of Employment was established in February 2012 comprising Azerbaijan, Australia, Canada, Finland, France, Germany (chair), Israel, Italy, Luxembourg, Mexico, Republic of Moldova, Netherlands, Poland, Switzerland, the United Kingdom, Eurostat, Eurofound, ILO, OECD, UNECE (secretariat) and Women in Informal Employment Globalizing and Organizing (WIEGO). The Expert Group has the following objectives: (i) review and revise the conceptual structure of measuring quality of employment as outlined in the *Report on Potential Indicators for Measurement of Quality of Employment*; (ii) revise the set of indicators of quality of employment in order to reflect the issues that were raised at the 58th CES plenary session, in country reports and during the Expert Group meeting on 31 October-2 November 2011; and (iii) develop operational definitions and computation guidelines (including on data sources and limitations) for quality of employment indicators.

10. This document introduces the statistical framework for measuring quality of employment, specifies the objectives and structure of the framework and introduces a list of recommended indicators for measuring quality of employment. The annexes include the list of indicators as well as detailed *indicator sheets* for all of the indicators. These indicator sheets provide operational definitions and detailed guidelines for compiling the indicators as well as for their interpretation in the context of quality of employment.

¹⁰UNECE, 2010: *Measuring Quality of Employment, Country Pilot Reports*. UNECE, Geneva, 2010.

II. THE CONCEPT OF QUALITY OF EMPLOYMENT

11. The statistical framework follows the definition of employment endorsed by the *Resolution concerning statistics of work, employment and labour underutilisation* adopted by the Nineteenth International Conference of Labour Statisticians (ICLS) held in October 2013.¹¹ This Resolution (hereafter referred to as the 19th ICLS Resolution on work statistics) presents not only refinements to existing ICLS standards on conceptual definitions and guidelines on the labour force and related components, but also presents a new framework and guidelines for measuring different forms of work as well as recommendations on measures of labour underutilisation. According to this Resolution, *work* is defined as any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use. This definition of work is consistent with the *general* production boundary of the System of National Accounts (SNA) and enables full compilation of national production accounts and satellite accounts. Five mutually exclusive forms of work — including employment work — are identified in this Resolution, which are distinguished by the intended destination of the production (i.e., whether for own final use or for use by other economic units) and the nature of the transaction (i.e., whether monetary or non-monetary transactions and transfers). *Employment work* refers to work performed (for use by other units) in exchange for pay or profit. The form of work identified as employment at the same time sets the reference scope for the definition of the *labour force*. The concept of the labour force refers to the current supply of labour for the production of goods and services in exchange for pay or profit.

12. According to the 19th ICLS Resolution on work statistics, *persons in employment* are defined as all those of working age who, during a short reference period, either worked in a job for pay or profit for at least one hour or were temporarily absent from such a job in which they had already worked. *Pay or profit* refers to work done as part of a transaction in exchange for remuneration, which may be payable either as wages or salaries for time worked or work done or as profit (or loss) derived through market transactions from the goods and/or services produced. Remuneration may be in cash or in kind, whether actually received or not. The 19th ICLS Resolution on work statistics defines a *job* as a set of tasks and duties performed, or meant to be performed, by one person for a single economic unit. Persons may have one or several jobs. Notably, for many quality of employment indicators, including those related to employment-related income and working time, indicators should ideally cover all jobs of multiple jobholders, since the employment quality perspective of the employed person is taken into account. This is a feature distinguishing the quality of employment framework from a job quality framework. In cases where the main job is used as the reference amongst multiple job-holders, the main job

¹¹ *Resolution concerning statistics of work, employment and labour underutilization*, adopted by the Nineteenth International Conference of Labour Statisticians (October 2013). Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_230304/lang--en/index.htm

should refer to the one with the longest hours usually worked, as defined in the international statistical standards on working time.¹²

13. In accordance with the importance of multiple job holding in a given country, countries may decide to focus on the main job when calculating indicators on quality of employment. It is recommended to provide information regarding secondary job(s) whenever necessary. Still, countries should take into account that more detailed information tends to be available for the main job. If information is provided for both main and secondary job(s), it should be provided in breakdown by main and secondary jobs (e.g., concerning earnings or working hours) in order not

**Background information: Changes in the international statistical standards
regarding the definition of employment**

Until the adoption of the *Resolution concerning statistics of work, employment and labour underutilization* adopted by the Nineteenth International Conference of Labour Statisticians (ICLS) in 2013, the international statistical recommendations regarding the concept definition of employment were based on the *Resolution concerning statistics of the economically active population, employment, unemployment and underemployment*, adopted by the Thirteenth ICLS in 1982. According to the 13th ICLS Resolution, employment referred to all persons above a specified age who during a brief period (either one week or one day) were either (1) in paid employment (for wage or salary, in cash or in kind) or (2) in self-employment (for profit or family gain). In either case, to be considered employed, the person had to have been (during the brief period) either at work or temporarily not at work in a job to which they had some attachment.

According to the 13th ICLS resolution, a work activity was considered employment if the activity in which the person was engaged was included within the production boundary of the System of National Accounts, thus making the previous definition broader than the current one. The previous definition of employment allowed the inclusion of persons that were in a work activity that was not for pay or profit, such as (1) unpaid apprentices and trainees, (2) persons who produced goods for own final use (such as subsistence foodstuff producers) if such production comprised an important contribution to the total household consumption, (3) persons who volunteered through/for organisations and (4) persons who volunteered to produce goods for other households, if the production comprised an important contribution to the total household consumption. All four of these types of workers are now excluded from the definition of persons in employment according to the 19th ICLS Resolution on work statistics. In countries where persons engaged in the production of goods for own final use has been a sizable share of employment and employment data have been collected following the 13th ICLS recommendations, it may be expected that there will be an important break in series once the new 19th ICLS Resolution on work statistics standards are adopted in the national data collection system.

¹² *Resolution concerning the measurement of working time*, adopted by the Eighteenth International Conference of Labour Statisticians (November-December 2008). Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang--en/index.htm

to restrict the analytical potential. Countries should try to allow for an identification of the several jobs carried out by the same employed person.

14. The statistical framework was designed for measuring quality of employment (i.e., work for pay or profit). Many dimensions and indicators could however also be relevant for other types of work, for instance own-use production of goods and unpaid trainee work. According to national circumstances, countries may consider extending the scope of parts of the indicators to other forms of work, if deemed necessary. In this case, however, it is recommended to provide breakdowns by form of work. In the case of Sub-dimension 1b (Child labour and forced labour), a broader scope is suggested, as the restriction to employment work does not seem appropriate in this specific case.

15. Quality of employment is a complex concept. Its definition and components depend on whether quality of employment is assessed from the perspective of the society, the corporation or the individual.¹³ The societal perspective of quality employment focuses on the social consequences of “high” or “low” quality of employment. “High” quality employment for the society may refer to employment adequate to the qualifications of the labour force, leading to high productivity rates and enhancing social cohesion. From the corporate point of view, “high” quality employment may correspond to having a skilled and efficient workforce. Individual workers may rate the quality of their employment high if certain conditions such as safety and health at work or security of employment are met and if the remuneration is favourable. Of course there are overlaps between the societal, corporate and individual views on what constitutes high quality employment. Both employers and workers, for example, presumably have a strong interest in reducing accidents in employment. Likewise, workers usually have an interest in working for a profitable enterprise. However, one can also imagine contrasting views. For example, what an employee might see as “high wages” (to his or her benefit) the employer might view as high labour costs weighing down the firm’s profits.

16. The Expert Group on Measuring Quality of Employment adopts the individual’s perspective on quality of employment. Quality of employment can be defined as the entirety of aspects of employment that may affect the well-being of employed persons. In other words, quality of employment refers to the conditions and ethics of employment, monetary and non-pecuniary benefits, working time arrangements and work-life balance, employment security and social protection, skills development and training as well as work motivation and employment-related relationships of an individual. Employment is not only analysed as a source of income, but also as providing social security, identity and self-esteem. The quality of employment for a person with more than one job ideally takes important characteristics of the secondary job(s) into account.

17. Quality of employment is a multidimensional concept. Employment is characterised by many different facets, or dimensions, which relate to human needs in various ways. In order to measure quality of employment, several dimensions should be taken into consideration. The

¹³ Vermeylen, Greet, 2005: *Quality in work and employment in the European Working Conditions Survey*, Working Paper no. 4 UNECE/ILO/Eurostat Seminar on the Quality of Work, Geneva, May 11 to 13, 2005, p.2, available at: <http://www.unece.org/fileadmin/DAM/stats/documents/2005/05/labour/wp.4.e.pdf>

dimensions are not hierarchical, and no single dimension is more important than another. For example, *income and benefits from employment* and *security of employment and social protection* are both dimensions of quality of employment, but it is difficult to argue that decent pay is more important than a secure job or vice versa. Albeit closely interlinked, the dimensions are also to some degree independent from one another. The situation in one dimension cannot necessarily be deduced from the situation in others.

18. Even when adopting the perspective of the individual worker, quality of employment is determined at several institutional levels that might be referred to as macro, meso and micro.¹⁴ Some elements of quality of employment are linked to regulations at the political (macro) level, such as minimum working conditions, minimum wages or provisions regarding the prevention of accidents at work. Other elements are mainly determined at the meso level of the sector or the enterprise. Such elements would include the specific working time and pay arrangements (determined by, for example, collective agreements). Further elements are inherent to a specific job (micro), such as the tasks to be carried out, the autonomy of the worker, relationships with superiors and colleagues or work motivation. It should be noted that this distinction is an analytical one, whereas empirically there will be quite strong interrelationships between the levels. Furthermore, the allocation of the elements to the three levels will to some extent depend on the institutional and cultural context. Taking the perspective of the individual worker should not be confused with establishing indicators only at the micro level.

19. Any assessment of quality of employment will to some degree depend on the point of view taken. Employers might have a different interpretation than trade unions and the meaning may also differ from country to country. The assessment will also be influenced by the specific socio-economic context. For example, a country's view of the quality of employment for those with few hours of work may differ during a time of recession compared to a period of strong growth. Similarly, the definition of "high quality" or "low quality" jobs may differ across countries depending on average levels of income across countries.

20. Quality of employment also has a subjective component. An employment characteristic may be perceived as highly rewarding by one worker and as stressful by another. For example, some might see working part-time as a good opportunity to combine work and family life, whereas others might emphasise reduced income opportunities of part-time jobs or implications for their level of social security. Also, a job perceived as favourable in one phase of life might be viewed differently in another one.

21. In the process of identifying dimensions and relevant indicators, statisticians can draw on existing international standards, such as the Resolutions and Guidelines adopted by the International Conference of Labour Statisticians (ICLS) and the Declarations, Conventions and Recommendations adopted by the ILO International Labour Conference (ILC), as well as a rich

¹⁴ See Cloutier, Luc: *La qualité de l'emploi au Québec, développements conceptuels et création d'une typologie. État actuel de la réflexion*, Québec, Institut de la statistique du Québec, 2008 ; Guergoat-Larivière, Mathilde and Olivier Marchand, 2012: *Définition et mesure de la qualité de l'emploi: une illustration au prisme des comparaisons européennes*. In: *Économie et Statistique*, no. 454, pp. 23-42.

body of international research. Internationally, there is a broad consensus that some types of employment should be abolished. This is, for example, the case for child labour and forced labour. Although the framework avoids value judgement, such cases are in no way relativised. Furthermore, a body of international research over many decades has provided evidence that specific employment situations can adversely affect a person's health or certain aspects of quality of life more often than others.¹⁵ For example, working long hours can have negative health implications and often has a negative impact on work-life balance. This does not imply, however, that certain types of employment are considered per se "low" quality. The impact will depend on the institutional and cultural context as well as the personal characteristics and preferences of the worker. The selection of the dimensions, sub-dimensions and indicators was made on the basis of international standards as well as established findings of international research. The rationale of the selection of the dimensions and sub-dimensions, as well as the indicators, is elaborated further in section IV. The indicator sheets in Annex 2 include further explanations for each indicator as well as a selection of specific references to existing research.

22. Official statistics has an important role to play by providing relevant, reliable and impartial statistical information that can be used to understand and interpret the elements of quality of employment. Producers of official statistics should compile and release data on an objective basis determined by statistical considerations only. While statisticians can analyse the correlation between certain aspects of employment and the employed persons' well-being, they should not make value judgments about what is considered "high quality" or "low quality" employment.

¹⁵ For recent examples, see, e.g., Green, Francis, 2006: *Demanding work. The paradox of job quality in affluent economy*. Princeton and Oxford: Oxford University Press. Kalleberg, Arne L., 2011: *Good Jobs, Bad Jobs. The rise of polarized and precarious employment systems in the United States, 1970s to 2000s*. New York: Russell Sage Foundation. Guillén, Ana M. and Sverre-Åge Dahl (eds.), 2009: *Quality of Work in the European Union. Concept, Data and Debates from a Transnational Perspective*. Brussels: Peter Lang. Gallie, Duncan (ed.), 2007: *Employment Regimes and the Quality of Work*. Oxford: Oxford University Press. Muñoz de Bustillo, Rafael et al, 2011: *Measuring More Than Money – The Social Economics of Job Quality*, Cheltenham: Edward Elgar.

III. ELEMENTS AND PRINCIPLES OF THE STATISTICAL FRAMEWORK

23. The statistical framework presented in this paper aims to provide a structured and coherent system for measuring quality of employment. It specifies the concept of quality of employment in seven dimensions. The dimensions are further subdivided into sub-dimensions where appropriate. For measuring quality of employment in each of the dimensions and sub-dimensions, the framework proposes a list of statistical indicators, together with proposals for relevant context information. Detailed descriptions of each indicator – indicator sheets – have been developed to provide guidance for the computation and interpretation of the indicators. The details on the dimensions and sub-dimensions of the statistical framework are given in the next section; the list of indicators is included in Annex 1 of this document. Grounded in a review of the existing literature as well as in-depth analyses on quality of employment in the countries represented, the Expert Group believes that the framework is comprehensive enough to support work by a diverse set of countries to monitor levels and trends in quality of employment.

24. The framework provides a conceptual structure that can be used to give a comprehensive picture of quality of employment. It can be seen as a toolbox for compiling data and calculating indicators on quality of employment. The statistical indicators supply users with the information relevant to describe the main quality aspects of employment. The dimensions and the indicators proposed were selected on the basis of recognised research on quality of employment and studies in countries. The dimensions have been selected to ensure that the main aspects of quality of employment are covered, while the indicators within the dimensions aim to support proper measurement by providing definitions and practical guidance. The framework adheres to the UN Fundamental Principles of Official Statistics, which stipulate that official statistics should be relevant and impartial and that the methods and procedures for the collection, processing, storage and presentation of statistical data should be based on strictly professional considerations.¹⁶ The framework does not include judgements regarding the distinction of “high quality” and “low quality” employment, but includes indicators for their relevance to quality of employment. The indicator sheets in Annex 2 include more information on why the indicators have been selected and suggest guidelines for interpretation. Any value judgement is left to the users of the data.

25. Some information related to quality of employment may be available in one country but not in another. In the view of the Expert Group, it may not be possible or efficient for each country to produce exactly the same information. Rather, the approach here is to provide a comprehensive set of indicators that countries may draw from. Countries are free to select those indicators from the framework that they deem useful, considering their national circumstances, and choose the most suitable data sources.

¹⁶ See the UN *Fundamental Principles of Official Statistics*, available at: <http://www.unece.org/stats/archive/docs.fp.e.html>

26. Another element to consider is that some indicators of quality of employment may show a trend considered favourable while others may be judged to show a negative trend. It is important to note that no single indicator can provide a holistic view of trends in quality of employment. Therefore a variety of indicators should be analysed jointly in order to provide a comprehensive picture.

27. In order to measure quality of employment, it is important to look at all relevant dimensions simultaneously. As a result, the framework will not yield a black and white picture of quality of employment but rather reflect the complexity of the issue being measured.

28. The statistical framework is designed to help users measuring quality of employment from the individual's perspective. In other words, the framework for measuring quality of employment is based on the components (dimensions and sub-dimensions) of quality of employment that are relevant to the employed person. This approach is quite similar to what is proposed in recent conceptual work, where job quality is defined as the characteristics of employment that affect the well-being of the worker.¹⁷

29. While several related international frameworks exist, each suits a particular purpose or policy agenda. None attempts to produce a broad, overall framework for the measurement of quality of employment as such. The difference between the statistical framework for measuring quality of employment and other existing frameworks is that this framework has been developed as a statistical toolbox that can be used in various contexts and does not aim to monitor progress towards targets in a given policy agenda.

30. Interested countries can use the relevant components of the statistical framework based on their requirements and according to the policy needs in their country. Despite the different objectives of other international frameworks, the former Task Forces and the current Expert Group on Measuring Quality of Employment have reviewed the underlying concepts and variables used in other frameworks in order to ensure conceptual consistency to the greatest extent possible.

31. The following principles were followed in the development of the statistical framework for measuring quality of employment:

- 1) The dimensions, sub-dimensions and indicators of quality of employment are organized using a transparent, logical structure;
- 2) All dimensions, sub-dimensions and indicators are clearly relevant for quality of employment, demonstrated by empirical research and country experiences;
- 3) The dimensions, sub-dimensions and indicators for measuring quality of employment are sufficiently broad to allow countries the necessary adaptations to national circumstances;
- 4) Each indicator of quality of employment is of sufficient importance at least within a group of countries to justify measurement;

¹⁷ Muñoz de Bustillo, Rafael et al., 2011: *Measuring more than money: The social economics of job quality*, Edward Elgar, Cheltenham 2011.

- 5) The statistics of quality of employment are technically feasible to produce, but the current availability of data did not drive the selection of indicators. While the framework is designed to draw from existing sources, countries may need to consider expanding the collection of statistics on quality of employment where desirable;
- 6) The indicators are developed, wherever possible, using international recommendations and guidelines on classifications, concepts, definitions and computation methods and definitions. The indicators are those which both National Statistical Offices (NSOs) and other statistics-producing bodies find appropriate to provide data for.

32. The first principle relates to the organization of the indicators. The indicator list needs a clear structure, and the structure chosen here is based on individual needs from employment. The seven dimensions of the framework reflect established theories in the field of human motivation, which have been extensively applied in the field of Quality of Work Life research. This view offers a logical structure to the quality of employment indicators and ensures all aspects of quality of employment are covered.

33. The second, third and fourth principles ensure that comprehensive, varied indicators will allow countries to measure quality of employment for employed persons by age, economic activity, occupation group or status in employment. Countries may find that not all parts of the framework are applicable, as it has been developed with a broad approach to the measurement of quality of employment.

34. The fifth principle ensures practicality, suggesting simple indicators that can be produced using data collection programmes common in many countries, such as population censuses or household surveys (for example, labour force surveys). This aims to facilitate ease of use, although it is of lower priority; practicality is important, but simply choosing what is currently available would not encourage statistical development. There are important aspects of quality of employment that are rarely measured by NSOs. For those aspects, indicators are proposed where, in principle, measurement is considered feasible. All indicators have been measured in at least one country, as reflected in the “Country Pilot Reports” commissioned by the earlier Task Force, and in country reports published to date, as well as in the findings presented during the work of the Expert Group.¹⁸

35. The sixth principle relates the indicators to the international standards that are currently in place, for example, the standards adopted by the International Conference of Labour Statisticians. This principle confers three advantages – first, it avoids duplication of effort; second, it helps ensure consistency of the data produced for indicators on quality of employment with existing international standards. It thirdly facilitates the identification of good practices on which to construct a specific international standard devoted to measuring quality of employment, should the international community decide to proceed in this direction.

¹⁸ See for instance, UNECE, 2010: *Measuring Quality of Employment, Country Pilot Reports*. Geneva: UNECE 2010 or Swiss Federal Statistical Office, 2011: *Quality of Employment in Switzerland*. Neuchâtel: Swiss Federal Statistical Office 2011. Available at <http://www.bfs.admin.ch/bfs/portal/en/index/news/publikationen.html?publicationID=4515>.

36. A logical consequence of taking the perspective of the individual is that indicators of quality of employment are defined in such a way that allows assessing the situation for specific sub-populations, such as women compared to men, young or old compared to middle aged, lower compared to higher educated, migrants compared to nationals, etc. This implies that the indicators are defined, as much as possible, independently from these categories.

37. The statistical framework includes two types of indicators: “objective” and “subjective” indicators. It should be noted that this distinction is neither related to the objectivity of the statistical measurement nor to the accuracy of the measurement. The distinction in fact refers to the substance of the indicators: while “objective” indicators describe the actual conditions shaping the quality of employment (for example, the number of hours worked), “subjective” indicators focus on how workers perceive certain aspects of quality of employment. As in the broader area of quality of life, comprehensively measuring quality of employment requires both objective and subjective indicators. This is in line with the recommendations of the Stiglitz-Sen-Fitoussi commission.¹⁹ At the same time, it should be noted that it is not always straightforward to draw a clear line between “objective” and “subjective” indicators, as the perception of the respondents is often involved to some degree when measuring factual information. Indicators measuring the perception of the respondents might be influenced by cultural and institutional differences, which may restrict international comparability. The indicator sheets in Annex 2 provide further comments regarding such restrictions. Countries that do not consider the use of “subjective” indicators relevant are free to restrict their choice to the other indicators.

38. The conceptual framework focuses on quality aspects of employment. For this reason, general labour market indicators, such as employment rates (employment-to-population ratios) or unemployment rates, are considered outside the scope of the quality of employment indicators. Nevertheless, reflecting the importance of this information for the interpretation of many indicators, such general labour market indicators are included in the framework as *context information*. Besides indicators regarding general labour market conditions, the institutional and legal context should also be considered when using the statistical framework to analyse the state of quality of employment in a given country. To get a full picture of the labour market situation of a country, the indicators on quality of employment should be accompanied by such context information. Following the introduction of the indicators on quality of employment, section IV presents suggestions for context information that might be considered for the interpretation of indicators on quality of employment. General labour market indicators that should always be considered as context information include the labour market participation rate, the employment rate, the unemployment rate and measures of labour underutilisation, all broken down by gender, age and other relevant population groups.

39. As part of the context information, statistical indicators on the economic and social context may cover a set of well-established labour market indicators concerning the population, the labour force participation and employment-to-population ratio of various population groups,

¹⁹ See Stiglitz, Joseph; Sen, Amartya; Fitoussi, Jean-Paul, 2009: *Report by the Commission on the Measurement of Economic Performance and Social Progress*. At www.stiglitz-sen-fitoussi.fr, p. 15-19, 43-45.

unemployment and persons outside the labour force. A particular focus of such statistical context indicators could be the access to employment of certain vulnerable groups of the population. Further possible areas relate to migration, working time at the household level, social protection systems, income distribution and short-term economic trends. These indicators do not provide information on quality of employment as such, but rather quantitative information on the development of the number of employed persons and other relevant socio-economic developments. This kind of information, nevertheless, often proves useful to interpret and understand the levels and changes regarding quality of employment indicators.²⁰

40. Information regarding the legal and institutional context in a given country often further facilitates the interpretation of indicators on quality of employment. For example, the legal provisions for the termination of employment are important for the interpretation of the percentage of employees with fixed-term contracts. As another example, national laws, policies and institutions, worker coverage, established levels and so on regarding the minimum wage and working time of employees may be important for adequately interpreting statistical indicators on quality of employment related to employee earnings and hours. The Expert Group recommends that countries consider the list of legal framework indicators developed in the ILO's Decent Work measurement framework by referring to the ILO Decent work indicators manual.²¹

41. The guiding principles, dimensions and sub-dimensions of the framework may be updated from time to time but should remain relatively stable. The list of indicators, and in particular the indicator sheets, however, should be periodically reviewed in order to remain relevant in light of changes of employment types and patterns (see section V).

²⁰ Context information is available at many international databases, e.g., to be accessed via <http://www.ilo.org/global/statistics-and-databases/lang--en/index.htm>, <http://www.oecd-ilibrary.org/statistics>, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database and others.

²¹ International Labour Organisation, 2013: *Decent Work Indicators. Guidelines for Producers and Users of Statistical and Legal Framework Indicators*. ILO Manual, Second version, Geneva: ILO.

IV. DEFINING THE DIMENSIONS OF QUALITY OF EMPLOYMENT

42. After establishing the principles for the statistical framework of measuring quality of employment, this section defines the dimensions and sub-dimensions of the framework and explains the importance of each of the dimensions for quality of employment. The presentation of the sub-dimensions at the same time introduces important context information that should be considered when interpreting the results.²² The structure of the framework is intended to cover human needs that may be satisfied through employment. The proposed seven dimensions of quality of employment are illustrated in Figure 1.

43. The dimensions and sub-dimensions of the framework for measuring quality of employment are presented below. It is important to note that the ordering of the dimensions does not imply any hierarchy among the dimensions and each may be considered equally important.

1. Safety and ethics of employment
 - a) Safety at work
 - b) Child labour and forced labour
 - c) Fair treatment in employment
2. Income and benefits from employment
 - a) Income
 - b) Non-wage pecuniary benefits
3. Working time and work-life balance
 - a) Working hours
 - b) Working time arrangements
 - c) Work-life balance
4. Security of employment and social protection
 - a) Security of employment
 - b) Social protection
5. Social dialogue
6. Skills development and training
7. Employment-related relationships and work motivation
 - a) Employment-related relationships
 - b) Work motivation

²² For the use of context information, detailed guidance can be found in the Decent Work Indicator Manual of the ILO: International Labour Organisation, 2013: *Decent Work Indicators. Guidelines for Producers and Users of Statistical and Legal Framework Indicators*. ILO Manual, Second version, Geneva: ILO.

Figure 1: The dimensions of quality of employment

44. In the following, together with the dimensions and sub-dimensions, the list of suggested indicators is introduced within each of the sub-dimensions. The list of indicators is based on the list of potential indicators endorsed by Conference of European Statisticians (CES) at its fifty-eighth plenary session in June 2010.²³ This list of indicators had previously been tested in various ways: Nine country profiles were prepared, which were sponsored by the International Labour Organization and used funds provided by the European Union (specifically in Canada, Israel, Finland, France, Germany, Italy, Mexico, Moldova and Ukraine).²⁴ In addition, a validation study had been conducted by the Italian National Statistical Institute (ISTAT) using Principal Component Analysis to test the completeness, redundancy and validity of the indicators.²⁵ Further independent country reports have also applied these indicators in different national contexts.

²³ UNECE, 2010: *Potential indicators for measurement of quality of employment. Note by the secretariat.* Conference of European Statisticians, fifty-eighth plenary session, 8–10 June 2010, document ECE/CES/2010/9. Available at: www.unece.org/stats/documents/ece/ces/2010/9.e.pdf

²⁴ See UNECE, 2010: *Measuring Quality of Employment, Country Pilot Reports.* UNECE, Geneva, 2010. Available at: http://www.unece.org/fileadmin/DAM/stats/publications/Measuring_quality_of_employment.pdf

²⁵ See ISTAT, 2009: *A Validation Study of the Quality of Employment Indicators.* Prepared for the Task Force on the Measurement of Quality of Employment. Rome: ISTAT 2009. Available at: http://www.unece.org/fileadmin/DAM/stats/documents/qualityofemployment/Validation%20Study_QoE.pdf

45. The current Expert Group on Measuring Quality of Employment proposed revisions of this list of indicators in order to incorporate comments given at the fifty-eighth Plenary Session of the CES and to reflect issues raised in the country reports to date and at the Sixth Meeting of the Group of Experts on Measuring Quality of Employment (31 October-2 November 2011). In the revision exercise, the Expert Group, through extensive electronic consultations and at its meeting on 22-23 November 2012, renamed the indicators to improve accuracy in title and/or scope and achieve consistency with the terminology used by the ILO. The revision also incorporated the changes made necessary by the adoption of the *Resolution on statistics of work, employment and labour underutilisation* by the 19th ICLS in 2013. Against the background of the experiences of the countries represented in the Expert Group, further suggestions were made to revise, remove, add or replace indicators to enhance relevant measurement in all dimensions of quality of employment. The list of indicators was further discussed and refined during the seventh meeting of Experts on Measuring Quality of Employment (11-13 September 2013), a meeting of experts at University of London on 3 December 2013, as well as at the second meeting of the Expert Group on Measuring Quality of Employment (10-11 September 2014). The complete final list of indicators is available in Annex 1. Specifications of the indicators regarding definition and formula, measurement objectives, recommended disaggregations, data sources as well as limitations and interpretation guidelines are to be found in the indicator sheets in Annex 2.

DIMENSION 1: SAFETY AND ETHICS OF EMPLOYMENT

46. The dimension on safety and ethics of employment focuses on physical safety and conditions at work, physical health and mental well-being, as well as the rights and treatment of the person in employment. In this way, the dimension is a fundamental component of quality of employment, as physical well-being and the application of internationally accepted human rights and labour conventions are essential to ensure high quality employment. The indicators under this dimension provide general information on workplace injuries, forms of labour such as child and forced labour and unfair treatment.

Sub-dimension 1a: Safety at work

47. The physical safety and health aspect of quality of employment is covered by the sub-dimension *Safety at work*. Risks of injury or death can exist across all types of employment, and thus indicators of safety at work are an important element of quality of employment. The sub-dimension covers four indicators. Two indicators concern the rate of occupational injuries, both fatal and non-fatal. As stated in the ICLS Resolution concerning statistics of occupational injuries,²⁶ protection against employment-related injuries is an important part of the protection of workers against hazards and risks. In many countries, these indicators measure rather rare or even extreme events. At the same time, employment might also adversely affect the physical or mental well-being of workers without directly leading to accidents. Against this background, two further

²⁶ *Resolution concerning statistics of occupational injuries (resulting from occupational accidents)*, adopted by the Sixteenth International Conference of Labour Statisticians (October 1998), available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087528.pdf

indicators are included, measuring whether employment negatively affects either physical or mental well-being of the worker.

Indicators in Sub-dimension 1a: Safety at Work

1a1	Fatal occupational injuries	Rate of fatal occupational injuries per 100,000 employed persons
1a2	Nonfatal occupational injuries	Rate of nonfatal occupational injuries per 100,000 employed persons
1a3	Exposure to physical health risk factors	Percentage of employed persons who are exposed to physical health risk factors at work
1a4	Exposure to mental health risk factors	Percentage of employed persons who are exposed to mental well-being risk factors at work

48. For the interpretation of the indicators in this sub-dimension it may be useful to consult context information, for example regarding the resources deployed nationally for monitoring and enforcing work conditions and standards (e.g., the rate of labour inspectors per 10,000 employed persons). Other useful context indicators that may be obtained from administrative records from the government department responsible for regulating work conditions include registered workplaces that could be selected for labour inspection, visits to workplaces during the year and visits per inspector.

49. The legal and institutional framework of the national labour inspection system, especially as regards occupational safety and health, might also be considered when interpreting the indicators. Particularly for the interpretation of the indicators on occupational injuries, it could be helpful to consult information regarding the provisions for income replacement in case of occupational injuries or other employment-related health problems, including the worker coverage of the system, the qualifying conditions as well as the level and duration of the benefits. Furthermore, changes of the structure of economic activities can be an important factor for the understanding of changes in the trends of safety at work indicators.

Sub-dimension 1b: Child labour and forced labour

50. The sub-dimension *Child labour and forced labour* is closely related to the ILO Declaration on Fundamental Principles and Rights at Work and other international conventions requiring that certain types of work should be abolished, in particular child labour and forced labour. Against this background, protecting children from economic exploitation and from work that is dangerous to their health and morals is a key element of quality of employment as is the elimination of all forms of forced or compulsory labour. For this reason, *Child labour and forced labour* is included as a separate sub-dimension of quality of employment. The 18th International Conference of

Labour Statisticians in 2008 adopted the Resolution concerning statistics of child labour, which contains concepts, definitions and methods of data collection on child labour, including its worst forms.²⁷

51. The term child labour, according to the resolution of the 18th ICLS, reflects “the engagement of children in prohibited work and, more generally, in types of work to be eliminated as socially and morally undesirable,” as guided by national legislation and international standards. Children engaged in child labour include all persons aged 5 to 17 years who, during a specified time period, were engaged in one or more of the following categories of activities: (a) worst forms of child labour, (b) employment below the minimum age and (c) hazardous unpaid household services.²⁸

52. While no international statistical standard has yet been adopted concerning forced labour, in 1930 the term forced labour was defined in the ILO Forced Labour Convention (C29) as “work or service that is extracted from any person under the menace of any penalty and for which the said person has not offered himself or herself voluntarily”.²⁹ This includes such practices as slavery, bonded labour and involuntary labour resulting from human trafficking. The issue of how to statistically define and measure forced labour was first discussed by the ICLS in 2003 when delegates noted the need to define observable criteria that could be used as direct or indirect indicators of the existence of a forced labour situation. In 2005, the ILO Special Action Programme to Combat Forced Labour (SAP-FL) published the first global estimate of forced labour. New estimates have since been published based on a “capture-recapture” method resulting in a greater awareness of the problem and also an increased demand for country specific information to assist policymakers to fight forced labour.

53. There are many difficulties in designing surveys to capture information on forced labour, including the operationalisation of the definition given in ILO Convention 29, specifically concerning the aspects of involuntariness and threat of penalty or coercion during employment. During the 19th ICLS, the topic of forced labour was again discussed and delegates raised the issue of the difficulties of differentiating the concepts of forced labour, trafficking and slavery and called for an international statistical definition and criteria that could be made operational in practice.

54. The indicators selected for this sub-dimension closely reflect the concepts laid down in the resolution concerning statistics on child labour, including the Child labour rate, the Hazardous child labour rate and the Rate of worst forms of child labour other than hazardous work. Forced labour is covered by two indicators: the percentage of persons who are in forced labour and the

²⁷ The ILO’s International Programme on the Elimination of Child Labour (IPEC) has worked extensively in this area. The ILO Statistical Information and Monitoring Programme on Child Labour (SIMPOC), which is the statistical branch of IPEC, supports countries in the development of statistics on the level, characteristics and determinants of child labour.

²⁸ *Resolution concerning statistics of child labour, adopted by the 18th International Conference of Labour Statisticians*, Report of the Conference, pp. 56-66. Geneva 2009. Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112458/lang-en/index.htm

²⁹ *Convention concerning Forced or Compulsory Labour*, Convention No. 29, adopted by the 14th ILC in 1930. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C029

percentage of migrants who were in forced labour. These indicators are vital for gauging the incidence, distribution and characteristics of forced labour and child labour. The implementation of the indicators needs to be informed by the relevant national legislation in order to make the indicators operational. In accordance with international standards, the reference population for indicators on child labour and forced labour should go beyond the group of persons engaged in employment work, covering either forms of work within the SNA production boundary or forms of work within the general production boundary, as defined in the 19th ICLS resolution on work statistics.

Indicators in Sub-dimension 1b: Child Labour and Forced Labour

1b1	Child labour rate	Percentage of children aged 5 to 17 years who are engaged in child labour
1b2	Hazardous child labour rate	Percentage of children aged 5 to 17 years who are engaged in hazardous child labour
1b3	Forced labour rate	Percentage of persons who are in forced labour
1b4	Forced labour rate among returned migrants	Percentage of returned labour migrants who were in forced labour
1bx	Other worst forms of child labour (experimental)	Percentage of children aged 5 to 17 years who are engaged in worst forms of child labour other than hazardous work

55. Relevant context information for the interpretation of the indicators on child labour and forced labour includes the respective national legal provisions. In the case of child labour, important aspects may be the minimum age set by national law for employment, hazardous work and permissible light work, the coverage of this legislation and the prohibition of certain types of child labour, such as the worst forms of child labour. Interpretation of the indicators should also be informed by the participation of children in education, including both the actual percentage of children not in school as well as the legal provisions for compulsory education. Regarding forced labour, it is helpful to bear in mind the national legislation regarding the prohibition, criminalisation and punishment of forced labour, including trafficking and its definition.

Sub-dimension 1c: Fair treatment in employment

56. The elimination of discrimination with respect to employment and occupation is another one of the four ILO Fundamental Principles and Rights at Work. Discrimination at work includes any less favourable treatment that is explicitly or implicitly based on particular grounds, such as sex, race, etc. (direct discrimination), or, although neutral on the surface, the same condition, treatment or criterion leading in practice to a harsh impact on some persons on the basis of characteristics such as race, colour, sex, etc. (indirect discrimination). Discrimination at work denies opportunities for individuals who may not, for example, receive equal pay or have access to managerial positions or who may experience less favourable working conditions. The 2008 ILO

Declaration on Social Justice for a Fair Globalisation underlines the particular importance of gender equality and non-discrimination as a strategic cross-cutting aspect of quality of employment.

57. The sub-dimension *Fair treatment in employment* is aimed at providing measures for discrimination and unfair treatment of men and women as well as other subpopulations in employment. Taking into account the variety of possible grounds of discrimination, apart from gender, population groups to which attention should be paid include various age groups, people of certain ethnic origins, people with physical or mental disabilities, indigenous populations and migrant populations. Fair treatment in employment is a cross-cutting sub-dimension. In other words, unfair treatment can concern any of the other sub-dimensions in the statistical framework. Consequently, in order to assess the level of fair treatment in employment, in principle all sub-dimensions and indicators should be considered for all relevant demographic and social categories in the population. Since the framework takes the perspective of the individual, in principle data should be collected and indicators should be calculated at the level of the person. This allows disaggregation of the relevant quality of employment indicators by sub-population of concern and comparison of those groups with other groups or to the results for the general population. This could be done by producing profiles of quality of employment for selected subpopulations. The relevant subpopulations should be selected according to the groups potentially concerned by in unfair treatment in a given country.

58. To highlight particularly important aspects of fair treatment in employment, three additional indicators were defined that relate to differences in remuneration, differential representation in managerial occupations as well as the self-perception of discrimination at work. It should be noted that these indicators require careful interpretation, as differences between population subgroups cannot necessarily be attributed to discrimination. The results should therefore be interpreted together with adjusted estimates controlling for certain personal characteristics, such as level and field of education, employment biography and years of work experience, that may differ between subgroups. The underlying assumptions in the models used should be made transparent. When examining pay gaps, measurement should refer to gross hourly earnings from main-job employment, so as to account for situations where the (weekly or monthly) earnings of people in one sub-group are equal to the earnings of people in another subgroup only because individuals in the first sub-group combine jobs. Depending on national circumstances, the pay gaps in secondary jobs might be reported complementarily. A further indicator that is relevant for this sub-dimension is the employment rate of mothers and fathers (3c1): A low employment rate of mothers (as compared to that of fathers) could be indicative of discrimination against women with children.

Indicators in Sub-dimension 1c: Fair treatment in employment

For the measurement of fair treatment, users should consider the relevant demographic or social groups given the national circumstances. It is recommended to always provide breakdowns by sex and age groups. Groups for which fair treatment could be an issue include sex, ethnic groups, immigrants, indigenous population groups, persons with disabilities, age groups and geographic regions.

Furthermore, the following specific indicators on fair treatment should be included.

1c1	Pay gap	Pay gap between subpopulation groups (e.g., gender pay gap)
1c2	Access to managerial occupations	Percentage of employed persons in population subgroups (e.g., women) in managerial occupations (ISCO-08 major group 1)
1c3	Discrimination at work	Percentage of employed persons who have been a victim of discrimination at work

59. For the interpretation of indicators regarding fair treatment in employment, it might also be useful to consult context information such as the differential access of different groups to employment, for example, the percentage of employed persons who are women and the selectivity in who amongst women are employed this implies. Furthermore, the distribution of population subgroups across different occupation groups and economic activity groups (horizontal segregation) is a type of context information that could be considered to facilitate interpretation. A further useful context indicator might be the percentage of persons who have stopped looking for work because they believe that they are or would be facing discrimination. Regarding the legal and institutional framework, national policies on non-discrimination, including national laws and policies on equal opportunity and treatment in employment and occupation, might be considered as background information. Moreover, national policies regarding equal pay for men and women for work of equal value, as well as other population groups that may be subject to discrimination in employment, could be taken into account when analysing the statistical indicators in this sub-dimension.

DIMENSION 2: INCOME AND BENEFITS FROM EMPLOYMENT

60. The employment-related income that people receive is clearly an important component of quality of employment. A motivation shared by most employed persons is to earn their living. Most people depend on income from employment for their material well-being. Moreover, people value payment for their work, but they also consider the leave, health coverage and other benefits provided by their work when asking themselves “what is a good job?”³⁰

³⁰ In a survey conducted on about 2,500 Canadians, over half of the respondents said that benefits were “very important” in a job, while over 6 in ten said that good pay was very important. Interestingly, the same survey compared what workers want in a job to what they feel they actually get. The largest “job quality deficits” were noted in pay,

61. The concept of income from employment is framed broadly to include earnings of employees (which includes wages and salaries as well as certain non-wage benefits such as paid leave, as defined below) and also income related to self-employment (also defined below).

Sub-dimension 2a: Income from employment

62. The sub-dimension *Income from employment* provides information on the earnings paid to employees as well as income from self-employment. The concept of earnings was defined in the *Resolution concerning an integrated system of wages statistics*³¹ adopted by the Twelfth ICLS in 1973. The statistical measure of earnings is based on the concept of wages as income of the employee. According to the 12th ICLS Resolution, the concept of earnings relates to remuneration in cash and in kind paid to employees, as a rule at regular intervals, for time worked or work done together with remuneration for time not worked, such as for annual vacation, other paid leave or holidays. Earnings comprise four components: (1) direct wages and salaries (in cash) including regular bonuses, family allowances and house-rent allowances paid by the employer and cost-of-living allowances, (2) remuneration for time not worked (in cash) such as annual vacation and other paid leave, (3) bonuses and gratuities (in cash) such as one-time or year-end bonuses and profit-sharing bonuses and (4) payments in kind including imputed rental value of free or subsidised housing and other payments in kind such as food, drink, fuel, footwear and clothing. Earnings should relate to employees' gross remuneration, that is, total earnings before deductions by an employer for taxes and deductions of contributions of employees to social security, pensions, life insurance premiums, union dues, etc. The term earnings refers solely to remuneration paid to employees by an employer and excludes remuneration received by self-employed workers.

63. The concept of employment-related income was defined in the *Resolution concerning the measurement of employment-related income*, adopted by the Sixteenth ICLS in 1998.³² The Resolution covers the concept of *employment-related income received by employees and income related to self-employment. Employment-related income excludes income derived from other sources such as property, social assistance, transfers, etc., not related to employment. Income related to self-employment* is defined as the income that is received, over a given reference period, by individuals, for themselves or in respect of their family members, as a result of their current or former involvement in self-employment jobs. It is recommended that *gross income related to self-employment* be covered, which includes: (1) the profit (or the share of profit) that is generated by the self-employment activity, (2) where relevant, the remuneration received by owner-managers of corporations and quasi corporations and (3) the amount of employment-related social security benefits received by self-employed persons through schemes recognizing the status in employment as a specific condition for membership. Contributions that self-

benefits and the related concept of advancement opportunities.

³¹ *Resolution concerning an integrated system of wages statistics*, adopted by the Twelfth ICLS in 1973 available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087496/lang--en/index.htm

³² *Resolution concerning the measurement of employment-related income*, adopted by the Sixteenth ICLS in 1998, available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087490/lang--en/index.htm

employed persons made on behalf of themselves to compulsory social security should be deducted. Contributions to voluntary insurance schemes and the benefits of these are not considered.

64. The indicators proposed for Sub-dimension 2a include the mean earnings of employees as well as three indicators regarding the distribution of income from employment of employees and the self-employed. Income from employment should refer to earnings/self-employed income that is received from all jobs if a person holds more than one job and such information is available; otherwise, it should refer to earnings/self-employed income of the main job reflecting the highest number of hours usually worked. The distribution based indicators cover the percentage of employees with earnings below two thirds of the median earnings (low pay rate) as well as the earnings distribution in deciles for both employees and the self-employed. In addition to the indicators relating to the distribution of earnings from employment, the mean earnings provide information regarding the actual pay level in a given country that cannot be derived from indicators of the distribution of earnings. It should be noted that the sub-dimension excludes indicators taking into account the household income (e. g., poverty rates, working poverty rates), since these indicators also include income sources other than employment and depend on the specific household context. However, it is important to consider these kinds of indicators as context information (see below).

Indicators in Sub-dimension 2a: Income from employment

2a1	Average earnings	Mean nominal monthly / hourly earnings of employees (local currency)
2a2	Employees with low pay	Percentage of employees with low pay
2a3	Earnings by deciles	Nominal monthly / hourly earnings of employees by deciles (local currency)
2a4	Employment-related income of self-employed	Employment-related income of self-employed by deciles (local currency)

65. The context information that might be considered for the interpretation of the indicators on income from employment includes information on the dynamics of the labour market (e.g., increase of either employment or unemployment), the consumer price index as well as information regarding employed persons at risk of poverty (working poverty rate). Information on the distribution of employment according to status in employment (and in particular, the share of employees in total employment and the share of self-employed persons in total employment) will also be important to understanding the indicators in the national context. The working poverty rate takes into account that people usually pool their resources with the other members of their household and thus are not necessarily poor when they receive low pay. Further useful context information concerns the existence of a national minimum wage-fixing system: What is the area of application (e.g., regional or sectoral) and how is the minimum wage fixed and adjusted? Which workers are covered or excluded from it? Since it is recommended that information on gross

earnings be provided, it may be helpful to consider information regarding the national system of taxes and social insurance contributions. Moreover, it may be useful to analyse the indicators in the context of the levels and trends of total labour share of gross value added (GVA), labour productivity (i.e., GDP per employed person or GDP per hours worked), GDP per capita and the evolution of the salary mass.

Sub-dimension 2b: Non-wage pecuniary benefits

66. The sub-dimension *Non-wage pecuniary benefits* refers to benefits provided by the employer that are non-monetary benefits. The sub-dimension covers the entitlement and actual use of paid sick leave and paid annual leave. Although both kinds of benefits are frequently regulated through labour law and collective agreements, they are nevertheless included under the dimension Income and benefits from employment. This is also justified by the fact that there might be a trade-off between direct wages and salaries and non-wage pecuniary benefits, for example, in countries in which employees can choose an increased salary in lieu of entitlements to paid leave. According to the ILO Holidays with Pay Convention (No. 132; 1970), every person to whom the convention applies shall enjoy at least three working weeks of annual paid holiday for one year of service. The indicators currently measure both the entitlement of leave and the leave actually taken.

Indicators in Sub-dimension 2b: Non-wage pecuniary benefits

2b1	Paid leave entitlement	Percentage of employees entitled to paid annual leave
2b2	Days of paid leave entitlement	Mean number of days of paid annual leave per year to which employees are entitled
2b3	Actual days of paid leave	Mean number of days of paid annual leave used per employee during the reference year
2b4	Sick leave entitlement	Percentage of employees entitled to paid sick leave
2b5	Days of sick leave entitlement	Mean number of days of paid sick leave per year to which employees are entitled
2b6	Actual days of sick leave	Mean number of days of paid sick leave used per employee during the reference year

67. For the interpretation of the indicators on non-wage pecuniary benefits, context information might be consulted regarding the number of days of public holidays in a country or region as well the length and coverage of paid annual leave of employees provided for by national legislation (or collective agreements). Similarly, the legal provisions regarding sick leave, including the length, level of payment and workers' coverage may constitute relevant context information. An overview on the legal provisions for sick leave in 32 European countries (including the duration and source of the continued payment of wages and salaries) can be found at the Mutual

Information System on Social Protection (MISSOC).³³ Information on the share of employees in total employment will be important to understanding the set of indicators in the national context.

DIMENSION 3: WORKING TIME AND WORK-LIFE BALANCE

68. Dimension 3 of the statistical framework on measuring quality of employment covers various aspects of working time and work-life balance. Working time refers to the time associated with productive activities and the arrangement of this time during a specified reference period. Work-life balance in this framework encompasses not only measures that would be expected to be closely related to decisions to work for pay or profit given family or care responsibilities, but also attempts to measure time allocation between time spent in a job(s) and time spent in private life.

69. The *Resolution concerning the Measurement of Working Time*³⁴, adopted by the Eighteenth International Conference of Labour Statisticians in 2008, established international statistical standards for seven concepts of working time associated with the productive activities of a person and performed in a job. The indicators in this dimension refer to the concept of hours usually worked.

70. Working time can have a number of implications on quality of employment. First of all, earnings are understood (and often formally fixed) in relation to the time spent at work. Consequently, a notion of adequate pay is only possible if there is also the corresponding notion of adequate working time. Secondly, excessively long working hours and atypical working time patterns often adversely affect the physical and mental well-being of the worker. Thirdly, the time spent in employment is no longer available for non-work activities, including recreation and family responsibilities. An out-of-balance time allocation for work and non-working life can have a negative impact on well-being. The dimension covers three sub-dimensions: the sub-dimension *working hours* focuses on the number of hours worked. The sub-dimension *working time arrangements* contains indicators regarding work outside usual working hours as well as the flexibility of working time for the employed person. Finally, a third sub-dimension relates to the *work-life balance*, in other words, whether working time allows adequate time for family and personal life.

Sub-dimension 3a: Working hours

71. The sub-dimension of *working hours* focuses on the number of working hours. The concept of working hours in the context of the statistical framework on measuring quality of employment is the hours usually worked, not the hours actually worked in a reference week. Both of these are defined in the 18th ICLS Resolution on Working Time. The reason for this is straightforward. Incidental fluctuations in working hours, for example, due to paid leave or illness, are usually of

³³ See <http://www.missoc.org/>

³⁴ *Resolution concerning the Measurement of Working Time*, adopted by the Eighteenth International Conference of Labour Statisticians in 2008, available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang-en/index.htm

little relevance for quality of employment. Since the framework takes the perspective of the individual worker, in addition to the number of hours worked in the main job, the total number of hours in all jobs held by the same person should also be measured, if available. It is of particular importance to include information on secondary jobs in countries in which secondary jobs are practiced by a substantial number of employed persons and have a substantial volume.

72. An issue for this sub-dimension is that there is not always a univocal relationship between working hours and quality of employment. Excessively long or involuntarily short hours of work may have a significant impact on well-being. Still, it is not easy to find answers to questions like “how many working hours per week are bad for your health?” or whether working part time is problematic (e.g., due to reduced social protection) or, on the contrary, allows for more individual flexibility.³⁵ The effects on the well-being of the worker also depend upon the specific circumstances and are mediated by factors like job autonomy, occupation, status in employment, etc. There are several ways of translating the number of working hours into a set of indicators. The indicators of the sub-dimension on working hours include the mean number of hours usually worked, the percentage of employed persons working 49 or more hours per week, the percentage of employed persons working part time involuntarily as well as the distribution of working time in standardised hour bands. An indicator on the percentage of employed persons working in more than one job is included as well.³⁶ This is so closely linked to hours worked that it justifies inclusion in this sub-dimension.

Indicators in Sub-dimension 3a: Working hours

3a1	Mean weekly working hours	Mean weekly hours usually worked per employed person
3a2	Long working hours	Percentage of employed persons usually working 49 hours or more per week
3a3	Involuntary part-time work	Percentage of employed persons working part time for the main reason that they did not find a full-time job
3a4	Distribution of weekly working hours	Employment by weekly hours usually worked (hours in standardised hour bands)
3a5	Multiple job holders	Percentage of employed persons who have more than one job

73. Relevant context information for the interpretation of the indicators in this sub-dimension may include national legislation on the maximum hours of work. It is equally important to

³⁵ It was an important incentive to develop a EC directive on working time: Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time Official Journal L 299 , 18/11/2003 P. 0009 - 0019

³⁶ See, e.g., ILO: *Decent Working Time: Balancing Workers' Needs with Business Requirements*. Geneva: International Labour Office 2007.

consider whether hours worked in excess of the contractual working hours are remunerated as paid overtime or remain unpaid. Interpretation of changes of working hours over time needs to take into account that the total number of working hours in an economy might be sensitive to the business cycle. It is therefore recommended to analyse the indicators of the sub-dimension together with GDP growth, the employment-to-population ratio and the mean actual working hours. Average working time might decrease during recessions, while employment in long working hours might increase (as layoffs increase the workload of the remaining workers). Closely linked is the relationship between working hours and labour productivity (i.e., GDP per employed person), which is a further kind of context information that might be considered.

Sub-dimension 3b: Working time arrangements

74. According to the 18th ICLS *Resolution concerning the Measurement of Working Time, working-time arrangements* describe measurable characteristics of a job that refer to the organization (length and timing) and scheduling (stability or flexibility) of work and non-work periods during a specified reference day, week, month or longer period and apply to all types of jobs, including in informal employment and in agricultural employment.³⁷

75. Working at atypical hours, at least when practiced over a long period of time, may adversely affect a worker's health. This suggests that *working time arrangements* are relevant to quality of employment. For this reason, the topic is included as a separate sub-dimension. The sub-dimension includes information regarding the share of employed persons working in the evening, at night or on the weekend. Many studies indicate that there is a (negative) relationship between working outside usual working hours (in particular at night, but also during the weekend or in the evening) and well-being. The sub-dimension furthermore covers the use of a flexible work schedule. Although not always having straightforward implications on quality of employment, the flexibility to schedule working time may have a major impact on workers' well-being, too.

³⁷ *Resolution concerning the Measurement of Working Time* adopted by the Eighteenth International Conference of Labour Statisticians in 2008, available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang-en/index.htm

Indicators in Sub-dimension 3b: Working time arrangements

3b1	Night work	Percentage of employed persons who usually work at night
3b2	Evening work	Percentage of employed persons who usually work in the evening
3b3	Weekend work	Percentage of employed persons who usually work on the weekend
3b4	Flexible work schedules	Percentage of employees with a flexible work schedule

76. Relevant context information that may facilitate the interpretation of the indicators on working time arrangements includes national legal regulations concerning work outside usual working hours (e.g., at night, in the evening, on Saturdays, on Sundays or on public holidays) and its coverage and remuneration. The indicators should be analysed together with the indicators on work-life balance, the third sub-dimension relating to working time.

Sub-dimension 3c: Work-life balance

77. The sub-dimension *Work-life balance* seeks to highlight elements of work that potentially conflict with other aspects of life or facilitate reconciling work with private life. The balance between work and family life is often difficult for parents with young children. In particular the distribution of childcare responsibilities affects the position of parents in the labour market and has important implications on the reconciliation of work and family life. The employment rate of fathers and mothers tries to compare the distribution of care responsibilities of mothers and fathers. It should however be noted that a higher percentage of mothers and fathers who are working does not necessarily indicate that these mothers and fathers are better off in terms of work-life balance. On the contrary, a high employment rate of parents could also indicate work-life balance issues. A lower percentage of mothers who are working could also indicate that women with children are facing discrimination in the work place. Therefore, the percentage of mothers who are working may also be considered as a measure of discrimination. The access of employed persons to child care, as well as the possibility to work at home, may facilitate or impede reconciling work for pay or profit with household duties, child care and leisure activities. Furthermore, the mean duration of commuting from home to work can have a significant impact on work-life balance as it adds to working time and restricts the time available for non-working life. The issue of parental leave is a particularly challenging element of this sub-dimension. Such types of leave differ greatly between countries, reflecting differences in national legislation. This makes it difficult to define and measure comparable indicators. This is even further complicated by the fact that not all persons in parental leave are considered employed in national Labour Force Surveys. These issues need further development and analysis work in order to gradually improve the indicators.

78. The sub-dimension aims at covering private life in a broad sense. It not only relates to persons with dependent children but could also relate to persons with other dependants, such as

friends or relatives. It could even cover persons without care responsibilities that have other social activities competing for time obligations of employed persons.

Indicators in Sub-dimension 3c: Work-life balance

3c1	Employment rate of mothers and fathers	Percentage of women, respectively men aged 20-49 years who are employed with and without children under compulsory school age
3c2	Possibility to work at home	Percentage of employed persons whose working arrangements offer the possibility to work at home
3c3	Commuting time	Mean duration of commuting time between work and home (one way)
3c4	Care leave entitlement	Percentage of employed persons entitled to leave for care responsibilities for children or adults
3c5	Parental leave	Percentage of parents in employment on parental leave
3cx	Child care use (experimental)	Percentage of employed parents with children under compulsory school age who currently use child care

79. For the interpretation of the indicators, context information including the availability and quality of facilities for child care and the care of elderly persons, might be considered together with the legal provisions regarding maternity and paternity leave, parental leave as well as access to child care. How long are maternity, paternity and parental leave, is there continued payment of the wage or salary and which types of employed persons are covered by these provisions? Regarding child care, an important aspect might be whether employed persons are granted the right to a place in a child care facility and what the qualifying conditions are (e.g., age of the child). Regarding comparative analysis of EU member states, the Barcelona objectives on childcare facilities for young children might be a further useful source of information.³⁸ Since, in the case of families with children, reconciling work with family life is closely linked to the composition of the household, it might be useful to consider household-level indicators as context information (e.g., household size and type and hours usually worked by the household). The employment rate of mothers and fathers might also be affected by the institutional and cultural context in a given country. It is therefore crucial to consider the percentage of working mothers and fathers in the cultural and institutional context within a given country.

³⁸ European Commission, 2013: *Barcelona objectives. The development of childcare facilities for young children in Europe with a view to sustainable and inclusive growth*. Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Luxembourg: Publications Office of the European Union. Available at: http://ec.europa.eu/justice/gender-equality/files/documents/130531_barcelona_en.pdf

DIMENSION 4: SECURITY OF EMPLOYMENT AND SOCIAL PROTECTION

80. The dimension of Security of employment and social protection assesses the threats to employment security as well as the measures and safety nets that can offset possible risks that come with short or long spells of unemployment or being outside the labour force, health problems and retirement. The feeling of insecurity will often adversely affect well-being, as a number of empirical studies have shown.³⁹

Sub-dimension 4a: Security of employment

81. The sub-dimension *Security of employment* essentially refers to how likely a person is to lose his or her job(s). It involves information on the degree of permanence and tenure of the work, the status in employment and the formal or informal nature of employment. Information on the perceived job security is an important element to complement information available on rather objective indicators regarding security of employment, for example, the percentage of fixed-term contracts or of persons employed via temporary employment agencies. As demonstrated by recent research, security of employment is a very important dimension for quality of employment. For example, out of all the dimensions, job security and job prospects (as well as work motivation) have the largest impact on the well-being of the worker.⁴⁰

82. The interpretation of indicators in the sub-dimension of security of employment would be aided by context information regarding the national legal settings and circumstances. The aspects that are relevant will therefore differ by country. For example, the legal provisions regarding workers' protection against dismissal can affect the (differential) job security of fixed-term employees. Furthermore, the specific regulation of employment via temporary employment agencies varies across countries and needs to be considered for proper interpretation.

83. The indicators covering security of employment are therefore better suited to assessing the development over time in one country than to comparing different countries. They seek to detect potential emerging issues. This has several consequences for the set of indicators in this dimension. Firstly, a relatively large number of indicators are needed to cover the entire dimension. Secondly, the set of indicators will require regular revision in order to remain up to date. Whenever a new security-of-employment-related phenomenon emerges in one country, it may be appropriate to include indicators to see if it becomes relevant to other countries as well. The updating could also concern the definitions of the concepts that are measured. Revisions could be necessary to adapt to changing circumstances.

84. To keep the indicators in this sub-dimension manageable, the denominator of the indicators should be, to the extent possible, the same for all indicators. This implies that the total employed population should be taken as the reference. This allows combining indicators and finding out which elements are relevant for which sub-populations. Still, it is recommended to

³⁹ For a recent overview, see Green, Francis, 2006: *Demanding work. The paradox of job quality in affluent economy*. Princeton and Oxford: Oxford University Press, pp. 126-149.

⁴⁰ See Eurofound, 2013; *Health and well-being at work. A report based on the fifth European Working Conditions Survey*. Dublin: Eurofound.

provide the indicators in breakdown by status in employment (in particular employees vs. the self-employed), whenever possible.

85. An important element of this sub-dimension is related to status in employment and, in particular, the distinction between employees and self-employed workers. Despite the existing *Resolution concerning the International Classification of Status in Employment (ICSE-93)*⁴¹ adopted by the Fifteenth ICLS in 1993, which includes definitions of “paid employment” jobs and “self-employment” jobs, the borderline between the two categories is not always clear cut. Workers with an unclear status in employment may be a growing group in many countries. In particular, a variety of new contractual arrangements are leading to uncertainty about the boundary between self-employment and wage employment. An example of an ambiguous case is when employed persons are working as sub-contractors (thus sharing some characteristics of the self-employed), while being economically dependent on one single client (similar to employees). Aspects of security that are directly related to the (type of) contract – such as duration of employment – are only relevant to employees, while other dimensions of security concern the self-employed. Thus, security of employment is to be understood in the context of the status in employment classification. The uncertainty about this boundary is one of the major current challenges of labour market statistics and one of the issues debated in the context of the planned revision of the International Classification of Status in Employment (ICSE-93). For the time being, the dimension tries to capture types of contracts and elements of the work organization that identify differentiated categories of self-employed. Also more generally, the indicators selected for Sub-dimension 4a on security of employment should be reviewed after the revision of the ICSE-93, which is scheduled for the 20th International Conference of Labour Statisticians.

86. Two indicators are still earmarked as experimental: the precarious employment rate and the informal employment rate. Both based on international standards agreed in the context of the International Conference of Labour Statisticians (ICLS), these indicators are actually composite indicators that summarise multiple aspects of security of employment.⁴² While the work of the Expert Group has shown that such indicators can be powerful tools of analysis, it was at the same time acknowledged that further conceptual and methodological developments are needed in order to make the indicators fully operational, in particular in developed countries. It should be

⁴¹ *Resolution concerning the International Classification of Status in Employment (ICSE)*, adopted by the 15th ICLS in 1993, available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087562/lang-en/index.htm

⁴² The concept of precarious employment is defined in paragraph 14 d of the *Resolution concerning the International Classification of Status in Employment (ICSE)*, adopted by the Fifteenth International Conference of Labour Statisticians (January 1993); available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087562/lang-en/index.htm. The concept of informal employment is defined in the *Guidelines concerning a statistical definition of informal employment*, endorsed at the Seventeenth International Conference of Labour Statisticians (ICLS), 2003, available at http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/guidelines-adopted-by-international-conferences-of-labour-statisticians/WCMS_087622/lang-en/index.htm. See also the *Resolution concerning statistics of employment in the informal sector* adopted by the Fifteenth International Conference of Labour Statisticians (January 1993) available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087484/lang-en/index.htm

noted that changes in the definition of employment adopted in the *Resolution concerning statistics of work, employment and labour underutilisation*, adopted by the 19th ICLS in 2013, are expected to have an important impact on the category of workers previously classified in informal employment who were own-account workers engaged in the production of goods for own final use by their household. Such workers are no longer to be classified as employed and therefore are no longer to be counted in informal employment. Still, countries may consider reporting this group separately.

Indicators in Sub-dimension 4a: Security of employment

4a1	Fixed-term contracts	Percentage of employed persons 25 years and older with fixed term contract
4a2	Job tenure	Percentage of employed persons aged 25 years or over whose number of years of tenure at the current job or with the current employer is (1) < 1 year, (2) 1 – less than 5 years (3) 5 – less than 10 years and (4) ≥ 10 years
4a3	Own account workers	Percentage of employed persons who are own-account workers
4a4	Self-employed with one client	Percentage of self-employed workers with only one client
4a5	Perceived job security	Percentage of employed persons who might lose their job in the next six months
4a6	Temporary employment agency workers	Percentage of employed persons employed via a temporary employment agency
4a7	Lack of formal contract	Percentage of employed persons without formal contracts or without pay slip / pay stub
4ax1	Precarious employment rate (experimental)	Percentage of employed persons who are in precarious employment (as defined in ICSE-93)
4ax2	Informal employment rate (experimental)	Percentage of employed persons in informal employment

87. It would be of particular interest to take into account information regarding the legal and institutional context of employment. This regards the legal provisions pertaining to the conditions of employee dismissal and the percentage of workers covered by these provisions. Furthermore, the legal requirements relating to fixed-term contracts, employment via temporary employment agencies as well as valid employment contracts could also be considered. Legal provisions within a country pertaining to employee dismissal also could influence a country's measurement of security of employment and its interpretation. A further important kind of context information concerns access to employment, in other words, the employment, unemployment and participation rates for the population and the relevant sub-populations. Lower levels of employment security might be interpreted differently depending on the level of unemployment or the opportunities of young people to enter the labour market or the degree to which there are differences in access to social protection between fixed-term contracts (4a1) or temporary employment agency work (4a6) or working without formal contract (4a7) and regular employment. Finally, indicators of employment security may be sensitive to the business cycle and should be analysed in relation to GDP growth. For example, the proportion of workers with short job tenure may tend to fall during an economic downturn. This results from both reduced hiring and lay-offs of newly-hired workers; therefore, the interpretation would have to take into account that the (size and) composition of the group of employed persons might have changed. To take such composition effects into account, complementary analyses with longitudinal data may prove useful.⁴³

Sub-dimension 4b: Social protection

88. *Social protection* may be available in a variety of forms including unemployment insurance, pensions and health insurance. The components of social protection covered here are distinct from those in Income and benefits from employment, as the former are more directly linked with security of employment (e.g., likelihood of pregnant women losing employment) and often the cost of these benefits is not solely borne by the employer.

89. In general, social security statistics of a country cover the contingencies and types of schemes envisaged in the International Labour Convention on Social Security (C102), adopted in 1952, and include contingencies relating to medical care, sickness benefits, unemployment benefits, old-age benefits, employment injury benefits, family benefits, maternity benefits, invalidity benefits and survivors' benefits. Types of schemes include schemes organized or supervised under national law or regulations in accordance with the following principles: social insurance, compulsory schemes as well as non-compulsory schemes, public service and social assistance. International recommendations on developing such statistics are contained in the *Resolution concerning the development of social security statistics*⁴⁴, adopted by the Ninth ICLS in 1957.

⁴³ For a recent example, see Erhel, Christine et al., 2012: *Trends in Job Quality during the Great Recession: a Comparative Approach for the EU*. Document de travail no. 161-1, Centre de l'Étude de l'Emploi, pp. 21-28.

⁴⁴ *Resolution concerning the development of social security statistics* adopted by the Ninth ICLS (1957), available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087550/lang-en/index.htm

90. The quality of employment measurement framework covers only social security contingencies related to unemployment benefits, old-age benefits and medical care. Other contingencies of social security mentioned above are important elements that should be taken into account when studying quality of employment but are not included in the statistical framework in order to limit the number of indicators. As the institutional settings in countries are highly varied, a proper interpretation of the indicators depends on the availability of context information regarding the national circumstances.

91. This sub-dimension comprises three indicators, relating to the percentage of employed persons who are active contributors to pension schemes, unemployment insurance and health insurance.

Indicators in Sub-dimension 4b: Social protection

4b1	Pension insurance coverage	Percentage of employed persons who are active contributors to a pension scheme
4b2	Unemployment insurance coverage	Percentage of employees that are active contributors to an unemployment insurance scheme
4b3	Medical insurance coverage	Percentage of employed persons who are active contributors to a medical insurance plan/scheme related to their employment

92. As noted before, context information on the legal and institutional background largely facilitates the interpretation of the indicators on social protection. This includes the legal provisions of the social protection systems and specific schemes related to the indicators. At the same time, it concerns the coverage and qualifying conditions of the insurance schemes, financing of the schemes and worker contributions and the level and duration of the benefits. Furthermore, the public social security expenditure as a share of GDP is another type of context information that provides an indication of the overall public redistributive effort of a given country (yet its interpretation presents inherent difficulties). Indicators regarding social protection (e.g., unemployment insurance) might be correlated with the economic cycle and countries may consider to analyse the indicators together with GDP growth (e.g., if employment growth after a recession concerns predominantly jobs that are not covered by parts of social protection). Further potentially relevant context information includes the percentage of persons at or above the statutory retirement age (or 65 and over) who are employed, the percentage of unemployed persons receiving regular periodic social security unemployment benefits (contributory and non-contributory schemes) as well as the percentage of the population above the statutory pensionable age (or aged 65 or above) benefiting from an old-age pension. As further useful context information, the ratio of unemployment insurance benefits to the mean earnings might be considered to obtain information regarding the level of unemployment benefits.

DIMENSION 5: SOCIAL DIALOGUE

93. The degree to which workers are able to join organizations of their own choosing and on a collective basis enter into social dialogue with employers (and their organizations) and the government is an important aspect of quality of employment that facilitates the improvement of employment conditions covered in the other dimensions of the statistical framework. For example, collective bargaining agreements that determine the terms and conditions of employment as well as contribute to fair and stable labour relations between employers and employees can be achieved through bargaining between trade unions and employers (and their organizations). Effective social dialogue is a prerequisite for healthy employment relationships, which in turn contribute to other dimensions of employment quality. Social dialogue encompasses freedom of association and the right to organize and bargain collectively. Social dialogue includes all types of negotiation, consultation or simply exchange of information between representatives of governments, employers and workers on issues of common interest relating to economic and social policy. Because of the potential to improve quality of employment, it is important to cover this topic in the statistical framework.

94. There are few international statistical standards relating to the coverage of collective bargaining and the statistics of strikes and lockouts.⁴⁵ The ILC Convention concerning Labour Statistics No. 160 (1985) and the accompanying recommendation include the recommendations related to basic labour statistics on industrial disputes.⁴⁶ To date there are no internationally agreed statistical recommendations related to the statistics of trade union and employer organization membership. However, ILC Conventions related to freedom of association can serve as internationally recognised instruments to provide guidance on statistical concept definitions related to these topics.⁴⁷

95. In respect of social dialogue, the statistical framework includes four indicators: the collective bargaining rate, the trade union density rate, the days not worked due to strikes and lockouts and the percentage of employees working in enterprises belonging to an employer's organization. These indicators were also discussed by an ILO tripartite meeting of experts, which is a social dialogue between selected experts representing employer organizations, worker organizations and governments.

96. The collective bargaining coverage rate provides a measure of the proportion of employees (or of all workers in employment) whose pay and conditions of employment are regulated by one

⁴⁵ *Resolution concerning statistics of collective agreements*, adopted by the Third ICLS (October 1926) and the *Resolution concerning statistics of strikes, lockouts and other action due to labour disputes*, adopted by the Fifteenth ICLS (January 1993); available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087547.pdf and http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087544.pdf

⁴⁶ *Convention concerning Labour Statistics (No. C160)*, adopted by the 71st ILC in 1985. Available at: [http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312508:NO](http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312305;Recommendation Concerning Labour Statistics (No. R. 170), adopted by the 71st ILC in 1985. Available at: <a href=)

⁴⁷ *Convention concerning Freedom of Association and Protection of the Right to Organise (No. Co87)*, adopted by the 31st ILC in 1948. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312232:NO

or more collective bargaining agreements. The trade union density rate provides a proxy measure of workers' representation. This indicator aims at capturing the unionisation of the employed population. It should be noted that, in particular as regards comparisons across countries, differences in unionisation do not necessarily reflect differences in social dialogue and should always be interpreted together with information regarding the institutional, cultural and legal context. Consequently, low unionisation and low collective bargaining coverage rates do not necessarily imply the lack of an ability for people to join together in groups to express opinions, the inability of workers to freely express their opinions to their employers or their government, that there is a poor exchange of information between employers and workers or the absence of social dialogue in general. The indicator regarding days not worked due to strikes and lockouts measures the time not worked by workers involved in a strike or lockout per 1,000 employees and thus provides information on the direct impact of labour disputes on production. It may be used to provide indirect information on the effectiveness of social dialogue in a country, but it also needs to be accompanied by context information. The percentage of employees working in enterprises belonging to an employer's organization gives some indication of the coverage and representativeness of employers' organizations. It is a somewhat crude measure because it does not reflect the characteristics of the enterprises as well as the obligations linked to the membership. Since the indicators on social dialogue depend very much on the various national systems of industrial relations, they should generally be used for temporal rather than international comparisons.

Indicators in Dimension 5: Social dialogue

5.1	Collective bargaining coverage rate	Percentage of employees covered by collective bargaining agreements
5.2	Trade union density rate	Percentage of employees who are members of one or more trade union
5.3	Days not worked due to strikes and lock-out	Days not worked due to strikes and lock-out per 1000 employees (or employed persons)
5.x	Employer organization density rate (experimental)	Percentage of employees working in enterprises belonging to an employer's organization

97. In the field of social dialogue, context information regarding the legal, cultural and institutional background will facilitate the interpretation of the indicators. Regarding the legal framework, users might consider the following context information: is there national legislation guaranteeing the right to join and form organizations for the protection of workplace interests (freedom of association)? This information includes laws, regulations and all freedom of association and the right to organize as well as the collective requirements to form a workers' organization (e.g., minimum number of workers). Further important context information regards the recognition of the right to strike by law or the constitution. Information may also include the implementation of these rights in practice. Moreover, context information may include the institutions and the legislation pertaining to collective bargaining. This covers the main aspects of

the structure of collective bargaining, for example, the level at which it takes place, its coverage, the subjects of the negotiations, the existence of extension clauses, etc. A further area of useful context information regards the structures of tripartism, in other words, the institutions of social dialogue and cooperation between governments, employers and workers in the formulation of standards and policies dealing with labour issues. It presupposes the existence of a national law or government policy establishing a tripartite mechanism for consultation and social dialogue.

DIMENSION 6: SKILLS DEVELOPMENT AND TRAINING

98. The fit between the skills of the worker and the demands of the job as well as the opportunity to further develop the skills of the worker both play an important role for quality of employment. It has been argued that, while there is a long-term trend of rising average levels of workers' skills, one can also observe a trend towards skill polarisation. Workers with a lower skill level have increasing problems in finding employment opportunities and at the same time have to make concessions regarding their salary, employment security and working conditions.⁴⁸ Empirical research shows a strong correlation between employability and well-being.⁴⁹ However, low skill level is not the only factor that is related to lower quality of employment: if the worker is not able to use acquired skills in his or her job, this might lead to reduced well-being and dissatisfaction.

99. The dimension skills development and life-long learning refers to the personal development opportunities of the individual employed person as well as the fit of the worker's skills and the demands of the job. According to the International Standard Classification of Education (ISCED 2011), intentional learning can either be formal, non-formal or informal. Formal education designates education that is institutionalised, intentional and planned through public organizations and recognised private bodies and – in its totality – constitutes the formal education system of a country. Non-formal education is also institutionalised, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or complement to formal education within the process of lifelong learning of individuals. Informal learning may include learning activities that occur in the family, workplace, local community and daily life on a self-directed, family-directed or socially-directed basis. Dimension 6 focuses on non-formal education and informal learning, since formal education to a large degree takes place before the entry into the labour market. The indicator regarding training participation measures the participation of employed persons in non-formal job-related training. The information on training participation needs to be complemented by an indication of the quantity and quality of the training received. To this end, the statistical framework includes an indicator regarding the volume of job-related training as well as an indicator that attempts to capture the quality of job-related training (measured as the worker's perception of whether the most recent training has helped improve work). Skills can be acquired not only via formal and non-formal education, but also informally. Often informal learning is as important for skills

⁴⁸ Green, F., 2006: *Demanding work. The paradox of job quality in the affluent economy*. Princeton: Princeton University Press, pp. 24-43. Gallie, D., 1991: *Patterns of Skill Change: Upskilling, Deskilling or the Polarization of Skills?* In: *Work, Employment & Society* 5, pp. 319-351. Gallie, D. et al., 1998: *Restructuring the Employment Relationship*. Oxford: Oxford University Press.

⁴⁹ See, e.g., Eurofound, 2013: *Health and well-being at work. A report based on the fifth European Working Conditions Survey*. Dublin: Eurofound.

development, and employees spend much more time on informal learning activities than on formal learning.⁵⁰ This is reflected by another indicator asking whether the job involves the possibility to improve the worker's skills. The skills are not only important to working in a job, but at the same time determine how easy or difficult it is to find another job, for example, in case of dismissal or problems at the workplace. For this reason, a further indicator measures employability, in other words, the self-perceived usefulness of the worker's skills and experiences for finding another job. Finally, a further indicator regards skills match, in other words, whether employed persons can actually use their skills in their current job. For this indicator, it is recommended to use a measure based on the perception of the respondent. Nevertheless, it might be useful to complement this approach by using disaggregations by the highest level of education (ISCED) and occupation (ISCO).

Indicators in Dimension 6: Skills development and training

6.1	Training participation	Percentage of employed persons having received job-related non-formal education and training in the past twelve months
6.2	Volume of training	Volume of job-related non-formal education and training per participant in the last twelve months (in days)
6.3	Usefulness of training	Percentage of employed persons whose job-related non-formal education and training has helped improve the way they work
6.4	Learning at work	Percentage of employed persons whose job involves improving their skills
6.5	Employability	Percentage of employed persons whose work experience and job skills would be helpful to find another job
6.6	Skills match	Percentage of employed persons who have the opportunity to use their knowledge and skills in their current job

100. Context information that might be considered for interpreting the indicators in this dimension includes the structure of employed persons by educational attainment, in particular the share of employed persons with tertiary educational attainment (high skilled occupations). Participation in formal education might also be useful context information, depending on the specificities of the national education system. Further useful information regards the institutional

⁵⁰ See, e.g., Borghans, L., Goldsteyn, B. and de Grip, A., 2006: *Meer werken is meer leren. Determinanten van kennisontwikkeling*. [Dutch: Working more is learning more. Determinants of skill development]. Den Bosch: CINOP.

context of education and training in the country under consideration: what is the relationship between formal, non-formal and informal learning? Which kinds of programmes do employed persons usually attend after starting a job?

DIMENSION 7: EMPLOYMENT-RELATED RELATIONSHIPS AND WORK MOTIVATION

101. Employment-related relationships and work motivation characteristics are important elements of quality of employment. Empirical research has shown that they directly affect the well-being of the individual employed person. Often the impact is even larger compared to traditional indicators of quality of employment.⁵¹ Employment-related relationships and work motivation are important for several reasons. From the point of view of the individual worker, they not only directly affect health and well-being, but are also key factors for achieving high levels of sustainability of work. Workers who have sufficient job autonomy can influence organizational decisions and are not subject to excessive work intensity will show higher levels of motivation and engagement and be less likely to leave the labour market prematurely. The social support from co-workers and superiors also has a huge impact on the well-being of workers and is at the same time an important factor to cope with difficult work situations. Two sub-dimensions are distinguished: employment-related relationships and work motivation. The first relates to the social characteristics of the work, for instance the social support from co-workers and superiors as well as the exposure to adverse social behaviour. The second sub-dimension comprises the more individual motivational characteristics.⁵²

Sub-dimension 7a: Employment-related relationships

102. The sub-dimension on *employment-related relationships* focuses on inter-employee dialogue and relationships as well as communication between employees and their supervisors. Research on social support has suggested that low social support, both regarding the support of co-workers and of superiors, and social isolation are associated with increased health risks.⁵³ The relationship with co-workers is measured through an indicator asking whether employed persons have a good relationship with their co-workers and colleagues. A similar indicator is used to measure the relationship with the supervisor.⁵⁴ A further aspect is the exposure to socially adverse behaviour in relation with employment. The indicator selected for the statistical framework focuses on unequivocal cases of adverse behaviour, in other words, employment-related physical, psychological or sexual violence.

⁵¹ Lowe, G. and G. Shellenberg, 2001: *What's a Good Job? The Importance of Employment Relationships*. Canadian Policy Research Networks, Study No. W05, Ottawa, 2001.

⁵² See for example: Humphrey, S., J. Nahrgang and F. Morgeson, 2007: *Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature*. *Journal of Applied Psychology*, 92, pp. 1332–1356.

⁵³ For an overview, see Eurofound, 2013: *Health and well-being at work. A report based on the fifth European Working Conditions Survey*. Dublin: Eurofound, pp. 26-27.

⁵⁴ In contrast, whether regular feedback is received from the supervisor is rather seen as an indicator for work motivation and therefore included in Sub-dimension 7b.

Indicators in Sub-dimension 7a: Employment-related relationships

7a1	Relationship with co-workers	Percentage of employed persons who have a good relationship with their co-workers and colleagues
7a2	Relationship with supervisor	Percentage of employees who have a good relationship with their supervisor
7a3	Employment-related violence	Percentage of persons who have been victim of physical, psychological or sexual violence in relation with their employment in the last 12 months

Sub-dimension 7b: Work motivation

103. The dimension of *work motivation* is key to understanding the factors that drive employed persons in carrying out their work. This dimension encompasses the form, direction, intensity and duration of work-related behaviour. According to the standard theories of work motivation, characteristics determining work motivation include the degree to which the employee has independence, freedom and discretion in carrying out the job (job autonomy), the degree to which workers receive regular feedback from their supervisor, the degree to which the work carried out is perceived as having valuable goals and being useful to other people (intrinsic rewards), the degree to which the job has to be provided under time (or other kinds of) pressure (work intensity) as well as the degree to which employed persons are given the opportunity to influence organizational decisions regarding their work.⁵⁵ While there is a high correlation between these measures and motivation, their relationship is complex and not one to one. Consequently, there might be jobs and occupations that, for example, have a high degree of job autonomy but in which the average worker is not highly motivated. Furthermore, specific types of jobs and occupations having the same ranking on a measure – for instance degree of autonomy – does not, of course, imply that everyone in that type of job or occupation is equally motivated.

104. There is evidence from academic research that these motivational characteristics have large impacts on health and well-being of workers. Although there are only rarely linear relationships, greater job autonomy and influence on organizational decisions have a positive impact on a worker's well-being, while high work intensity and low autonomy tend to have a negative impact. Still, it should be kept in mind that the effects are mediated by other factors and might be perceived differently in individual cases. Some occupations could intrinsically entail tight deadlines (for example, newspaper editors and reporters), and workers in these types of jobs might not necessarily have low levels of motivation. Worker motivation indicators should therefore be examined within the context of occupations. A lack of motivation or loyalty to an

⁵⁵ See Hackman, J. and G. Oldham, 1975: *Development of job diagnostic survey*. In: *Journal of Applied Psychology*, 60, pp. 159-170; Karasek, R., 1979: *Job demands, job decision latitude and mental strain: implications for job redesign*. In: *Administrative Science Quarterly*, 24, pp. 285-308; Siegrist, J., 1996: *Adverse health effects of high-effort/low-reward conditions*. In: *Journal of Occupational Health and Psychology*, 1, pp. 27-41.

employer on the part of a worker also may be manifested in a higher quit rate. Consequently, quit rates (controlling for workers changing jobs to obtain higher wages and business cycle factors) could be used as another measure of worker motivation or considered as a contextual factor for other job motivation indicators. Furthermore, in conjunction with Dimension 2, the impact of pecuniary aspects on motivation should be taken into account. Further developments are needed in order to assess the impact of additional payments and bonuses on work motivation.

105. This sub-dimension will often have to rely on the perception of the respondents as measured in the survey interview. This means that the measurement of the indicators entails some subjective assessment by the respondents. While this should be taken into consideration when interpreting the indicators, a large body of research today shows that survey estimates can be considered sufficiently reliable and valid. Still, some caution is needed when drawing international comparisons.

Indicators in Sub-dimension 7b: Work motivation

7b1	Job autonomy	Percentage of employed persons who are able to choose their methods of work or to influence their pace of work
7b2	Feedback from supervisor	Percentage of employees who receive regular feedback from their supervisor
7b3	Intrinsic rewards	Percentage of employed persons who do "useful" work
7b4	Work intensity	Percentage of employed persons who have to work at very high speed or to tight deadlines
7b5	Organizational participation	Percentage of employed persons who can influence decisions that affect their work

V. FUTURE WORK AND RESEARCH ISSUES

106. Labour markets constantly change. Research on the impacts of work will lead to new results. New forms of employment are emerging, new working time patterns affect the structure the working day and the technology used for work constantly changes. To keep the framework relevant in light of such changes, it should be checked regularly whether the list of indicators needs to be updated to remain relevant.

107. Changes will also take place regarding statistical input. New data sources might become available, enabling the compilation of new indicators, as in the case of enhanced statistical registers, accounting systems or other data sources (e.g., big data). In order to take into account such developments, the need to adapt the framework should be examined at regular intervals.

108. Some indicators included in the list are still earmarked as experimental, either because further effort is needed to clarify the concepts or because the operationalisation of the data collection for the indicators requires further methodological research. The list of indicators should stimulate such research. Research areas identified by the Expert Group so far include the following:

- Exploring the need to develop further indicators regarding physical working conditions (e.g., related to the equipment, use of information technologies, physical space, etc.)
- Development of further specific indicators on discrimination at work (Sub-dimension 1c)
- Development of approaches taking into account additional payments, bonuses and non-wage benefits in indicators on income and benefits from employment, including facilities (e.g., canteen, medical centre, kindergarten) made available by the employer (Dimension 2)
- Development of indicators regarding prospects for promotion, including the use of longitudinal indicators of mobility within and across employers (dimensions 2 and 6)
- Exploring the possibility of including longitudinal indicators regarding the stability of income from employment (e.g., mobility of low wage earners over time; Sub-dimension 2a)
- Further refinement of the indicators regarding work-life balance, in particular those regarding the implications and measurement of parental leave and the use of child care (Sub-dimension 3c)
- Expansion of the indicators regarding work-life balance to include measures of those who are facing work-life balance issues due to eldercare, care for older dependent children who reside in their parents' homes or care for other relatives (besides children) and friends (Sub-dimension 3c).
- Requirements for implementation of the concept of "precarious employment" from the International Classification of Status in Employment (ICSE-93) (Dimension 4)
- Analysis and development of operational definitions allowing measurement of the impact of subcontracting on security of employment (Sub-dimension 4a)

- Application and operationalisation of informal employment according to the Guidelines concerning a statistical definition of informal employment endorsed by the 17th International Conference of Labour Statisticians (ICLS) (Dimension 4)⁵⁶
- Review of the indicators after the revision of the International Classification of Status of Employment (ICSE-93), scheduled for the 20th ICLS (in particular Sub-dimension 4a)
- Coverage of the population by (basic) health care provision (Dimension 4)
- Development of further indicators relating to social insurance covering further contingencies, in particular disability (Dimension 4)
- Improving data availability as well as further conceptual work regarding the Employer organization density rate (Dimension 5)
- Analysis of the impact of relationships with clients on social support in employment (Dimension 7)
- Exploring the possibility and need to add an indicator on work engagement in the sub-dimension work motivation (Sub-dimension 7b)
- Improving data availability and measurement of employment-related violence, including suicide and homicide at work (Dimension 7)
- Further analysis of the indicators in the framework in relation to measures of job satisfaction

109. There is a need for continued exchange of experience and expertise at the international level in order to ensure the framework remains practical and relevant. This also regards the development of innovative approaches to present the indicators from a complex statistical framework (e.g., in the form of dashboards, aggregated indicators or by the identification of core indicators or headline indicators). Building on previous work, for example, by the OECD or in the context of the Job Quality Index (JQI), further research should be undertaken regarding the option of the construction of indices summarising several indicators.⁵⁷ Further experiences and exchange are also needed regarding the use of general labour market indicators and other context information in the analysis of the indicators of quality of employment and their development over time. Statistical offices are invited to make use of the statistical framework for publications regarding quality of employment in their countries and provide feedback regarding their experiences.

⁵⁶ Preliminary work has already been conducted by the Expert Group, exploring the application of the statistical definition of informal employment using indicators already being developed for Dimension 4 (Security of Employment); see Carré, F., R. Negrete and J. Vanek. 2013: *Relating Quality of Employment to Informal Employment*. Paper presented at the Meeting of Experts on Measuring Quality of Employment, Geneva, 11-13 September 2013. Available at: http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.12/2013/Session_4_-_Informal_employment_WIEGO.pdf

⁵⁷ See OECD, 2014: *How good is your job? A Framework for measuring and assessing job quality*. In OECD Employment Outlook 2014, Paris: OECD Publishing. Leschke, J. and A. Watt, 2008: *Putting a number on job quality? Constructing a European Job Quality Index*. Working paper WP 2008.03. Brussels: European Trade Union Institute.

VI. HOW TO USE THE INDICATORS

110. Numerous rounds of exercises and revisions have been undertaken to confirm the current statistical framework and the indicators for measuring quality of employment. Country reports (15 at the time of the Sixth meeting of the Group of Experts on Measuring Quality of Employment) proved the practicability of the dimensions and the indicators. However, this is not to say that the list of indicators cannot be modified with changing needs and possibilities as long as the changes are well-justified. It is acknowledged that the list is a dynamic system that will require adaptations to changing circumstances and environments in the future.

111. In applying the indicators, it is proposed that countries consider all aspects of quality of employment indicators and decide for themselves which indicators are the most relevant. The Expert Group on Measuring Quality of Employment has prepared detailed indicator sheets. These contain sections on measurement objectives, formulas, recommended data sources, recommended metadata, recommended disaggregation, guidelines for interpretation and comparisons as well as suggested readings. These will provide guidance for countries. The entire set of indicator sheets is included as Annex 2 of this report.

112. At the national level, the indicators can be also used to identify labour market trends. In cases of economic downturn, for example, it is useful to know how the labour market adapts, not only in terms of changes in the quantity of work but also through changes in the quality of work. Secondly, the indicators are especially useful for identifying groups with less favourable labour market situations. Many different sub-populations could be considered in this context: sex, age categories, ethnic minorities, level of educational attainment, persons with disabilities, regions, etc. This requires, of course, that the indicators are measured for the categories in question, allowing a breakdown for the quantitative indicators. Finally, a possible application of the list of indicators is to use it to compare quality of employment in different sectors of economic activity or in different occupational groups.

113. It is recommended that countries decide according to national circumstances in which periodicity they deem it necessary to provide indicators on quality of employment. It is usually not necessary to report quality of employment indicators intra-annually. For many indicators, annual reporting will most likely be the standard. For indicators that are known to change slowly over time, a multi-annual periodicity might, however, also be sufficient.

114. Another important comparison between different categories of employed persons, at least for certain dimensions of quality of employment, is that of status in employment: employees; employers, own-account workers; and contributing family workers. They may face different issues with respect to quality of employment. It is important to note that quality of employment indicators aim at covering both persons in paid employment and the self-employed, and for that reason, many of the indicators are defined in terms of all employed persons. While some sub-dimensions are by definition more relevant for employees, countries should in principle cover all employed persons when measuring quality of employment.

115. Finally, it is recognised that change over time, up or down, in some indicators could have a different meaning in different contexts. For example, an increase in the numbers of hours worked

per employee for a given economic activity may mean a reduction in the quality of employment in a country where policymakers view that employees are overworked, compared to another country where there may be a general lack of employment opportunities. The users of the indicators should decide for themselves whether or not quality of employment is improving. Again, as suggested earlier, that assessment should be done using the maximum number of relevant variables available for an individual country, making use of the proposed list of context indicators.

116. Although interpretation might be challenging when making international comparisons, countries are encouraged to also make use of the indicators from a comparative perspective. As most indicators are available from internationally harmonised sources, international comparisons should be feasible at least for groups of countries. To further facilitate international comparability, it is recommended to make use of international standard classifications, including the International Standard Classification of Occupations (ISCO-08), the International Standard Classification of Status in Employment (ICSE-93), the International Standard Classification of Education (ISCED 2011) and the International Standard Classification of International Standard Industrial Classification of All Economic Activities (ISIC rev. 4). Whenever data are available, the most recent versions of these classifications should be used. Nevertheless, it is recommended to take into account national circumstances in all of the countries when making comparisons.

ANNEX 1: LIST OF INDICATORS FOR THE MEASUREMENT OF QUALITY OF EMPLOYMENT

<i>Dimension</i>	<i>No.</i>	<i>Short name</i>	<i>Suggested Indicator</i>
1. Safety and ethics of employment			
(a) Safety at work	1a1	Fatal occupational injuries	Rate of fatal occupational injuries per 100,000 employed persons
	1a2	Nonfatal occupational injuries	Rate of nonfatal occupational injuries per 100,000 employed persons
	1a3	Exposure to physical health risk factors	Percentage of employed persons they are exposed to physical health risk factors at work
	1a4	Exposure to mental health risk factors	Percentage of employed persons who are exposed to mental well-being risk factors at work
(b) Child labour and forced labour	1b1	Child labour rate	Percentage of children aged 5 to 17 years who are engaged in child labour
	1b2	Hazardous child labour rate	Percentage of children aged 5 to 17 years who are engaged in hazardous child labour
	1b3	Forced labour rate	Percentage of persons who are in forced labour
	1b4	Forced labour rate among returned migrants	Percentage of returned labour migrants who were in forced labour
	1bx	Other worst forms of child labour (experimental)	Percentage of children aged 5 to 17 years who are engaged in worst forms of child labour other than hazardous work

<i>Dimension</i>	<i>No.</i>	<i>Short name</i>	<i>Suggested Indicator</i>
(c) Fair treatment in employment [earmarked as topic for further development]		For the measurement of fair treatment, users should consider the demographic or social groups relevant given the national circumstances. It is recommended to always provide breakdowns by sex and age groups. Groups for whom fair treatment could be an issue: Sex Ethnic groups Immigrants Indigenous population Persons with disabilities Age groups Geographic Regions Furthermore, the following specific indicators on fair treatment should be included:	
	1c1	Pay gap	Pay gap between subpopulation groups (e.g., gender pay gap)
	1c2	Access to managerial occupations	Percentage of employed persons in population subgroups (e.g., women) in managerial occupations (ISCO-08 major group 1)
	1c3	Discrimination at work	Percentage of employed persons who have been a victim of discrimination at work

2. Income and benefits from employment

(a) Income from employment	2a1	Average earnings	Mean nominal monthly / hourly earnings of employees (local currency)
	2a2	Employees with low pay	Percentage of employees with low pay
	2a3	Earnings by deciles	Nominal monthly / hourly earnings of employees by deciles (local currency)
	2a4	Employment-related income of self-employed	Employment-related income of self-employed by deciles (local currency)
(b) Non-wage pecuniary benefits	2b1	Paid leave entitlement	Percentage of employees entitled to paid annual leave
	2b2	Days of paid leave entitlement	Mean number of days of paid annual leave per year to which employees are entitled
	2b3	Actual days of paid leave	Mean number of days of paid annual leave used per employee during the reference year
	2b4	Sick leave	Percentage of employees entitled to paid sick

<i>Dimension</i>	<i>No.</i>	<i>Short name</i>	<i>Suggested Indicator</i>
		entitlement	leave
	2b5	Days of sick leave entitlement	Mean number of days of paid sick leave per year to which employees are entitled
	2b6	Actual days of sick leave	Mean number of days of paid sick leave used per employee during the reference year
3. Working time and work -life balance			
(a) Working hours	3a1	Mean weekly working hours	Mean weekly hours usually worked per employed person
	3a2	Long working hours	Percentage of employed persons usually working 49 hours or more per week
	3a3	Involuntary part-time work	Percentage of employed persons working part time for the main reason that they did not find a full-time job
	3a4	Distribution of weekly working hours	Employment by weekly hours usually worked (hours in standardised hour bands)
	3a5	Multiple job holders	Percentage of employed persons who work more than one job
(b) Working time arrangements	3b1	Night work	Percentage of employed persons who usually work at night
	3b2	Evening work	Percentage of employed persons who usually work in the evening
	3b3	Weekend work	Percentage of employed persons who usually work on the weekend
	3b4	Flexible work schedules	Percentage of employees with a flexible work schedule
(c) Work-life balance	3c1	Employment rate of mothers and fathers	Percentage of women, resp. men aged 20-49 years who are employed with and without children under compulsory school age
	3c2	Possibility to work at home	Percentage of employed persons whose working arrangements offer the possibility to work at home
	3c3	Commuting time	Mean duration of commuting time between work and home (one way)
	3c4	Care leave entitlement	Percentage of employed persons entitled to leave for care responsibilities for children or adults

<i>Dimension</i>	<i>No.</i>	<i>Short name</i>	<i>Suggested Indicator</i>
	3c5	Parental leave	Percentage of parents in employment on parental leave
	3cx	child care use (experimental)	Percentage of employed parents with children under compulsory school age who currently use child care

4. Security of employment and social protection

(a) Security of employment	4a1	Fixed-term contracts	Percentage of employed persons 25 years and older with fixed-term contract
	4a2	Job tenure	Percentage of employed persons aged 25 years or over whose number of years of tenure at the current job or with the current employer is (1) < 1 year, (2) 1 – less than 5 years (3) 5 – less than 10 years and (4) ≥ 10 years.
	4a3	Own account worker	Percentage of employed persons who are own-account workers
	4a4	Self-employed with one client	Percentage of self-employed workers with only one client
	4a5	Perceived job security	Percentage of employed persons who might lose their job in the next six months
	4a6	Temporary employment agency workers	Percentage of employed persons employed via a temporary employment agency
	4a7	Lack of formal contracts	Percentage of employed persons without formal contracts or without pay slip / pay stub
	4ax1	Precarious employment (experimental)	Percentage of employed persons who are in precarious employment (as defined in ICSE-93)
	4ax2	Informal employment (experimental)	Percentage of employed persons in informal employment
(b) Social protection	4b1	Pension insurance coverage	Percentage of employed persons who are active contributors to a pension scheme
	4b2	Unemployment insurance coverage	Percentage of employees that are active contributors to an unemployment insurance scheme
	4b3	Medical insurance coverage	Percentage of employed persons who are active contributors to a medical insurance plan/scheme related to their employment

<i>Dimension</i>	<i>No.</i>	<i>Short name</i>	<i>Suggested Indicator</i>
5. Social dialogue			
	5.1	Collective bargaining coverage rate	Percentage of employees covered by collective bargaining agreements
	5.2	Trade union density rate	Percentage of employees who are members of one or more trade union
	5.3	Days not worked due to strikes and lock-out	Days not worked due to strikes and lock-out per 1000 employees (or employed persons)
	5.x	Employer organization density rate (experimental)	Percentage of employees working in enterprises belonging to an employer organization
6. Skills development and training			
	6.1	Training participation	Percentage of employed persons having received job-related non-formal education and training in the past twelve months
	6.2	Volume of training	Volume of job-related non-formal education and training per participant in the last twelve months (in days)
	6.3	Usefulness of training	Percentage of employed persons whose job-related non-formal education and training has helped improve the way they work
	6.4	Learning at work	Percentage of employed persons whose job involves improving their skills
	6.5	Employability	Percentage of employed persons whose work experience and job skills would be helpful to find another job
	6.6	Skills match	Percentage of employed persons who have the opportunity to use their knowledge and skills in their current job
7. Employment-related relationships and work motivation			
(a) Employment-related relationships	7a1	Relationship with co-workers	Percentage of employed persons who have a good relationship with their co-workers
	7a2	Relationship with supervisor	Percentage of employees who have a good relationship with their supervisor

<i>Dimension</i>	<i>No.</i>	<i>Short name</i>	<i>Suggested Indicator</i>
	7a3	Employment-related violence	Percentage of persons who have been victim of physical, psychological or sexual violence in relation with their employment in the last 12 months
(b) Work motivation	7b1	Job autonomy	Percentage of employed persons who are able to choose their methods of work or to influence their pace of work
	7b2	Feedback from supervisor	Percentage of employees who receive regular feedback from their supervisor
	7b3	Intrinsic rewards	Percentage of employed persons who do “useful” work
	7b4	Work intensity	Percentage of employed persons who have to work at very high speed or to tight deadlines
	7b5	Organizational participation	Percentage of employed persons who can influence decisions that affect their work

ANNEX 2: INDICATOR SHEETS

DIMENSION 1: SAFETY AND ETHICS OF EMPLOYMENT

Sub-dimension 1a: Safety at work

Short name	Fatal occupational injuries (1a1)
Name	Rate of fatal occupational injuries per 100,000 employed persons
Dimension and sub-dimension	1. Safety and ethics of employment <ul style="list-style-type: none"> a. Safety at work b. Child labour and forced labour c. Fair treatment of employment
Description	The rate of fatal occupational injuries is calculated as the total number of fatal occupational injuries during the reference year divided by the total number of persons in the reference group (depending on the data available) during the reference year multiplied by 100,000.
Measurement objectives	The objective of measuring the rate of fatal occupational injuries is to assess and monitor the extent to which workers are protected from work-related hazards and risks. The rate of fatal occupational injuries is a measure of the risk to an employed person of having a fatal injury due to adverse work-related factors.
Formula	$\frac{\text{Total number of new cases of fatal occupational injuries during the reference year}}{\text{Total number of persons in the reference group during the reference year}} \times 100,000$ <p>For the calculation of rates, the numerator and the denominator should have the same coverage. For example, if self-employed persons are covered in the statistics of fatal occupational injuries, they should also be covered in the denominator. While the preferred denominator is total employed persons, worker coverage may therefore be limited to employees or insured workers, depending on the data source.</p>
Concepts and definitions	<p>For the purposes of statistics of occupational injuries, the following terms and definitions are used according to the <i>Resolution concerning statistics of occupational injuries (resulting from occupational accidents)</i>, adopted by the Sixteenth International Conference of Labour Statisticians (October 1998):</p> <p><i>Occupational accident</i>: an unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work which results in one or more workers incurring a personal injury, disease or death; as occupational accidents are to be considered travel, transport or road traffic accidents in which workers are injured and which arise out of or in the course of work, i.e., while engaged in an economic activity, or at work, or carrying on the business of the employer.</p>

Short name	Fatal occupational injuries (1a1)
	<p><i>Occupational injury</i>: any personal injury, disease or death resulting from an occupational accident; an occupational injury is therefore distinct from an occupational disease, which is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity.</p> <p><i>Case of occupational injury</i>: the case of one worker incurring an occupational injury as a result of one occupational accident. If a person is injured in more than one occupational accident during the reference period, each case of injury to that person should be counted separately.</p> <p><i>Fatal occupational injury</i>: an injury caused by an accident at work which leads to the death of a victim within one year of the accident.</p> <p>Note: cases of occupational disease and cases of injury due to commuting accidents (see glossary) are generally excluded from the numerator.</p> <p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>While ideally the numerator and denominator should derive from the same source, this may not be feasible in practice.</p> <p>Data for new cases of fatal occupational injuries (the numerator) should be based on registers and other administrative sources. The recommended data sources are national administrative systems for the notification of cases of fatal occupational injury, such as labour inspection records and annual reports, insurance and compensation records and death registers. The data source for the number of employed persons (the denominator) may be either administrative sources (employment registers) or a labour force survey.</p> <p>The type of source determines the coverage of the statistics. In many countries, the coverage of reporting requirements or injury compensation, and thus the coverage of the statistics, is limited to certain types of workers such as employees only or insured workers only.</p>
Recommended metadata	<p>Metadata should include the type and name of the data source, possible age coverage, geographic coverage and other coverage limitations. If the numerator and denominator derive from different sources, this should be clearly specified. Furthermore, metadata should specify (i) whether the data relate to cases of occupational injury which have been reported (to an accident notification system or to an accident compensation scheme), compensated (by an accident insurance scheme) or identified in some other way (for example through a survey of households or establishments) and (ii) whether cases of occupational injury due to commuting accidents are included in the statistics. The variable used in the denominator should be clearly identified as total employed persons, total number of employees, total insured workers or other worker coverage, according to the data</p>

Short name	Fatal occupational injuries (1a1)
	<p>source.</p> <p>Metadata should also specify the worker coverage according to the economic activity (ISIC), institutional sectors and status in employment, information on occupations for which data on accidents at work are subject to confidentiality by national legislation, as well as procedures used to correct data for under-reporting (or over-reporting). Finally, information about any national specificity essential for the interpretation, i.e., description of the work insurance system for reporting accidents at work, discrepancies between national and international definitions (e.g., definition of local unit, commuting accidents, etc.) should be provided.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Employment status (employees / self-employed) • Hours worked (part-time / full-time) • Occupation group • Economic activity group • Type of injury from the International Statistical Classification of Diseases and Related Health Problems, ICD-10 (1992).
Interpretation guidelines	<p>There may be problems of under reporting of fatal occupational injuries, and appropriate systems should be put in place to ensure the best reporting and data quality. Because data quality issues may be present, it may be more relevant to analyse indicator trends rather than levels. Still, for an analysis of trends, it should be taken into account that the structure of economic activities over time may have a significant impact on the trend of occupational injuries.</p> <p>The indicator may be used to identify groups of workers exposed to high risks of fatal occupational injuries. When measured over time, the indicator can reveal progress or deterioration in occupational safety.</p> <p>The indicator is defined in terms of the total number of employed persons during the reference year. Therefore, no account is taken of differences in hours worked between groups of workers.</p> <p>A rise or fall in the number of cases of occupational injury over a period of time may reflect not only changes in conditions of work but also changes in reporting procedures or data collection methods, or revisions to laws and regulations concerning the reporting or compensation of occupational injuries in a given country.</p>
Relation to other indicators	<p>For a comprehensive analysis of safety at work, the rate of fatal occupational injuries should be analysed together with the rate and types of non-fatal occupational injuries and with other indicators of safety at work.</p> <p>An analysis of the occupational safety and health system generally and the</p>

Short name	Fatal occupational injuries (1a1)
	analysis of the context indicator (legal framework information) on labour inspection on occupational safety and health in particular would be useful to analyse with this indicator.
International comparisons	<p>Care should be taken when making international comparisons, since the sources, methods of data collection, worker coverage and classifications used will differ between countries. For example, coverage may be limited to certain types of workers (e.g., employees, insured persons, full-time workers, etc.), certain economic activities, establishments with a limited number of employees etc. Furthermore, care should be taken in case of any deviations from the definition, e.g., regarding the exclusion of commuting accidents or occupational diseases from the numerator.</p> <p>Differences in the structure of economic activities between countries should also be taken into account: occupational injuries are more likely to occur in some occupations and economic activities than in others.</p>
Recommended calculation in the EU-LFS or other international surveys	Not applicable.
Further readings	<p>Eurostat, 2012: European Statistics on Accidents at Work, Summary methodology, 2012 edition, Eurostat Methodologies and Working Papers, Luxembourg. Available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-12-002/EN/KS-RA-12-002-EN.PDF</p> <p>ILO, 1998: Resolution concerning statistics of occupational injuries (resulting from occupational accidents), adopted by the Sixteenth International Conference of Labour Statisticians (October 1998). Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087528/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators: Guidelines for Producers and Users of Statistical and Legal Framework Indicators. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang--en/index.htm.</p>

Short name	Nonfatal occupational injuries (1a2)
Name	Rate of nonfatal occupational injuries per 100,000 employed persons
Dimension and sub-dimension	<p>1. Safety and ethics of employment</p> <ul style="list-style-type: none"> a. Safety at work b. Child labour and forced labour c. Fair treatment of employment
Measurement objectives	The objective of measuring the rate of nonfatal occupational injuries is to assess and monitor the extent to which workers are protected from work-related hazards and risks. The rate of nonfatal occupational injuries is a measure of the risk to an employed person (or a different reference group, depending on the data available) of having a nonfatal injury due to adverse work-related factors.
Formula	$\frac{\text{Total number of new cases of nonfatal occupational injuries during the reference year}}{\text{Total number of persons in the reference group during the reference year}} \times 100,000$ <p>It should be noted that the total number of cases of injury is counted rather than the total number of persons suffering injuries.</p> <p>For the calculation of rates, the numerator and the denominator should have the same coverage. For example, if self-employed persons are covered in the statistics of nonfatal occupational injuries, they should also be covered in the denominator. While the preferred denominator is total employed persons, worker coverage may be limited to employees or insured workers, depending on the data source.</p>
Concepts and definitions	<p>For the purposes of statistics of occupational injuries, the following terms and definitions are used according to the <i>Resolution concerning statistics of occupational injuries (resulting from occupational accidents)</i>, adopted by the Sixteenth International Conference of Labour Statisticians (October 1998):</p> <p><i>Occupational accident</i>: an unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work which results in one or more workers incurring a personal injury, disease or death; as occupational accidents are to be considered travel, transport or road traffic accidents in which workers are injured and which arise out of or in the course of work, i.e., while engaged in an economic activity, or at work, or carrying on the business of the employer.</p> <p><i>Occupational injury</i>: any personal injury, disease or death resulting from an occupational accident; an occupational injury is therefore distinct from an occupational disease, which is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity.</p> <p><i>Case of occupational injury</i>: the case of one worker incurring an occupational</p>

Short name	Nonfatal occupational injuries (1a2)
	<p>injury as a result of one occupational accident. If a person is injured in more than one occupational accident during the reference period, each case of injury to that person should be counted separately.</p> <p><i>Incapacity for work:</i> inability of the victim, due to an occupational injury, to perform the normal duties of work in the job or post occupied at the time of the occupational accident.</p> <p><i>Nonfatal occupational injury:</i> a nonfatal injury caused by an occupational accident.</p> <p>Note: cases of occupational disease and cases of injury due to commuting accidents (see glossary) are generally excluded from the numerator.</p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>While ideally the numerator and denominator should derive from the same source, this may not be feasible in practice.</p> <p>Data for new cases of nonfatal occupational injuries (the numerator) shall preferably be based on registers and other administrative sources, such as labour inspection records or insurance/compensation records. However, if these are incomplete, household and/or establishment surveys may be used as supplementary sources. The data source for the number of employed persons (the denominator) may be either administrative sources (employment registers) or a labour force survey.</p> <p>The type of source determines the coverage of the statistics. In many countries, the coverage of reporting requirements or injury compensation, and thus the coverage of the statistics, is limited to certain types of workers such as employees only or insured workers only.</p>
Recommended metadata	<p>Metadata should include the type and name of the data source, possible age coverage, geographic coverage and other coverage limitations. If the numerator and denominator derive from different sources, this should be clearly specified. Furthermore metadata should specify (i) whether the data relate to cases of occupational injury which have been reported (to an accident notification system or to an accident compensation scheme), compensated (by an accident insurance scheme) or identified in some other way (for example through a survey of households or establishments) and (ii) whether cases of occupational injury due to commuting accidents are included in the statistics.</p> <p>The variable used in the denominator should be clearly identified as total employed persons, total number of employees, total insured workers or other worker coverage, according to the data source.</p>

Short name	Nonfatal occupational injuries (1a2)
	<p>Metadata should also specify the worker coverage according to the economic activity (ISIC), institutional sectors and status in employment, information on professions/activities for which data on accidents at work are subject to confidentiality by national legislation, as well as procedures used to correct data for under reporting (or over-reporting). Finally, information about any national specificity essential for the interpretation, i.e., description of the work insurance system for reporting accidents at work, discrepancies between national and international definitions (definition of local unit, commuting accidents, etc.).</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Lost workdays (i.e., the number of days during which the victim is unable to work, including the threshold of four days that is used in the ESAW data collection) • Temporary versus permanent incapacity for work • Sex • Age • Employment status (employees / self-employed) • Hours worked (part-time / full-time) • Occupation group • Economic activity group • Type of injury from the International Statistical Classification of Diseases and Related Health Problems, ICD-10 (1992). • Part of body injured, from the International Statistical Classification of Diseases and Related Health Problems, ICD-10 (1992).
Interpretation guidelines	<p>There may be problems of under reporting of nonfatal occupational injuries, and appropriate systems should be put in place to ensure the best reporting and data quality. Because data quality issues may be present, it may be more relevant to analyse indicator trends rather than levels. Still, for an analysis of trends, it should be taken into account that the structure of economic activities over time may have a significant impact on the trend of occupational injuries.</p> <p>The indicator may be used to identify groups of workers exposed to high risks of nonfatal occupational injuries. When measured over time, the indicator can reveal progress or deterioration in occupational safety.</p> <p>The indicator is defined in terms of the total number of employed persons during the reference year. Therefore, no account is taken of differences in hours worked between groups of workers.</p>
Relation to other indicators	<p>For a comprehensive analysis of safety at work, the rate of nonfatal occupational injuries should be analysed together with the rate and types of fatal occupational injuries and with other indicators of safety at work.</p> <p>An analysis of the occupational safety and health system generally and of information on the legal institutional context concerning labour inspection on occupational safety and health in particular would be useful to analyse</p>

Short name	Nonfatal occupational injuries (1a2)
	with this indicator.
International comparisons	<p>Care should be taken when making international comparisons since the sources, methods of data collection, worker coverage and classifications used will differ between countries. For example, coverage may be limited to certain types of workers (e.g., employees, insured persons, full-time workers, etc.), certain economic activities, establishments with a limited number of employees, cases of injury losing more than a certain number of days of work, etc. Furthermore, care should be taken in case of any deviations from the definition, e.g., regarding the exclusion of commuting accidents or occupational diseases from the numerator.</p> <p>Differences in the structure of economic activities between countries should also be taken into account: Accidents at work happen more often in some occupations and economic activities than in others. This should be taken into account if cross-national comparisons are made.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Data on nonfatal occupational injuries are not regularly collected within the LFS. Within the EU, under the ESAW regulation, data are collected annually but these are restricted to nonfatal occupational injuries with at least four lost workdays. However, the indicator may be based on the 2007 and 2013 LFS ad hoc modules on accidents at work and work-related health problems. The relevant variable in these modules is AWNUMBR (Accidents at work in the last 12 months).</p> <p>A nonfatal occupational injury is defined as AWNUMBR = 1 or AWNUMBR = 2 with:</p> <p style="padding-left: 40px;">AWNUMBR = 1 (One accident at work)</p> <p style="padding-left: 40px;">AWNUMBR = 2 (Two or more accidents at work)</p> <p>The rate of nonfatal occupational injuries per 100,000 employed persons is then calculated according to the formula above. It should be noted, however, that in case of two or more accidents at work, the exact number of accidents is not available, so the total number of accidents will be underestimated.</p>
Further readings	<p>Eurostat (2012), European Statistics on Accidents at Work, Summary methodology, 2012 edition, Eurostat Methodologies and Working Papers, Luxembourg. Available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-12-002/EN/KS-RA-12-002-EN.PDF</p> <p>ILO (1998), Resolution concerning statistics of occupational injuries (resulting from occupational accidents), adopted by the Sixteenth International Conference of Labour Statisticians (October 1998). Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087528/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators: Guidelines for Producers and Users of</p>

Short name	Nonfatal occupational injuries (1a2)
	Statistical and Legal Framework Indicators. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang-en/index.htm .

Short name	Exposure to physical health risk factors (1a3)
Name	Percentage of employed persons who are exposed to physical health risk factors at work
Dimension and sub-dimension	1. Safety and ethics of employment <ol style="list-style-type: none"> a. Safety at work b. Child labour and forced labour c. Fair treatment of employment
Measurement objectives	The objective of measuring the indicator is to assess the extent to which employed persons are exposed to physical health risk factors at work.
Formula	$\frac{\text{Total number of employed persons who indicate that they are exposed to physical health risk factors at work during the reference year}}{\text{Total number of employed persons during the reference year}} \times 100$
Concepts and definitions	<p><i>Exposure to physical health risk factors:</i> reporting to be exposed at work to risk factors that can affect physical health. Occupational risk factors may include:</p> <ul style="list-style-type: none"> • Work underground, under water, at dangerous heights or in confined spaces • Difficult work postures or work movements • Work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads • Work in an unhealthy environment which may expose workers to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their physical health (e.g., chemicals, dust, fumes, smoke or gases) • Activities involving strong visual concentration for long hours • Risk of occupational accidents. <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	Data on employed persons who indicate that they are exposed to physical health risk factors at work shall preferably be based on labour force surveys or other social or household surveys. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.
Recommended metadata	Metadata should include the type and name of the data source, possible age coverage, geographic coverage and other coverage limitations. The metadata should include a description of the categories of physical health risk factors at work used in the survey methodology.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age group

Short name	Exposure to physical health risk factors (1a3)
	<ul style="list-style-type: none"> • Employment status (employees / self-employed) • Hours worked (part-time / full-time) • For employees: type of contract • Occupation group (ISCO) • Economic activity group (ISIC)
Interpretation guidelines	<p>The indicator may be used to identify the extent to which employed persons are exposed to unsafe working conditions and specifically, physical health risk factors at work.</p> <p>The indicator is defined in terms of the total number of employed persons during the reference year. Therefore, no account is taken of differences in hours worked between groups of workers.</p>
Relation to other indicators	<p>For a comprehensive analysis of safety at work, the indicator should be analysed together with other indicators of safety at work.</p> <p>The indicator may be supplemented by indicators on employment by economic activity and employment by occupation in those categories defined as hazardous according to national law or regulation (if these exist).</p> <p>The context information on labour inspection of occupational safety and health may be useful to analyse together with this indicator.</p>
International comparisons	<p>Care should be taken when making international comparisons since the sources, methods of data collection, worker coverage, classifications and measurement of <i>physical health risk factors</i> will differ between countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>The indicator on exposure to physical health risk factors may be calculated on the basis of items included in the EU-LFS ad-hoc modules 2007 and 2013 on “accidents at work and other work-related health problems”.</p> <p>The relevant variable in the LFS module is PHYSRISK (Exposure to physical health risk factors). Exposure to physical health risk factors is defined as PHYSRISK = 1, 2, 3, 4, 5 or 6 with:</p> <ul style="list-style-type: none"> • PHYSRISK = 1 (mainly to difficult work postures or work Movements) • PHYSRISK = 2 (mainly to handling of heavy loads) • PHYSRISK = 3 (mainly to noise or strong vibration) • PHYSRISK = 4 (mainly to chemicals, dust, fumes, smoke or gases) • PHYSRISK = 5 (mainly to activities involving strong visual Concentration) • PHYSRISK = 6 (mainly to risk of accidents)
Further readings	<p>Concha-Barrientos, M., et al., 2004: Selected Occupational Risk Factors. In: WHO (ed.): Comparative Quantification of Health Risks. Global and Regional Burden of Disease Attribution to Selected Major Risk Factors, Vol. 2, Geneva: WHO, pp. 1651-1801. Available at: http://www.who.int/publications/cra/en/</p>

Short name	Exposure to physical health risk factors (1a3)
	<p>ILO, 1981: Convention concerning Occupational Safety and Health and the Working Environment. Adopted by the 67th International Labour Conference in 1981. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C155</p> <p>Other International Labour Standards on Occupational safety and health are available through ILO at: http://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/occupational-safety-and-health/lang-en/index.htm</p>

Short name	Exposure to mental health risk factors (1a4)
Name	Percentage of employed persons who are exposed to mental well-being risk factors at work
Dimension and sub-dimension	1. Safety and ethics of employment <ol style="list-style-type: none"> a. Safety at work b. Child labour and forced labour c. Fair treatment of employment
Measurement objectives	The objective of measuring the indicator is to assess the extent to which the employed persons are exposed to mental well-being risk factors at work.
Formula	$\frac{\text{Total number of employed persons who indicate that they are exposed to risk factors at work that adversely affect their mental well - being during the reference year}}{\text{Total number of employed persons during the reference year}} \times 100$
Concepts and definitions	<p><i>Exposure to mental well-being risk factors:</i> reporting exposure at work to risk factors that can affect mental well-being. Risk factors include severe time pressure or overload of work, (threat of) violence and harassment or bullying.</p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	Data on the indicator should preferably be based on labour force surveys or other social or household surveys. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.
Recommended metadata	Metadata should include the type and name of the data source, possible age coverage, geographic coverage and other coverage limitations. The metadata should include a description of the categories of risk factors at work that adversely affect mental well-being used in the survey methodology.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age group • Employment status (employees / self-employed) • Hours worked (part-time / full-time) • For employees: type of contract • Occupation group (ISCO) • Economic activity group (ISIC)
Interpretation guidelines	<p>The indicator may be used to identify the extent to which employed persons are exposed to risk factors at work that adversely affect mental well-being.</p> <p>The indicator is defined in terms of the total number of employed persons during the reference year. Therefore, no account is taken of differences in</p>

Short name	Exposure to mental health risk factors (1a4)
	hours worked between groups of workers.
Relation to other indicators	For a comprehensive analysis of safety at work, the indicator should be analysed together with other indicators of safety at work.
International comparisons	Care should be taken when making international comparisons since the sources, methods of data collection, worker coverage, classifications and measurement of <i>risk factors</i> of mental health well-being will differ between countries.
Recommended calculation in the EU-LFS or other international surveys	<p>The indicator on exposure to mental well-being risk factors may be calculated on the basis of items included in the EU-LFS ad-hoc module 2013 on “accidents at work and other work-related health problems”.</p> <p>The relevant variable in the LFS module is MENTRISK (Exposure to mental well-being risk factors). Exposure to mental well-being risk factors is defined as MENTRISK = 1, 2 or 3 with:</p> <p style="padding-left: 40px;">MENTRISK = 1 (Yes, mainly to severe time pressure of overload of work)</p> <p style="padding-left: 40px;">MENTRISK = 2 (Yes, mainly to violence or threat of violence)</p> <p style="padding-left: 40px;">MENTRISK = 3 (Yes, mainly to harassment or bullying)</p>
Further readings	Eurofound, 2012: Fifth European Working Conditions Survey, Luxembourg, Publications Office of the European Union. (2012). Available at: http://www.eurofound.europa.eu/publications/htmlfiles/ef1182.htm

Sub-dimension 1b: Child labour and forced labour

Short name	Child labour rate (1b1)
Name	Percentage of children aged 5 to 17 years who are engaged in child labour
Dimension and sub-dimension	<p>1. Safety and ethics of employment</p> <p>a. Safety at work</p> <p>b. Child labour and forced labour</p> <p>c. Fair treatment of employment</p>
Measurement objectives	<p>This indicator provides information about the degree to which children aged 5 to 17 years are engaged in child labour.</p> <p>International labour conventions including Convention 138, the <i>Minimum Age Convention</i> (adopted in 1973) and Convention 182, the <i>Worst Forms of Child Labour Convention</i> (adopted in 1999) are two of the core labour standards that form the basis of the <i>ILO Declaration on Fundamental Principles and Rights at Work</i>. Adopted in 1998, the Declaration is an expression of commitment by governments, employers' and workers' organizations throughout the world to uphold basic human values that are vital to our social and economic lives.</p> <p>Measurement of children in all categories of child labour is essential in order to gauge its incidence, distribution and characteristics. The objective of child labour statistics generally is to provide reliable, comprehensive and timely data to serve as a basis for determining priorities for national action for the elimination of child labour. Data are used for monitoring and evaluation of the child labour situation in particular, and the well-being of children in general.</p>
Formula	$\frac{\text{Number of children aged 5 to 17 years in child labour}}{\text{Total number of children aged 5 to 17 years}} \times 100$
Concepts and definitions	<p>According to the <i>Resolution concerning statistics of child labour</i> adopted by the 18th ICLS in 2008, the term <i>child labour</i> reflects the engagement of children in prohibited work and, more generally, in types of work to be eliminated as socially and morally undesirable as guided by national legislation, the ILO Minimum Age Convention, 1973 (No. 138), and the Worst Forms of Child Labour Convention, 1999 (No. 182), as well as their respective supplementing Recommendations (No.s 146 and 190).</p> <p>Child labour may be measured in terms of the engagement of children in productive activities either on the basis of the general production boundary, or on the basis of the SNA production boundary. The underlying measurement framework should be clearly specified.</p> <p>Note: Based on national circumstances, countries may also wish to collect data on activities by children which are outside the general production boundary, such as begging and stealing, and which may need to be considered in the context of the worst forms of child labour.</p>

Short name	Child labour rate (1b1)
	<p>For the purpose of statistical measurement, children engaged in child labour include all persons aged 5 to 17 years who, during a specified time period, were engaged in one or more of the following categories of activities:</p> <p>(a) worst forms of child labour (see glossary);</p> <p>(b) employment below the minimum age (see glossary); and</p> <p>(c) hazardous unpaid household services, applicable where the general production boundary is used as the measurement framework (see glossary).</p> <p>These categories of activities of child labour are defined in the 18th ICLS <i>Resolution concerning statistics of child labour</i>.</p> <p>All persons in the age group from 5 to 17 years, where age is measured as the number of completed years at the child’s latest birthday (see glossary).</p>
<p>Recommended data source(s)</p>	<p>According to the 18th ICLS Resolution concerning statistics of child labour (2008), a <i>Household-based child labour survey</i> is the recommended data source, as it provides an effective tool for collecting a wide range of statistics on child labour and estimating its prevalence. It may be designed either as a stand-alone survey or as a module attached to another household-based survey. If the latter approach is used, a labour force survey (LFS) is preferred, since similar concepts are applied and similar topics covered. The advantage of the household-based child labour survey is that the household is the most appropriate unit for identifying children and their families, measuring their socio-economic and demographic characteristics and housing conditions, obtaining information on the child’s educational and work status and assessing the determinants and consequences of children’s work.</p> <p>Other sources:</p> <ul style="list-style-type: none"> • <i>An employment-based establishment survey</i> administered at the children’s workplaces (intended to capture the <i>number of jobs</i>) may be considered only as a secondary option; • <i>Population census</i>; • <i>Other household survey</i> with employment module. <p>It should be noted that if children who live on the street are part of the target population, special surveys will need to be developed that complement other sources of data on child labour.</p> <p>It is important to note that questions on child labour are highly sensitive and responses are therefore particularly subject to measurement error. Special care must therefore be taken in drafting and testing the survey questions, placement of questions in the questionnaire, and in interviewer training to minimise such error.</p>

Short name	Child labour rate (1b1)
	<p>In countries where child labour is a rare phenomenon or societal perceptions make it difficult to obtain reliable data, a combination of methods and different data sources may be considered to obtain indirect estimations.</p>
<p>Recommended metadata</p>	<p>At a minimum, metadata on the source (periodicity, breaks in series etc.), reference period, population coverage, child labour concept definition including SNA boundary used, age threshold(s) used, list of hazardous industries and occupations (determined by national legislation) and geographic coverage should be made available.</p>
<p>Recommended disaggregation</p>	<ul style="list-style-type: none"> • Sex • Age groups • Marital status • School attendance • Hours of work (hours worked per week) • Status in employment (ICSE-93; particularly self-employed workers vs. employees) • Occupation group (ISCO-08. Occupational data should be coded to the most detailed level of the national occupational classification for which reliable estimates can be obtained). • Economic activity group (ISIC rev.4) • Location of workplace (at home or away from home: street, market etc.) • Residency (urban, rural) • Regions • Activities outside the SNA, SNA general production boundary and SNA production boundary activities, depending on the scope of activities, to facilitate international comparisons
<p>Interpretation guidelines</p>	<p>Engagement of children in child labour is prohibited and should be abolished. Thus, any positive level in the indicator or a rising trend should be viewed with concern and should inform policy for appropriate policy action.</p> <p>Several elements in the definition of child labour require national consensus and consistency with national legislation. This includes the list of designated hazardous occupations and/or industries, a cut-off point used in defining long weekly hours worked and legislated minimum age of employment. Interpretations of the indicator should bear this in mind.</p> <p>The activity scope for the measurement of <i>child labour</i> may be the SNA production boundary, the SNA general production boundary or even beyond the general production boundary (to include child begging and stealing), that is, it may include all children aged 5-17 engaged in child labour during the reference period. The SNA boundary definition of the numerator will be very important to the interpretation of the indicator and for international comparisons. If the broadest activity boundary is applied (i.e., beyond the SNA general production boundary), countries are</p>

Short name	Child labour rate (1b1)
	<p>encouraged to analyse data within each boundary in order to allow targeted policy action for specific forms of child labour.</p> <p>The indicator should be disaggregated by sex, as there are often important differences in the experiences of girls and boys with respect to child labour. This is particularly important when hazardous unpaid household services are included in the measurement, that is, when child labour is measured on the basis of the general production boundary. Moreover, cultural norms, especially with respect to the age of marriage of girls, may affect the estimate of the child labour rate since married girls tend to be excluded when data are collected on the grounds that they are no longer children.</p> <p>Child labour studies in many countries often point to the predominance of child labour in rural areas and in the agricultural activities, sometimes a designated hazardous industry for children. Thus, it may be important to analyse urban-rural breakdowns as well as agricultural and non-agricultural disaggregations of the indicator.</p>
Relation to other indicators	<p>The child labour rate may be analysed together with other child labour indicators (for the age group concerned) and other indicators such as:</p> <ul style="list-style-type: none"> • Socio-economic characteristics of the child's household • School attendance status • Working conditions including impact on children's health and education <p>The child labour rate should be analysed with the a) total number of children and b) total number of children in employment.</p>
International comparisons	<p>Countries are encouraged to align statistical concepts and definitions related to child labour with the <i>ICLS Resolution concerning statistics of child labour</i> adopted by the 18th ICLS, 2008 which will facilitate the international comparability of the indicator. Nonetheless, national differences in the minimum age of employment, hazardous industries and occupations, and the long weekly hours threshold will limit the degree of international comparability. The extent to which different classification systems such as ISIC and ISCO are used across countries to define the hazardous industry and occupation groups will also affect international comparability.</p> <p>The SNA boundary scope of the numerator will be very important for international comparisons.</p> <p>Differences between countries regarding the measurement of employment and regarding working time concepts used and their definitions may affect comparability. Another key challenge is the quality of data collection methods, considering the possible variation in the nature of the target population.</p>
Recommended calculation in the EU-LFS or other	<p>The ILO Statistical Information and Monitoring Programme on Child Labour (SIMPOC) assists countries in the collection, documentation, processing and analysis of child labour data. SIMPOC makes available a wealth of statistical</p>

Short name	Child labour rate (1b1)
international surveys	tools, data, and reports, as for example, specific questionnaires for child labour surveys; manuals and training kits on how to carry out child labour data collection in households, schools and at the workplace; guidance on how to properly process and analyse the collected information; micro datasets and survey reports from around the world; research on critical statistical issues; and regular trend reports. Information is available at: http://www.ilo.org/ipec/ChildlabourstatisticsSIMPOC/lang--en/index.htm
Further readings	<p>ILO, 1973: Minimum Age Convention, ILO Convention No. 138, 1973. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312283:NO</p> <p>ILO, 1999: Worst Form of Child Labour Convention, ILO Convention No. 182, 1999. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312327:NO</p> <p>ILO, 1999: Worst Forms of Child Labour Recommendation, ILO Recommendation No. 190, 1999. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312528:NO</p> <p>ILO, 2008: Resolution concerning statistics of child labour, adopted by the 18th ICLS, 2008. Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112458/lang--en/index.htm</p> <p>ILO, 2008: Report III - Child Labour Statistics - 18th ICLS, Geneva, 24 November - 5 December 2008. Available at: http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_099577/lang--en/index.htm</p> <p>ILO, 2005: SIMPOC Training Modules on Child Labour Data Collection, Processing, Analysis and Reporting, ILO, Geneva, 2005. Available at: http://www.ilo.org/ipecinfo/product/viewProduct.do;?productId=5044</p> <p>ILO, 2004: Manual for child labour data analysis and statistical reports, ILO, Geneva, 2004. Available at: http://www.ilo.org/ipecinfo/product/viewProduct.do;?productId=3079</p> <p>ILO: Other Manuals on Child Labour. Available at: http://www.ilo.org/ipec/ChildlabourstatisticsSIMPOC/Manuals/la</p>

Short name	Child labour rate (1b1)
	<p data-bbox="523 241 738 275">ng--en/index.htm</p> <p data-bbox="443 331 1321 470">ILO, 2013: Decent Work Indicators. Guidelines for producers and users of statistical and legal framework indicators, 2013. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang-en/index.htm</p> <p data-bbox="443 526 1361 665">ILO, 2000-2012: Marking progress against child labour. Global estimates and trends 2000-2012. Available at: http://www.ilo.org/ipecc/Informationresources/WCMS_221513/lang-en/index.htm</p>

Short name	Hazardous child labour rate (1b2)
Name	Percentage of children aged 5 to 17 years who are engaged in hazardous child labour
Dimension and sub-dimension	1. Safety and ethics of employment <ul style="list-style-type: none"> a. Safety at work b. Child labour and forced labour c. Fair treatment of employment
Measurement objectives	<p>This indicator provides information about the degree to which children aged 5 to 17 years are engaged in hazardous child labour.</p> <p>As a subcomponent of child labour, the indicator reflects the engagement of children in hazardous work which is prohibited as guided by national legislation, the ILO Minimum Age Convention, 1973 (No. 138), and the Worst Forms of Child Labour Convention, 1999 (No. 182), as well as their respective supplementing Recommendations (No.s 146 and 190). International labour conventions including Convention 138 and Convention 182 are two of the core labour standards that form the basis of the <i>ILO Declaration on Fundamental Principles and Rights at Work</i>. Adopted in 1998, the Declaration is an expression of commitment by governments, employers' and workers' organizations throughout the world to uphold basic human values that are vital to our social and economic lives.</p> <p>According to Article 3 of ILO Convention No. 182, the worst forms of child labour include hazardous work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children.</p> <p>Measurement of children in hazardous work, a subcategory of the worst forms of child labour, is essential in order to gauge its incidence, distribution and characteristics. Data are used for monitoring and evaluation of child labour in hazardous work situations and to inform policy for its elimination.</p>
Formula	$\frac{\text{Number of children in hazardous child labour aged 5 to 17 years}}{\text{Total number of children aged 5 to 17 years}} \times 100$
Concepts and definitions	<p>The 18th ICLS <i>Resolution concerning statistics of child labour</i> indicates that for the purpose of statistical measurement, <i>children engaged in hazardous work</i> include all persons aged 5 to 17 years who, during a specified time period, were engaged in work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children.</p> <p>According to ILO Recommendation No. 190, the following criteria should be taken into account when determining hazardous work conditions of children at the national level:</p> <ul style="list-style-type: none"> (a) work which exposes children to physical, psychological or sexual abuse; (b) work underground, under water, at dangerous heights or in confined

Short name	Hazardous child labour rate (1b2)
	<p>spaces;</p> <p>(c) work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads;</p> <p>(d) work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health;</p> <p>(e) work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer.</p> <p>Hazardous work by children is statistically defined in terms of the engagement of children in activities of a hazardous nature (designated hazardous industries and occupations), or as work under hazardous conditions, for example, long hours of work in tasks and duties which by themselves may or may not be of a hazardous nature for children (hazardous work conditions).</p> <p>The criteria in (a) to (e) above can be used as a basis for constructing statistical variables for the measurement of hazardous work by children. Each criterion provides information that will inform the design of survey questions and response categories to be administered in child labour surveys.</p> <p>For hazardous work conditions reflected by subparagraphs (a)–(d), such work by children may be directly identified by existing survey questions on industry and occupation.</p> <p>A child is considered to be <i>working long hours</i> if the number of hours worked at all jobs during the reference period is above a specified threshold. The threshold may be determined in terms of the maximum number of hours of work that the national law or regulation sets for children who have reached the minimum working age. In the absence of such a specific limit for children, the threshold may be decided taking account of the regulation on the adult workers' normal working time.</p> <p>A child is considered to be <i>working at night</i> if the work schedule includes hours of work defined as night work prohibited for children under national legislation, where it exists. In the case of children, the period of time spent commuting between work and home should be considered as part of the work schedule. Alternative statistical definitions of night work for children may be formulated on the basis of the ILO Night Work Convention No. 171 (1990). Where there is no legal prohibition of night work of children, national legislation and prevailing collective agreements, if any, on night work of adult workers could be used as the basis for determining night work of children.</p> <p>The concept of <i>unpaid household services</i> is applicable where the general</p>

Short name	Hazardous child labour rate (1b2)
	<p>production boundary is used as the framework for measuring child labour. <i>Hazardous unpaid household services by children</i> are those performed in the child's own household under hazardous conditions, that is, unpaid household services performed (a) for long hours, (b) in an unhealthy environment, involving unsafe equipment or heavy loads, (c) in dangerous locations, and so on. The definition of <i>long hours in unpaid household services of children</i>, relative to their age, may differ from the one applied in respect to children in employment. The effect on a child's education should also be considered when determining what constitutes long hours.</p> <p>Child labour may be measured in terms of the engagement of children in productive activities either on the basis of the general production boundary, or on the basis of the SNA production boundary. The underlying measurement framework should be clearly specified.</p> <p>Note: Based on national circumstances, countries may also wish to collect data on activities by children which are outside the general production boundary, such as begging and stealing, and which may need to be considered in the context of the worst forms of child labour.</p> <p>All persons in the age group from 5 to 17 years, where age is measured as the number of completed years at the child's latest birthday (see glossary).</p>
<p>Recommended data source(s)</p>	<p>According to the 18th ICLS <i>Resolution concerning statistics of child labour</i> (2008), a <i>Household-based child labour survey</i> is the recommended data source, as it provides an effective tool for collecting a wide range of statistics on child labour and estimating its prevalence. It may be designed either as a stand-alone survey or as a module attached to another household-based survey. If the latter approach is used, a labour force survey (LFS) is preferred, since similar concepts are applied and similar topics covered. The advantage of the household-based child labour survey is that the household is the most appropriate unit for identifying children and their families, measuring their socio-economic and demographic characteristics and housing conditions, obtaining information on the child's educational and work status and assessing the determinants and consequences of children's work.</p> <p><i>An employment-based establishment survey</i> administered at the children's workplaces (intended to capture the <i>number of jobs</i>) may be considered only as a secondary option;</p> <p>It should be noted that if children who live on the street are part of the target population, special surveys will need to be developed that complement other sources of data on child labour.</p> <p>It is important to note that questions on hazardous child labour are highly sensitive and responses are therefore particularly subject to measurement error. Special care must therefore be taken in drafting and testing the</p>

Short name	Hazardous child labour rate (1b2)
	<p>survey questions, placement of questions in the questionnaire, and in interviewer training to minimise such error.</p> <p>In countries where hazardous child labour is a rare phenomenon or societal perceptions make it difficult to obtain reliable data, a combination of methods and different data sources may be considered to obtain indirect estimations.</p>
Recommended metadata	<p>At a minimum, metadata on the source (periodicity, breaks in series etc.), reference period, population coverage, hazardous child labour concept definition including SNA boundary used, age threshold(s) used, list of hazardous industries and occupations (determined by national legislation) and geographic coverage should be made available.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age groups • Marital status • School attendance • Hours of work (hours worked per week) • Status in employment (ICSE-93; particularly self-employed workers vs. employees) • Occupation group (ISCO-08. Occupational data should be coded to the most detailed level of the national occupational classification for which reliable estimates can be obtained). • Economic activity group (ISIC rev.4) • Location of workplace (at home or away from home: street, market etc.) • Residency (urban, rural) • Regions • Activities outside the SNA, SNA general production boundary and SNA production boundary activities, depending on the scope of activities, to facilitate international comparisons
Interpretation guidelines	<p>Engagement of children in hazardous work is prohibited and should be abolished. Thus, any positive level in the indicator or a rising trend should be viewed with concern and should inform policy for appropriate policy action.</p> <p>Several elements in the definition of the indicator require national consensus and consistency with national legislation. This includes the list of designated hazardous occupations and/or industries, a cut-off point used in defining long weekly hours worked and legislated minimum age of employment. Interpretations of the indicator should bear this in mind.</p> <p>The activity scope for the measurement of <i>hazardous child labour</i> may be the SNA production boundary, the SNA general production boundary or even beyond the general production boundary (to include child begging and stealing). The SNA boundary definition of the numerator will be very</p>

Short name	Hazardous child labour rate (1b2)
	<p>important to the interpretation of the indicator and for international comparisons. If the broadest activity boundary is applied (i.e., beyond the SNA general production boundary), countries are encouraged to analyse data within each boundary in order to allow targeted policy action for specific forms of child labour.</p> <p>The indicator should be disaggregated by sex, as there are often important differences in the experiences of girls and boys with respect to hazardous child labour. This is particularly important when hazardous unpaid household services are included in the measurement, that is, when child labour is measured on the basis of the general production boundary. Moreover, cultural norms, especially with respect to the age of marriage of girls, may affect the estimate since married girls tend to be excluded when data are collected on the grounds that they are no longer children.</p> <p>Child labour studies in many countries often point to the predominance of child labour in rural areas and in the agricultural activities, sometimes a designated hazardous industry for children. Thus, it may be important to analyse urban-rural breakdowns as well as agricultural and non-agricultural disaggregations of the indicator.</p>
<p>Relation to other indicators</p>	<p>The hazardous child labour rate may be analysed together with other child labour indicators (for the age group concerned) and other indicators such as:</p> <ul style="list-style-type: none"> • Socio-economic characteristics of the child’s household • School attendance status • Working conditions including impact on children’s health and education • Children in the worst forms of child labour other than hazardous work <p>The indicator should be analysed with the a) total number of children b) total number of children 5-17 in employment and c) the total number of children 5-17 in child labour.</p>
<p>International comparisons</p>	<p>Countries are encouraged to align statistical concepts and definitions related to child labour with the <i>ICLS Resolution concerning statistics of child labour</i> adopted by the 18th ICLS, 2008 which will facilitate the international comparability of the indicator. Nonetheless, national differences in the minimum age of employment, hazardous industries and occupations, and the long weekly hours threshold will limit the degree of international comparability. The extent to which different classification systems such as ISIC and ISCO are used across countries to define the hazardous industry and occupation groups will also affect international comparability.</p> <p>The SNA boundary scope of the numerator will be very important for international comparisons.</p> <p>Differences between countries regarding the measurement of employment and regarding working time concepts used and their definitions may affect</p>

Short name	Hazardous child labour rate (1b2)
	comparability. Another key challenge is the quality of data collection methods, considering the possible variation in the nature of the target population.
Recommended calculation in the EU-LFS or other international surveys	The ILO Statistical Information and Monitoring Programme on Child Labour (SIMPOC) assists countries in the collection, documentation, processing and analysis of child labour data. SIMPOC makes available a wealth of statistical tools, data, and reports, as for example, specific questionnaires for child labour surveys; manuals and training kits on how to carry out child labour data collection in households, schools and at the workplace; guidance on how to properly process and analyse the collected information; micro datasets and survey reports from around the world; research on critical statistical issues; and regular trend reports. Information is available at: http://www.ilo.org/ipecc/ChildlabourstatisticsSIMPOC/lang--en/index.htm
Further readings	<p>ILO, 1973: Minimum Age Convention, ILO Convention No. 138, 1973. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312283:NO</p> <p>ILO, 1999: Worst Form of Child Labour Convention, ILO Convention No. 182, 1999. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312327:NO</p> <p>ILO, 1999: Worst Forms of Child Labour Recommendation, ILO Recommendation No. 190, 1999. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312528:NO</p> <p>ILO, 2008: Resolution concerning statistics of child labour, adopted by the 18th ICLS, 2008. Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112458/lang--en/index.htm</p> <p>ILO, 2008: Report III - Child Labour Statistics - 18th ICLS, Geneva, 24 November - 5 December 2008. Available at: http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_099577/lang--en/index.htm</p> <p>ILO, 2005: SIMPOC Training Modules on Child Labour Data Collection, Processing, Analysis and Reporting, ILO, Geneva, 2005. Available at: http://www.ilo.org/ipeccinfo/product/viewProduct.do?productId=5044</p> <p>ILO, 2004: Manual for child labour data analysis and statistical reports, ILO,</p>

Short name	Hazardous child labour rate (1b2)
	<p>Geneva, 2004. Available at: http://www.ilo.org/ipecinfo/product/viewProduct.do?productId=3079</p> <p>ILO: Other Manuals on Child Labour. Available at: http://www.ilo.org/ipec/ChildlabourstatisticsSIMPOC/Manuals/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators. Guidelines for producers and users of statistical and legal framework indicators, 2013. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang--en/index.htm</p> <p>ILO, 2000-2012: Marking progress against child labour. Global estimates and trends 2000-2012. Available at: http://www.ilo.org/ipec/Informationresources/WCMS_221513/lang--en/index.htm</p>

Short title	Forced labour rate (1b3)
Name	Percentage of persons who are in forced labour
Dimension and sub-dimension	<p>1. Safety and ethics of employment</p> <ul style="list-style-type: none"> a. Safety at work b. Child labour and forced labour c. Fair treatment of employment
Measurement objectives	<p>This indicator targets the proportion of workers who have been in forced labour during a reference period (12 months).</p> <p>Measurement of forced labour and its elements are essential to understanding the nature and extent of the problem, determine its causes and consequences and inform policymakers and other stakeholders involved in action against forced labour.</p>
Formula	$\frac{\text{Number of persons in forced labour}}{\text{Total number of persons in the reference group}} \times 100$
Concepts and definitions	<p>Number of employed persons: persons above a certain age threshold who are employed during the reference period, as per the 19th ICLS Resolution concerning statistics of work, employment and labour underutilisation (2013).</p> <p>Number of workers in forced labour: workers who have been in forced labour (see glossary).</p> <p>The concept of coercion/menace of penalty includes all the means used by an employer or a recruiter to force someone to work against his/her will or to prevent him/her from leaving.</p> <p><i>Number of persons in the reference group: Persons above a certain age threshold in the forms of work covered by the indicator as per the 19th ICLS Resolution concerning statistics of work, employment and labour underutilisation adopted in 2013 (to be defined according to national circumstances). Some countries may wish to include children in employment, ages 5-17, as defined by the 18th ICLS Resolution concerning statistics of child labour (2008).</i></p> <p>Surveys can target a population identified as being at high risk of forced labour such as: workers from a specific industry/occupation, workers from a specific area, or groups of people identified as vulnerable to forced labour (e.g., indigenous people).</p> <p>The recommended reference period of measurement is the last 12 months.</p>
Recommended data source(s)	Dedicated household survey with a module on forced labour. If the survey targets a specific occupation/industry, individual interviews of workers in an establishment survey can be considered.

Short title	Forced labour rate (1b3)
	<p>The survey design and implementation must take into consideration the fact that, because forced labour is universally condemned and outlawed, it tends to be hidden, so gaining access to victims may be difficult and, even once identified, potential victims may avoid giving truthful responses in a survey.</p> <p>The greatest limitation for this indicator is difficulty in getting a large enough set of observations which permits extrapolation and required breakdowns. Sampling must take into account the pattern of forced labour in the country, as identified by key informants or previous qualitative research.</p>
Recommended metadata	<p>At a minimum, metadata on the source (periodicity, breaks in series etc.), reference period, population coverage, definition of the forced labour and its dimensions and types and geographic coverage should be made available.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age; if children are included in the measurement, breakdowns should also include ages 5-14 and 15-17. • Level of education • Type of recruitment • Migration status • Status in employment • Occupation group • Economic activity group • Location of workplace Work and life conditions abroad • Coercion methods applied • If children are included in the measurement
Interpretation guidelines	<p>As forced labour is by definition employment which is prohibited and to be eliminated, any positive level in the indicator or a rising trend should be viewed with concern and should inform policy for appropriate policy action.</p> <p>All operational criteria of forced labour have to be customised according to the national context in order to be relevant to the situations of forced labour existing in the country and they also have to be consistent with the national legislation on forced labour.</p> <p>The framework for the identification of forced labour and its elements on the basis of the operational criteria is part of the methodology proposed by the ILO.</p> <p>It is crucial to report the reference period together with the figures, as well as the international and national criteria for forced labour.</p>

Short title	Forced labour rate (1b3)
Relation to other indicators	<p>Forced labour indicators should be analysed together with indicators (for the age group concerned) such as:</p> <ul style="list-style-type: none"> • Socio-economic characteristics of the worker's household • Working conditions (type and volume of work, wages, social benefits, etc.) • Living conditions • The means of coercion applied by their employers <p>It is important to compare the socio-economic profile of workers in forced labour with workers not in forced labour.</p>
International comparisons	<p>Countries are encouraged to align statistical concept and definitions related to forced labour as closely as possible with the prevailing national laws and regulations. The data collected should be comprehensive and their compilation sufficiently detailed, to facilitate international comparability based on the concepts and definitions provided in the ILO methodology concerning statistics of forced labour.</p> <p>Utilisation of the ILO methodology should help to facilitate the international comparability of forced labour statistics by minimizing differences across countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Not applicable.</p>
Further readings	<p>ILO, 1930: Forced Labour Convention, ILO Convention No. 29, 1930. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312174:NO</p> <p>ILO, 1957: Abolition of Forced Labour Convention, ILO Convention No. 105, 1957. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312250:NO</p> <p>UN, 2000: Protocol to prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the UN Convention against transnational Organized Crime, 2000. Available at: http://untreaty.un.org/English/TreatyEvent2003/Texts/treaty2E.pdf</p> <p>ILO, 1975: ILO Migrant Workers (Supplementary provisions) Convention, ILO Convention No. 143, 1975. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312288:NO</p>

Short title	Forced labour rate (1b3)
	<p>ILO: Special Action Programme to combat Forced Labour (SAP-FL). Available at: http://www.ilo.org/forcedlabour</p> <p>ILO, 2009: The cost of coercion. Report of the Director-general. International Labour Conference. 98th Session 2009. Available at: http://www.ilo.org/sapfl/Informationresources/ILOPublications/WCMS_106268/lang--en/index.htm</p> <p>ILO, 2012: Hard to see, harder to count - Survey guidelines to estimate forced labour of adults and children. SAP-FL, IPEC, 2012. Available at: http://www.ilo.org/sapfl/Informationresources/ILOPublications/WCMS_182096/lang--en/index.htm</p> <p>ILO, 2012: ILO Indicators of Forced Labour. SAP-FL, 2012. Available at: http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_203832.pdf</p> <p>ILO, 2009: Operational indicators of trafficking in human being. Results from a Delphi survey implemented by the ILO and European Commission. First published in March 2009. Revised version of September 2009. Available at: http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_105023.pdf</p> <p>ILO, 2009: Lists of indicators of trafficking in human beings. List of the indicators of trafficking validated through the Delphi methodology at the European Union level. SAP-FL, 2009. Available at: http://www.ilo.org/sapfl/Informationresources/Factsheetsandbrochures/WCMS_105884/lang--en/index.htm</p> <p>ILO, 2009: Explanations for indicators of trafficking for labour exploitation. Detailed explanations of the indicators used with the Delphi methodology to define indicators of trafficking at the European Union level. SAP-FL, 2009. Available at: http://www.ilo.org/sapfl/Informationresources/Factsheetsandbrochures/WCMS_105035/lang--en/index.htm</p> <p>ILO, 2009: Explanations for indicators of trafficking for sexual exploitation. Detailed explanations of the indicators used with the Delphi methodology to define indicators of trafficking at the European Union level. SAP-FL, 2009. Available at: http://www.ilo.org/sapfl/Informationresources/Factsheetsandbrochures/WCMS_105036/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators. Guidelines for producers and users of statistical and legal framework indicators, 2013. Available</p>

Short title	Forced labour rate (1b3)
	<p data-bbox="523 248 1283 315">at: http://www.ilo.org/stat/Publications/WCMS_223121/lang--en/index.htm</p> <p data-bbox="443 371 1361 544">ILO, 2013: Measurement of Forced labour. 19th International Conference of Labour Statisticians, 2-11 October 2013. Available at: http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/19/WCMS_223908/lang--en/index.htm</p>

Short name	Forced labour rate among returned migrants (1b4)
Name	Percentage of returned labour migrants who were in forced labour
Dimension and sub-dimension	<p>1. Safety and ethics of employment</p> <ul style="list-style-type: none"> a. Safety at work b. Child labour and forced labour c. Fair treatment of employment
Measurement objectives	<p>This indicator presents the proportion of returned labour migrants (economically active migrants) for a given reference period (12 months) who have been in forced labour during their work in the destination country. The indicator relates to the quality of employment for the citizens of a given country who have worked abroad and to the efforts of combating forced labour by governments of destinations countries.</p> <p>Measurement of forced labour and its elements are essential to understand the nature and extent of the problem, determine its causes and consequences and inform policy-makers and other stakeholders involved in action against forced labour.</p>
Formula	$\frac{\text{Number of returned migrants who were in forced labour}}{\text{Total number of returned labour migrants}} \times 100$
Concepts and definitions	<p><i>Number of returned migrants:</i> members of households with labour migration experience in the last 12 months.</p> <p><i>Number of migrants in forced labour:</i> returned migrants who were in forced labour in the destination country (see glossary). The concept of coercion/menace of penalty includes all the means used by an employer or a recruiter to force someone to work against his/her will or to prevent him/her from leaving.</p> <p><i>Returned labour migrants:</i> All persons above the specified age used for the definition of active population (e.g., 15 years and over), no upper age boundary is recommended, who had travelled abroad to work or seek work in a given reference period.</p> <p>The recommended reference period of measurement is the last 12 months.</p>
Recommended data source(s)	<p>Dedicated household survey (migration, labour force or household income and expenditure surveys) with a module on forced labour.</p> <p>As an alternative option, migrants in forced labour can be identified also by means of surveys at airports, seaports and checkpoints that workers must pass through when returning home.</p> <p>The survey design and implementation must take into consideration the fact that, because forced labour is universally condemned and outlawed, it tends to be hidden so gaining access to victims may be difficult and, even once identified, potential victims may avoid giving truthful responses in a</p>

Short name	Forced labour rate among returned migrants (1b4)
	<p>survey.</p> <p>The greatest limitation for this indicator is difficulty in getting a large enough set of observations which permits extrapolation and required breakdowns. In addition, when entire households emigrate outside the country, they fall out of the sampling frame making it impossible to capture them through household surveys conducted in the origin country.</p>
Recommended metadata	<p>For this indicator, it is recommended that as a minimum, metadata on the source (periodicity, breaks in series etc.), reference period, population coverage, definition of the forced labour and its dimensions and types and geographic coverage are made available.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Level of education • Type of recruitment • Migration status • Country of destination • Status in employment (in the destination country) • Occupation group (in the destination country) • Economic activity group (in the destination country) • Location of workplace (in the destination country) • Work and life conditions abroad • Coercion methods applied
Interpretation guidelines	<p>As forced labour is by definition work which is prohibited and to be eliminated, any positive level in the indicator or a rising trend should be viewed with concern and should inform policy for appropriate policy action.</p> <p>All operational criteria of forced labour have to be customised according to the national context in order to be relevant to the situations of forced labour existing in the country and they also have to be consistent with the national legislation on forced labour.</p> <p>The framework for the identification of forced labour and its elements on the basis of the operational criteria is part of the methodology proposed by the ILO.</p> <p>It is the crucial to report the reference period together with the figures, as well as the international and national criteria for forced labour.</p>
Relation to other indicators	<p>Forced labour indicators should be analysed together with indicators (for the age group concerned) such as:</p> <ul style="list-style-type: none"> • Socio-economic characteristics of the migrant's household • Socio-economic profile of migrants before the trip and during the trip abroad

Short name	Forced labour rate among returned migrants (1b4)
	<ul style="list-style-type: none"> • Working conditions (type and volume of work, wages, social benefits, etc.) • Living conditions abroad • The means of coercions applied by their employers <p>It is important to compare the socio-economic profile of migrants in forced labour and migrants not in forced labour.</p>
International comparisons	<p>Countries are encouraged to align statistical concept and definitions related to forced labour as closely as possible with the prevailing national laws and regulations. The data collected should be comprehensive and their compilation sufficiently detailed, to facilitate international comparability based on the concepts and definitions provided in the ILO methodology concerning statistics of forced labour.</p> <p>Utilisation of the ILO methodology should help to facilitate the international comparability of forced labour statistics by minimizing differences across countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Not applicable.</p>
Further readings	<p>ILO, 1930: Forced Labour Convention, ILO Convention No. 29, 1930. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312174:NO</p> <p>ILO, 1957: Abolition of Forced Labour Convention, ILO Convention No. 105, 1957. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312250:NO</p> <p>UN, 2000: Protocol to prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the UN Convention against transnational Organized Crime, 2000. Available at: http://untreaty.un.org/English/TreatyEvent2003/Texts/treaty2E.pdf</p> <p>ILO, 1975: ILO Migrant Workers (Supplementary provisions) Convention, ILO Convention No. 143, 1975. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312288:NO</p> <p>ILO: Special Action Programme to combat Forced Labour (SAP-FL). Available at: http://www.ilo.org/forcedlabour</p>

Short name	Forced labour rate among returned migrants (1b4)
	<p>ILO, 2009: The cost of coercion. Report of the Director-general. International Labour Conference. 98th Session 2009. Available at: http://www.ilo.org/sapfl/Informationresources/ILOPublications/WCMS_106268/lang--en/index.htm</p> <p>ILO, 2012: Hard to see, harder to count - Survey guidelines to estimate forced labour of adults and children. SAP-FL, IPEC, 2012. Available at: http://www.ilo.org/sapfl/Informationresources/ILOPublications/WCMS_182096/lang--en/index.htm</p> <p>ILO, 2012: ILO Indicators of Forced Labour. SAP-FL, 2012. Available at: http://www.ilo.org/sapfl/Informationresources/Factsheetsandbrochures/WCMS_203832/lang--en/index.htm</p> <p>ILO, 2009: Operational indicators of trafficking in human being. Results from a Delphi survey implemented by the ILO and European Commission. First published in March 2009. Revised version of September 2009. Available at: http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_105023.pdf</p> <p>ILO, 2009: Lists of indicators of trafficking in human beings. List of the indicators of trafficking validated through the Delphi methodology at the European Union level. SAP-FL, 2009. Available at: http://www.ilo.org/sapfl/Informationresources/Factsheetsandbrochures/WCMS_105884/lang--en/index.htm</p> <p>ILO, 2009: Explanations for indicators of trafficking for labour exploitation. Detailed explanations of the indicators used with the Delphi methodology to define indicators of trafficking at the European Union level. SAP-FL, 2009. Available at: http://www.ilo.org/sapfl/Informationresources/Factsheetsandbrochures/WCMS_105035/lang--en/index.htm</p> <p>ILO, 2009: Explanations for indicators of trafficking for sexual exploitation. Detailed explanations of the indicators used with the Delphi methodology to define indicators of trafficking at the European Union level. SAP-FL, 2009. Available at: http://www.ilo.org/sapfl/Informationresources/Factsheetsandbrochures/WCMS_105036/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators. Guidelines for producers and users of statistical and legal framework indicators, 2013. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang--en/index.htm</p>

Short name	Forced labour rate among returned migrants (1b4)
	ILO, 2013: Measurement of Forced labour. 19th International Conference of Labour Statisticians, 2-11 October 2013. Available at: http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/19/WCMS_223908/lang--en/index.htm

Short name	Other worst forms of child labour (1bx)
Name	Percentage of children aged 5 to 17 years who are engaged in worst forms of child labour other than hazardous work
Dimension and sub-dimension	<p>1. Safety and ethics of employment</p> <ul style="list-style-type: none"> a. Safety at work b. Child labour and forced labour c. Fair treatment of employment
Measurement objectives	<p>This indicator provides information about the degree to which children aged 5 to 17 years are engaged in worst forms of child labour other than hazardous work.</p> <p>As a subcomponent of child labour, the indicator reflects the engagement of children in worst forms of child labour other than hazardous work which is prohibited as guided by national legislation, the ILO Minimum Age Convention, 1973 (No. 138), and the Worst Forms of Child Labour Convention, 1999 (No. 182), as well as their respective supplementing Recommendations (No.s 146 and 190). International labour conventions including Convention 138 and Convention 182 are two of the core labour standards that form the basis of the 1998 Declaration on Fundamental Principles and Rights at Work.</p> <p>According to Article 3 of ILO Convention No. 182, the worst forms of child labour (excluding hazardous work) comprise: (a) all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom, as well as forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict; (b) the use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances; and (c) the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in relevant international treaties.</p> <p>Measurement of children in worst forms of child labour (other than hazardous work) is essential in order to gauge its incidence, distribution and characteristics. Data are used for monitoring and evaluation of child labour in some of the worst forms of child labour and to inform policy for its elimination.</p>
Formula	$\frac{\text{Total number of children aged 5 to 17 years in worst forms of child labour other than hazardous work}}{\text{Total number of children aged 5 to 17 years}} \times 100$
Concepts and definitions	<p>The 18th ICLS <i>Resolution concerning statistics of child labour</i> indicates that for the purpose of statistical measurement, children engaged in worst forms of child labour other than hazardous work include all persons aged 5 to 17 years who, during a specified time period, were engaged in : (a) all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom, as well as forced or compulsory</p>

Short name	Other worst forms of child labour (1bx)
	<p>labour, including forced or compulsory recruitment of children for use in armed conflict; (b) the use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances; and (c) the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in relevant international treaties.</p> <p>Such activities are often also termed “unconditional worst forms of child labour”.</p> <p>Note: Standardised statistical concepts and definitions for these forms of child labour are not fully developed. Statistical measurement methods are at an experimental stage.</p> <p>Note: Based on national circumstances, countries may also wish to collect data on activities by children which are outside the general production boundary, such as begging and stealing, and which may need to be considered in the context of the worst forms of child labour.</p> <p>All persons in the age group from 5 to 17 years, where age is measured as the number of completed years at the child’s latest birthday (see glossary).</p>
Recommended data source(s)	<p>Household surveys are <i>not</i> an effective data collection tool for identifying most of the worst forms of child labour other than hazardous work, as most of these activities are clandestine and illicit. There are also difficulties with regard to interviewing children due to fear of the employer or guardian.</p> <p>Methodologies are currently being developed by the ILO Statistical Information and Monitoring Programme on Child Labour (SIMPOC) Programme for estimating the number of children in “the worst forms of child labour other than hazardous work”. Some sector-specific surveys have been piloted for testing.</p>
Recommended metadata	<p>At a minimum, metadata on the source, reference period, population coverage, variable definition used including SNA boundary, age threshold(s) used, and geographic coverage should be made available.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age groups • School attendance • Hours of work (hours worked per week) • Occupation group (ISCO-08. Occupational data should be coded to the most detailed level of the national occupational classification for which reliable estimates can be obtained). • Economic activity group (ISIC rev.4) • Location of workplace (at home or away from home: street, market etc.) • Residency (urban, rural)

Short name	Other worst forms of child labour (1bx)
	<ul style="list-style-type: none"> • Regions • SNA boundary, depending on the scope of activities
<p>Interpretation guidelines</p>	<p>Engagement of children in worst forms of child labour other than hazardous work is prohibited and should be abolished. Thus, any positive level in the indicator or a rising trend should be viewed with concern and should inform policy for appropriate policy action.</p> <p>The definition of the indicator requires national consensus and consistency with national legislation as regards illicit activities and the legislated minimum age of employment. Interpretations of the indicator should bear this in mind.</p> <p>The activity scope for the measurement of <i>hazardous child labour</i> may extend beyond the general production boundary (to include child begging and stealing). The SNA boundary definition of the numerator will be very important to the interpretation of the indicator and for international comparisons. If the broadest activity boundary is applied (i.e., beyond the SNA general production boundary), countries are encouraged to analyse data within each boundary in order to allow targeted policy action for specific forms of child labour.</p> <p>The indicator should be disaggregated by sex, as there may be important differences in the experiences of girls and boys with respect to the worst forms of child labour other than hazardous work. For example, girls may be more readily concentrated in child prostitution while boys may be more prevalent among children recruited into armed conflict.</p> <p>Child labour studies in many countries often point to the predominance of child labour in more remote, rural areas and in agricultural activities where forced labour is more often found. Thus, it may be important to analyse urban-rural breakdowns as well as agricultural and non-agricultural disaggregations of the indicator.</p>
<p>Relation to other indicators</p>	<p>The rate of children in worst forms of child labour other than hazardous work may be analysed together with other child labour indicators (for the age group concerned) and other indicators such as:</p> <ul style="list-style-type: none"> • Socio-economic characteristics of the child’s household • Number of homeless children • School attendance status • Working conditions including impact on children’s health and education • Hazardous child labour rate <p>The indicator should be analysed with the a) total number of children b) total number of children 5-17 in employment and c) the total number of children 5-17 in child labour.</p>

Short name	Other worst forms of child labour (1bx)
International comparisons	<p>Given that the measurement of children in worst forms of child labour other than hazardous work is still in the experimental stage, national differences in concept definitions will limit the degree of international comparability. Moreover, national legislation regarding illicit activities of children and the types of illicit child labour activities present will differ from country to country.</p> <p>The extent to which different classification systems such as ISIC and ISCO are used across countries to classify such child workers by industry and occupation groups will also affect international comparability.</p> <p>The SNA boundary scope of the numerator will also be important for international comparisons. Another key challenge is data quality, considering the clandestine and illicit nature of this type of worst forms of child labour.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>The ILO Statistical Information and Monitoring Programme on Child Labour (SIMPOC) assists countries in the collection, documentation, processing and analysis of child labour data.</p> <p>SIMPOC is currently developing methodologies for estimating the number of children in “the worst forms of child labour other than hazardous work”. Some sector-specific surveys have been piloted for testing.</p> <p>The SIMPOC website is available at: http://www.ilo.org/ipecc/ChildlabourstatisticsSIMPOC/lang-en/index.htm</p>
Further readings	<p>ILO, 1973: Minimum Age Convention, ILO Convention No. 138, 1973. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312283:NO</p> <p>ILO, 1999: Worst Form of Child Labour Convention, ILO Convention No. 182, 1999. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312327:NO</p> <p>ILO, 1999: Worst Forms of Child Labour Recommendation, ILO Recommendation No. 190, 1999. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312528:NO</p> <p>ILO, 2008: Resolution concerning statistics of child labour, adopted by the 18th ICLS, 2008. Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-</p>

Short name	Other worst forms of child labour (1bx)
	<p>statisticians/WCMS_112458/lang--en/index.htm</p> <p>ILO, 2008: Report III - Child Labour Statistics - 18th ICLS, Geneva, 24 November - 5 December 2008. Available at: http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_099577/lang--en/index.htm</p> <p>ILO, 2005: SIMPOC Training Modules on Child Labour Data Collection, Processing, Analysis and Reporting, ILO, Geneva, 2005. Available at: http://www.ilo.org/ipeinfo/product/viewProduct.do?productId=5044</p> <p>ILO, 2004: Manual for child labour data analysis and statistical reports, ILO, Geneva, 2004. Available at: http://www.ilo.org/ipeinfo/product/viewProduct.do?productId=3079</p> <p>ILO: Other Manuals on Child Labour. Available at: http://www.ilo.org/ipec/ChildlabourstatisticsSIMPOC/Manuals/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators. Guidelines for producers and users of statistical and legal framework indicators, 2013. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang--en/index.htm</p> <p>ILO, 2000-2012: Marking progress against child labour. Global estimates and trends 2000-2012. Available at: http://www.ilo.org/ipec/Informationresources/WCMS_221513/lang--en/index.htm</p>

Sub-dimension 1c: Fair treatment of employment

Short name	Pay gap (1c1)
Name	Pay gap between subpopulation groups (e.g., gender pay gap)
Dimension and sub-dimension	<p>1. Safety and ethics of employment</p> <ul style="list-style-type: none"> a. Safety at work b. Child labour and forced labour <p>c. Fair treatment of employment</p>
Measurement objectives	<p>The indicator measures the difference between the gross average hourly earnings of two paired subpopulation groups and gives information of the degree of equality in terms of pay. The paired groups could include women and men (gender pay gap), rural and urban areas, minority ethnic group and non-minority ethnic group, etc. Note that differenced measured by the indicator can not necessarily be attributed to discrimination.</p> <p>In particular, the measurement of gender differences in earnings is important for informing about gender discrimination in the workplace and human rights. From a policy perspective, it is important to monitor whether women and men receive equal pay for work performed of similar value. Equal pay for work of equal value is recognised as a basic human right in the Universal Declaration of Human Rights and as a fundamental workers' right in the Convention (No. 100) concerning Equal Remuneration for Men and Women Workers for Work of Equal Value, adopted in 1951 by the International Labour Conference of the International Labour Organization.</p>
Formula	$\frac{\text{Average hourly earnings sub - population group 2}}{\text{Average hourly earnings subpopulation group 1}} \times 100$ <p>Optional additional analysis: The pay gap may also be computed based on the median hourly earnings of subpopulation groups (see interpretation guidelines).</p>
Concepts and definitions	<p><i>Earnings</i>: Gross hourly earnings from main-job employment (i.e., wages). Any inclusions or exclusions (e.g., tips, bonuses, shift premiums, overtime) should be clearly stated in the metadata. Depending on national circumstances, the pay gaps of secondary jobs might be reported complementarily. See also the <i>Resolution concerning an integrated system of wages statistics</i>, adopted by the Twelfth International Conference of Labour Statisticians (October 1973) (see glossary).</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the Resolution concerning the International Classification of Status in Employment (ICSE) adopted by the Fifteenth International Conference of Labour Statisticians (January 1993) (see glossary).</p>
Recommended data source(s)	There are three main data sources on earnings:

Short name	Pay gap (1c1)
	<p><i>Household surveys</i> such as labour force surveys, surveys on household income as well as household budget and expenditure surveys.</p> <p><i>Establishment surveys</i> (e.g., the Structure of Earnings Survey of the European Statistical System)</p> <p><i>Administrative records</i> such as income tax records and social security registers.</p> <p>As each source has its specific merits, a decision about the preferred source should be taken according to data quality and data availability in a given country.</p> <p><i>Household surveys</i> with an employment module or labour force surveys provide full worker coverage, including employees in formal and informal employment. In addition, household surveys tend to be a rich source of additional social and demographic characteristics of workers which can allow the calculation of the indicator for specific subpopulation groups of employees.</p> <p>Worker coverage of <i>establishment surveys</i> is often limited to paid workers in medium to large establishments, and thus often excludes those engaged in microenterprises. They may exclude establishments in certain industries (e.g., agriculture), as well as workers remunerated predominately by a share of the profits (i.e., salaried directors and managers) and those paid on a commission basis without a retainer (i.e., outworkers, subcontracted workers). Establishment surveys are not usually the best sources of data for disaggregations by demographic variables except in some cases by sex, thus often preventing the calculation of the pay gap for specific subpopulation groups.</p> <p>Within the European Statistical System, it has been agreed to use the Structure of Earnings Survey, a harmonised establishment survey on earnings, as the standard data source for computing the gender pay gap.</p> <p>Worker coverage of <i>administrative records</i>, such as social security records, often includes workers in paid employment who are covered by the administrative system. It may miss those in informal employment, who are usually not covered. Since income coverage generally includes, for those in paid employment: total earnings and, in some cases, social security contributions, it would be important to obtain information on earnings components only for purposes of constructing the indicator. Administrative records may not be available disaggregated by key relevant variables, thus preventing the calculation of the pay gap for specific subpopulation groups.</p>
Recommended	For this indicator, it is recommended that, as a minimum, metadata on the

Short name	Pay gap (1c1)
metadata	<p>source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs), concepts and available information on earnings (net vs. gross) are made available.</p> <p>Should hourly data on earnings not be available, another variant of earnings data may be used, such as monthly earnings, weekly earnings, etc. However, the interpretation will differ from the hourly data since monthly and weekly earnings data also capture differences between subpopulation groups as concerns the number of hours worked. It would be best in this case to use earnings estimates for comparable working time arrangements categories, for example, earnings of full-time workers or earnings of full-time equivalents.</p>
Recommended disaggregation	<p>The indicator is a broad measure of inequality in terms of pay. The analytical capacity of the indicator may be enhanced when disaggregated. Useful disaggregations of the pay gap include any of the following categories (when not used to define the subpopulation group of interest):</p> <ul style="list-style-type: none"> • Gender • Age • Nationality • Economic activity group (ISIC) • Occupational groups (ISCO) • Public and private sector • Type of contract (fixed-term or open ended) • Number and age of children in the household
Interpretation guidelines	<p>The pay gap measures the extent to which the wages of one subpopulation group differ from a second subpopulation group. In the example of the gender pay gap, when the gender pay gap equals 0, it denotes equality of earnings. Positive values denote the extent to which women's earnings fall short of those received by men, where a value closer to 100 denotes more inequality than a value closer to 0. Negative values reflect the extent to which women's earnings are higher than men's.</p> <p>The pay gap presented above is in an unadjusted form. This means that some of the difference can be explained by observable characteristics, such as differences in education, choice of study field, employment history (e.g., interruptions due to child care when analysing the gender pay gap) or professional experience. In this regard, while the pay gap is a useful measure to the difference of earnings between groups, it is less useful for understanding the underlying reasons for which the gap exists (discrimination being only one possible explanation).</p> <p>Since means are sensitive to extreme values, users are also encouraged to also analyse median earnings and make note of any differences between a computation of the indicator based on mean and median earnings.</p>
Relation to other	The indicator should be analysed together with the labour force

Short name	Pay gap (1c1)
indicators	<p>participation, the number of hours worked, and occupational segregation of the subpopulation groups of interest.</p> <p>The estimation of an adjusted pay gap that controls for certain personal characteristics such as levels of education, years of work experience and type of training that may differ between the subpopulation groups may be helpful to understanding the underlying factors explaining the differences. Still, the results of the adjustment will depend on the assumptions taken in the model used (see Grimshaw/Rubbery 2002).</p>
International comparisons	<p>International comparisons may be limited by the use of different national definitions of earnings (including different earnings components and use of net vs. gross earnings concepts), population subgroups, reference period, and job coverage (earnings from main job or from all jobs).</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Not relevant to the indicator, because the EU-LFS is not the main source of earnings data. Since 2006, a harmonised methodology is used to compute the gender pay gap on the basis of the Structure of Earnings Survey (SES). According to this methodology, the unadjusted GPG indicator coverage is calculated by gender, as:</p> $\text{Gross hourly earnings of employees} = \frac{\sum (\text{variable 4.3} \times \text{variable 5.2})}{\sum \text{variable 5.2}}$ <p>The coverage is defined as follows: (1) target population: all employees, there are no restrictions for age and hours worked; (2) economic activity according to NACE Rev. 2., only for the aggregate sections B to S (excluding O) and B to N, and if available, also for sections B to S; (3) size of enterprises: 10 employees or more (see Eurostat 2013).</p>
Further readings	<p>Eurostat, 2013: Gender pay gap statistics, statistics explained at: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Gender_pay_gap_statistics</p> <p>ILO, 1973: Resolution concerning an integrated system of wage statistics, adopted by the Twelfth International Conference of Labour Statisticians. (Geneva, October 1973). Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/--stat/documents/normativeinstrument/wcms_087496.pdf</p> <p>ILO, 1993: Resolution concerning the International Classification of Status in Employment (ICSE) Adopted by the Fifteenth International Conference of Labour Statisticians (January 1993). Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087562/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators - Guidelines for producers and users of</p>

Short name	Pay gap (1c1)
	<p>statistical and legal framework indicators. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang-en/index.htm</p> <p>ILO, 2013: Global Wage Report 2012/13: Wages and Equitable Growth (Geneva). Available at: http://www.ilo.org/global/research/global-reports/global-wage-report/2012/WCMS_194843/lang-en/index.htm</p> <p>Foubert, Petra, 2010: The Gender Pay Gap in Europe from a Legal Perspective. Luxembourg: European Union. Available at: http://ec.europa.eu/social/BlobServlet?docId=6138&langId=en</p> <p>UNECE, 2008: Report on gender pay gap: Data availability and measurement issues. Geneva 2008. Available at: http://www.unece.org/statshome/areas-of-work/statsgender/gender-publications-and-reports.html</p> <p>Grimshaw, Damian and Jill Rubery, 2002: The adjusted gender pay gap: a critical appraisal of standard decomposition techniques. Working paper of the Manchester School of Management. Available at: https://research.mbs.ac.uk/european-employment/Portals/0/docs/gendersocial/GPGpolitical%20paper.pdf</p>

Short name	Access to managerial occupations (1c2)
Name	Percentage of employed persons in population subgroups (e.g., women) in managerial occupations (ISCO-08 major group 1)
Dimension and sub-dimension	<p>1. Safety and ethics of employment</p> <p>a. Safety at work</p> <p>b. Child labour and forced labour</p> <p>c. Fair treatment of employment</p>
Measurement objectives	<p>This indicator refers to the representation of different population groups in managerial occupations. It provides information on the proportion of these groups (e.g., women) who are employed in decision-making and management roles in enterprises, institutions, and government.</p> <p>The indicator should be computed for population subgroups that are unequally represented in managerial occupations (e.g., women, foreigners, migrants, disabled persons, ethnic minorities).</p>
Formula	$\frac{\text{Number employed in ISCO major group 1 in population subgroup}}{\text{Total number of employed in ISCO major group 1}} \times 100$
Concepts and definitions	<p><i>Employment</i> as defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p> <p><i>Occupation</i> according to the International Standard Classification of Occupations (ISCO-08) (see glossary).</p> <p><i>Employed persons in ISCO major group 1</i> (managers) above the specified age used for the definition of employment (e.g., 15 years or over).</p>
Recommended data source(s)	<p>A household-based LFS is the recommended data source, as it permits estimating the number of employed persons and generally allows disaggregations by economic activity and demographic variables. Further, it allows the calculation of the indicator for a large variety of population subgroups, such as by sex, age group, ethnic group or migrant worker, etc.</p> <p>If the information is not available from an LFS, other household surveys with an employment module may be used instead.</p> <p>In the absence of household surveys, establishment surveys or administrative records may be used.</p>
Recommended metadata	For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs), version of available ISCO-Classification and the approach towards coding occupations are made available.
Recommended disaggregation	<ul style="list-style-type: none"> • ISCO-08 sub-major groups 11, 12, 13, 14 • Status in employment • Different demographic groups (sex, age, nationality, educational

Short name	Access to managerial occupations (1c2)
	attainment etc.) <ul style="list-style-type: none"> • Full-time and part-time workers
Interpretation guidelines	<p>The share of employment in ISCO major group 1 provides some insight into the degree of influence, power and authority of different population subgroups in decision making in an economy and society. However, its principle limitation is that it does not reflect differences in the levels of responsibility in managerial positions or the importance of the enterprises and organizations in which they are employed.</p> <p>It should be noted that major group 1 is composed of partly heterogeneous sub-major groups. For instance sub-major group 14 (Hospitality, Retail and Other Services Managers) includes large numbers of managers in shops, cafés and restaurants at a lower skill level than the other sub-major groups. Therefore the indicator should be broken down by sub-major groups to facilitate interpretation. For similar reasons, managers in paid employment in self-employment should also be analysed separately.</p> <p>Given the different versions of the classification, there may be breaks in the time series. The recent change to version ISCO-08 may lead to a significant break.</p>
Relation to other indicators	<p>This indicator should be analysed in combination with the pay gap (1c1) and the Percentage of employed persons who feel they have been victim of discrimination at work (1c3). Additional information can be gained from context information regarding the share of different population groups in other ISCO major groups (occupational segregation).</p> <p>The indicators in Sub-dimension 3c “work-life balance”, in particular the “percentage of women, resp. men, aged 20-49 years who are employed, with and without children under compulsory school age” (3c1) should be analysed in conjunction with the female share of employment in ISCO major group 1.</p>
International comparisons	<p>As this indicator can be calculated with the LFS variables, the international comparison is generally feasible. However, national statistical offices use many different approaches towards the coding of occupations. As the practices differ, international comparability might be somewhat limited. Furthermore, depending on the job titles used nationally, coding according to ISCO might be more challenging for some countries than for others. Problems might in particular concern major group 1, which is less straightforward in coding than other major groups.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate the indicator from the EU-LFS it is recommended to use the following variables:</p> <ul style="list-style-type: none"> • Target population: employed persons living in private households (HHTYPE = 1 and WSTATOR in (1, 2)) • Employed persons in ISCO major group 1 (ISCO4D) • Recommended disaggregations: SEX, AGE, NATIONAL, STAPRO, NATIONAL, FTPT

Short name	Access to managerial occupations (1c2)
Further readings	<p>Davidson, M. and R. Burke (eds.), 2011: Women in Management Worldwide: Progress and Prospects. 2nd edition, Farnham, Burlington: Gower.</p> <p>ILO, 2012: Global Employment Trends for Women Geneva: ILO. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_195447.pdf</p> <p>Wirth, L., 2001: Breaking through the Glass Ceiling: Women in Management. 2nd edition, Geneva: ILO.</p>

Short name	Discrimination at work (1c3)
Name	Percentage of employed persons who have been a victim of discrimination at work
Dimension and sub-dimension	<p>1. Safety and ethics of employment</p> <ul style="list-style-type: none"> a. Safety at work b. Child labour and forced labour <p>c. Fair treatment of employment</p>
Measurement objectives	<p>The indicator reflects any kind of discrimination, no matter what the grounds (e.g., sex, age, nationality, ethnicity, disability, religion, sexual orientation) or the type of discriminatory treatment (e.g., lower earnings, glass ceilings including restricted access to managerial positions, and working time).</p> <p>The objective of the indicator is to estimate the share of employed persons who, according to their own perception, are subject to discrimination at work. The self-perception of respondents is important as it complements indicators regarding the outcome of discrimination (e.g., the pay gap between groups or the representation in managerial positions). While indicators based on outcomes are not straightforward in interpretation as the differences might be due to factors other than discrimination, the self-perception of respondents is a subjective measure. Only a combination of both types of indicators will provide a comprehensive picture regarding fair treatment.</p> <p>According to the ILO's 1998 Declaration on Fundamental Principles and Rights at Work, the "elimination of discrimination" is laid down as one of four fundamental principles.</p>
Formula	$\frac{\text{Employed persons who indicate they have been a victim of discrimination at work in the last 12 months}}{\text{Total number of employed persons who were employed at least one week in the last 12 months}} \times 100$
Concepts and definitions	<p><i>Discrimination at work (self-reported)</i>: Experiencing any less favourable treatment that is explicitly or implicitly based on a particular ground (or grounds), such as sex, race, etc. (direct discrimination), or, although neutral on the surface, the same condition, treatment or criterion leads in practice to a harsh impact on some persons on the basis of characteristics such as race, colour, sex, etc. (indirect discrimination). There is no international standard defining the grounds of discrimination. The EWCS includes separate items for discrimination on the grounds of sex, age, race, ethnic background or colour, nationality, religion, disability and sexual orientation.</p> <p><i>Employed persons (age 15+)</i>: according to the 19th ICLS definition of employed persons. If available the denominator should be consistent with the numerator, i.e., refer to the total number of employed persons who were employed for at least one week in the last 12 months.</p>

Short name	Discrimination at work (1c3)
Recommended data source(s)	<p>Data on employed persons who feel they have been a victim of discrimination at work should be collected in household or population surveys, e.g., Labour Force Surveys. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.</p> <p>In Europe, the European Working Conditions Survey 2010 (EWCS) provides data on discrimination at work as perceived by the respondent. The EWCS provides harmonised data for 34 European Countries. It should be noted that the sample size limits the possibilities for detailed analyses at the national level.</p> <p>It is important to note that questions on discrimination in employment are highly sensitive and responses are therefore particularly subject to measurement error. Special care must therefore be taken in drafting and testing the survey questions, placement of questions in the questionnaire, and in interviewer training to minimise such error.</p>
Recommended metadata	<p>The metadata should include a detailed description of the survey methodology. Especially important is the exact phrasing of the survey items on discrimination (incl. the response categories and the scale) and the position of the variable within the questionnaire.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Grounds of discrimination • Multiple grounds of discrimination • Type of discriminatory treatment • Sex • Age group • Employment status (employees / self-employed) • Hours worked (part-time / full-time) • For employees: type of contract • Occupation group • Economic activity group
Interpretation guidelines	<p>Discrimination at work denies opportunities for individuals and constitutes a major form of unfair treatment. Employed persons who are victim of discrimination at work may e.g., be denied equal pay or the access to managerial positions or may be exposed to less favourable working conditions. Therefore increasing shares of persons having been victim of discrimination at work can be interpreted as a decline in quality of employment.</p> <p>The indicator may be used to identify the extent to which employed persons perceive themselves as victims of discrimination and which are the most common grounds of discrimination.</p> <p>Given that the indicator is based upon self-perception, the response</p>

Short name	Discrimination at work (1c3)
	provided is subject to the respondent's subjectivity and should be interpreted with caution. At the same time the indicator has the advantage that it directly measures the perception of the respondents.
Relation to other indicators	<p>For a comprehensive analysis of discrimination at work, the percentage of employed persons who feel they have been victim of discrimination at work should be analysed together with the pay gap between groups (1c1) and the percentage of different groups (e.g., women) in managerial occupations (1c2). Indicators 1c1 and 1c2 serve as complementary measures to the indicator since they provide objective differences between groups (which might be due to discrimination, but also other reasons).</p> <p>The indicator is also related to Sub-dimension 7a (employment-related relationships), especially as regards the relationships of the worker with their co-workers and their superiors as well employment-related violence.</p> <p>A review of the legal framework including legislation and policy as regards equal opportunity and treatment and equal remuneration of men and women for work of equal value will be valuable to understanding the context as regards gender discrimination. Similarly, the legal framework concerning vulnerable populations such as migrant workers, minority ethnic groups, etc. will be worth analysing together with the indicator.</p>
International comparisons	<p>As no international standard exists regarding the grounds of discrimination (see ILO 2011), the definition of discrimination at work and in particular its grounds might be subject to differences between countries. This may lead to restrictions regarding the comparability across countries.</p> <p>As the indicator measures the self-perception of respondents, the responses might be influenced by cultural and institutional differences. This could also restrict the international comparability of the indicator. Furthermore, measures of self-perception are particularly sensitive to the survey implementation (e.g., question wording, sequence of questions, survey topic). For international comparisons, results from internationally harmonised surveys (like the LFS or the EWCS) should be preferred.</p>
Recommended calculation in the EU-LFS or other international surveys	It is recommended here to use the questions on self-perceived discrimination at work from the 5 th European Working Conditions Survey (EWCS) (questions Q65A – Q65G).
Further readings	<p>International Labour Organization, 2011: Equality at work: The continuing challenge. Global Report under the follow-up to the ILO Declaration on Fundamental Principles and Rights at Work. International Labour Conference, 100th session, Geneva: ILO. Available at: http://www.ilo.org/declaration/info/publications/eliminationofdiscrimination/WCMS_166583/lang--en/index.htm</p> <p>Convention concerning Discrimination in Respect of Employment and</p>

Short name	Discrimination at work (1c3)
	<p>Occupation (C111). Adopted by the 42nd International Labour Conference in 1958. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C111</p> <p>European Union, 2000: Employment Equality Framework Directive (2000/78/EC). Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32000L0078:en:HTML</p> <p>European Commission, 2008: The fight against discrimination and the promotion of equality: How to measure progress done. Luxembourg: European Commission.</p> <p>Makkonen, T., 2007: Measuring Discrimination. Data Collection and EU Equality Law. Brussels: European Commission 2007.</p>

DIMENSION 2: INCOME AND BENEFITS FROM EMPLOYMENT

Sub-dimension 2a: Income from employment

Short name	Average earnings (2a1)
Name	Mean nominal monthly / hourly earnings of employees (local currency)
Dimension and sub-dimension	2. Income and benefits from employment a. Income from employment b. Non-wage pecuniary benefits
Measurement objectives	<p>The objective of this measure is to assess country-specific average (or median) earnings from main-job employment of employees.</p> <p>Average earnings of all employees, while useful for assessing changes in earnings over time (especially when adjusted for inflation), are not sufficient for analysing quality of employment. Breakdowns by gender, age and vulnerable populations are critical for more robust analyses of this indicator.</p>
Formula	<p>Monthly:</p> $\frac{\text{Total gross monthly earnings of employees (without adjustment for cost of living)}}{\text{Total number of employees}}$ <ul style="list-style-type: none"> If only weekly earnings data are available, obtain approximate monthly earnings by multiplying weekly earnings by 4.3. <p>Hourly:</p> $\frac{\text{Total gross hourly earnings of employees (without adjustment for cost of living)}}{\text{Total number of employees}}$ <ul style="list-style-type: none"> If only monthly earnings data are available, obtain hourly earnings by dividing monthly earnings by monthly usual hours worked. If only weekly earnings data are available, obtain hourly earnings by dividing weekly earnings by weekly usual hours worked. <p>Optional additional analysis: median weekly and hourly earnings of employees (see Interpretation Guidelines).</p>
Concepts and definitions	<p><i>Earnings</i>: gross monthly and hourly earnings from main-job employment (i.e., wages). Any inclusions or exclusions (e.g., tips, bonuses, shift premiums, overtime) should be clearly stated in all metadata. Depending on national circumstances, the average earnings from secondary jobs might be reported complementarily.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993</p>

Short name	Average earnings (2a1)
	(see glossary).
Recommended data source(s)	<p>Due to the existing differences regarding the data sources for earnings, no definitive recommendation is possible. Three main data sources should be considered, according to the availability and quality of the sources within each jurisdiction:</p> <ul style="list-style-type: none"> • Household surveys, such as labour force surveys, income surveys and household budget surveys • Establishment surveys (e.g., the Structure of Earnings Survey of the European Statistical System) • Administrative records, such as income tax records and social security registers <p>Each source has merits and a decision about preferred source should be taken according to data quality and data availability in a given country.</p> <p>Household surveys generally provide full worker coverage, including those in paid employment, self-employment and informal employment. In addition, household surveys tend to be a rich source of additional characteristics of workers, which allow further analysis and the calculation of indicators for specific groups of workers.</p> <p>Worker coverage in establishment surveys is often limited to paid workers in medium to large establishments, excluding those engaged in self-employment and in smaller enterprises. Establishment surveys may also exclude those employed in certain industries, as well as workers remunerated predominately by a share of the profits (e.g., salaried directors and managers) as well as those paid on a commission basis without a retainer (e.g., outworkers, subcontracted workers). The income data collected relates to the earnings concept and tends to include those elements paid directly and regularly by the employer (total cash earnings) but may exclude irregular payments, income in kind and end of year bonuses. However, as the information is directly provided by the employer, it is often considered to be highly accurate. Establishment surveys often have jobs (and not employed persons) as reference concept, which needs to be taken into account when interpreting the results.</p> <p>Worker coverage of administrative records, such as social security records, often includes workers in paid employment and in self-employment who are covered by the administrative system. It may miss those in informal employment, who are usually not covered. Income coverage of those in paid employment generally includes total earnings and, in some cases, social security contributions. For those in self-employment, administrative records generally include net profit or entrepreneurial income. Administrative data, however, may not be available in breakdowns by key relevant socio-economic or socio-demographic characteristics of the employed persons, thus preventing the calculation of indicators for specific</p>

Short name	Average earnings (2a1)
	categories of workers.
Recommended metadata	<ul style="list-style-type: none"> • Periodicity • Population coverage (e.g., coverage of economic activities, small businesses, age minimum or maximum) • Wage exclusions/inclusions (e.g., tips, commissions)
Recommended disaggregation	<ul style="list-style-type: none"> • Total employees, full-time employees and part-time employees • Sex • Age groups (at minimum 15-24, 25-54, 55+) • Vulnerable populations (e.g., Aboriginal peoples, immigrants) • Educational attainment (ISCED) • Industry (ISIC) • Occupation (ISCO)
Interpretation guidelines	<p>If comparing over time, increasing mean earnings, after adjusting for inflation, is generally considered a sign of economic prosperity. However, whether comparing over time or not, an assessment of various groups (as mentioned above) is vital to a robust analysis. For example, if total earnings are increasing over time, but earnings among males are rapidly growing while earnings for women are stagnating, this is a sign of inequality and is worthy of further evaluation.</p> <p>Note that monthly (and weekly) earnings are directly affected by the average usual hours worked per week, and even more so by the average hours paid for per week. Since the average hours worked can vary by group, either different working hours should be acknowledged when analysing monthly earnings, or average hourly earnings should be used instead.</p> <p>The indicator is based on gross earnings. Net earnings (i.e., earnings after deduction of taxes and mandatory contributions to social security) are relevant for other analyses, such as those involving purchasing power.</p> <p>Since means are sensitive to extreme values, users are also encouraged to also analyse median earnings and make note of any differences between mean and median earnings.</p> <p>Sometimes, counter-intuitive developments can be observed over the business cycle. For example, during a recession, low-skilled workers with temporary employment contracts might be the first to be dismissed by enterprises. Since the remaining workforce then consists of relatively better paid workers, this can bias trends in average wages upwards. The reverse effect can sometimes be observed during the recovery, when low-paid workers are often the first to be re-hired. However, this effect is often dominated by changes in working time that generally decrease during a recession (and hence monthly wages fall) and increase during a recovery (when monthly wages rise as a result).</p>

Short name	Average earnings (2a1)
	For comparisons over time (as well as across countries), earnings estimated should be used on a commonly denominated basis, i.e., as real earnings accounting for purchasing power differences.
Relation to other indicators	The indicators in Dimensions 2 and 3 should be examined together. There is also a strong relationship to indicator 1c1 (“Pay gap between groups”).
International comparisons	<p>Mean or median earnings are hard to compare across international jurisdictions without some kind of adjustments. One adjustment is conversion to a standard currency, with or without adjustment for differences in purchasing power. Another can be age-standardisation, as it is known that age structures across countries differ and that workers of core working age generally garner higher earnings than younger or older workers.</p> <p>Regardless of any attempts to standardise earnings figures, there will likely remain a critical need for country-specific context, such as how wages compare to basic living needs and how the situation in each country has changed over time.</p> <p>To compare monthly and weekly earnings, divide monthly figure by 4.3 to obtain approximate weekly earnings (or multiply weekly earnings by 4.3 to get approximate monthly earnings).</p>
Recommended calculation in the EU-LFS or other international surveys	Wage data are not collected directly from the EU-LFS. Alternative sources are necessary within the EU.
Further readings	<p>ILO, 1973: “Report on the 12th International Conference of Labour Statisticians”, October 1973. Available at: http://www.ilo.org/public/libdoc/ilo/1974/74B09_149.pdf</p> <p>ILO, 2012-13: “Global Wage Report 2012-13: Wages and Equitable Growth”. Available at: http://www.ilo.org/global/research/global-reports/global-wage-report/2012/lang--en/index.htm</p> <p>European Union (EU), 2012: “Employment and Social Developments in Europe 2012” (Chapter 5). Available at: http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7315</p>

Short name	Employees with low pay (2a2)
Name	Percentage of employees with low pay
Dimension and sub-dimension	2. Income and benefits from employment a. Income from employment b. Non-wage pecuniary benefits
Measurement objectives	<p>The objective of this measure is to assess the share of employees earning low pay within a jurisdiction, which is an indicator of domestic wage equity and social cohesion and is often used as a proxy for individual economic hardship (see interpretation guidelines).</p> <p>Analysis over time can reveal how the share of employees receiving low pay is changing within a country or region.</p> <p>Analyses by gender and vulnerable populations are particularly important for this indicator, since higher shares of low-paid employees among some groups compared with others can indicate wage inequity.</p>
Formula	$\frac{\text{Number of employees earning less than two-thirds of median gross hourly earnings}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p><i>Earnings</i>: gross monthly and hourly earnings from main-job employment (i.e., wages). Any inclusions or exclusions (e.g., tips, bonuses, shift premiums and overtime) should be clearly stated in all metadata. Depending on national circumstances, the incidence of low pay in secondary jobs might be reported complementarily.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>Due to the existing differences regarding the data sources for earnings, no definitive recommendation is possible. Three main data sources should be considered, according to the availability and quality of the sources within each jurisdiction:</p> <ul style="list-style-type: none"> • Household surveys, such as labour force surveys, income surveys and household budget surveys • Establishment surveys (e.g., the Structure of Earnings Survey of the European Statistical System) • Administrative records, such as income tax records and social security registers <p>Each source has merits and a decision about preferred source should be taken according to data quality and data availability in a given country.</p> <p>Household surveys generally provide full worker coverage, including those in paid employment, self-employment and informal employment. In</p>

Short name	Employees with low pay (2a2)
	<p>addition, household surveys tend to be a rich source of additional characteristics of workers, which allow further analysis and the calculation of indicators for specific groups of workers.</p> <p>Worker coverage in establishment surveys is often limited to paid workers in medium to large establishments, excluding those engaged in self-employment and in smaller enterprises. Establishment surveys may also exclude those employed in certain industries, as well as workers remunerated predominately by a share of the profits (e.g., salaried directors and managers) as well as those paid on a commission basis without a retainer (e.g., outworkers, subcontracted workers). The income data collected relates to the earnings concept and tends to include those elements paid directly and regularly by the employer (total cash earnings) but may exclude irregular payments, income in kind and end of year bonuses. However, as the information is directly provided by the employer, it is often considered to be highly accurate.</p> <p>Worker coverage of administrative records, such as social security records, often includes workers in paid employment and in self-employment who are covered by the administrative system. It may miss those in informal employment, who are usually not covered. Income coverage of those in paid employment generally includes total earnings and, in some cases, social security contributions. For those in self-employment, administrative records generally include net profit or entrepreneurial income. Administrative data, however, may not be available in breakdowns by key relevant socio-economic or socio-demographic characteristics of the employed persons, thus preventing the calculation of indicators for specific categories of workers.</p>
Recommended metadata	<ul style="list-style-type: none"> • Periodicity • Population coverage (e.g., coverage of economic activities, small businesses, age minimum or maximum) • Wage exclusions/inclusions (e.g., tips, commissions)
Recommended disaggregation	<ul style="list-style-type: none"> • Total employees, full-time employees and part-time employees • Sex • Age groups (at minimum 15-24, 25-54, 55+) • Educational attainment • Vulnerable populations (e.g., Aboriginal peoples, immigrants) • Permanent or temporary jobs • Industry • Occupation
Interpretation guidelines	<p>The indicator is a relative measure, which depends on the distribution of hourly earnings in a country. It is likely to decrease when the hourly earnings of the lowest-paid workers increase relative to those of other workers. If hourly earnings of all workers increase (or decrease) proportionally, the percentage will remain the same. Therefore, care should</p>

Short name	Employees with low pay (2a2)
	<p>be taken when interpreting the indicator as a measurement of economic hardship.</p> <p>For an appropriate interpretation, the low pay percentage should always be published together with the low-pay threshold figure (two-thirds of the gross median hourly earnings) in order to provide information on the level of earnings of the lowest paid workers, not just the distribution of earnings.</p> <p>When presenting these data, it is important to acknowledge the conceptual differences between earnings and income. Income distribution will deviate from the distribution of earnings, as there may be social programs or support initiatives for those who receive low pay. For example, there may be supplementary welfare payments or reduced taxation for low-paid workers. Furthermore, for an analysis of the income distribution, also the household composition and the income of other household members have to be considered.</p>
Relation to other indicators	<p>The indicator should be interpreted in conjunction with the other indicators of Dimension 2, for instance, mean monthly or hourly pay, which helps to identify trends in the level of earnings.</p> <p>Interpretations over time and by disaggregated groups are critical to understanding the likely economic difficulties, health impacts and quality of employment for different groups. Including data on hours worked (Dimension 3) and job permanency (Dimension 4) will provide further context. The impact of government policies, such as minimum wage, or the presence of labour market institutions, such as union density (Dimension 5), also provide important context.</p>
International comparisons	<p>Presenting the threshold for low pay allows for greater international comparability. Metadata are critical, with a clear need to present inclusions and exclusions and any supplementary social support programs or policies that are relevant to the low pay data.</p>
Recommended calculation in the EU-LFS or other	<p>Wage data are not collected directly from the EU-LFS. Alternative sources are necessary within the EU.</p>
Further readings	<p>Grimshaw, Damian, 2011: "What we Know about Low-Wage Work and Low-Wage Workers", International Labour Organization, 2011.</p> <p>Lee, Sangheon and Kristen Sobeck, 2012: "Low-wage work: A global perspective", International Labour Review 151 (2012), pp. 141-155.</p> <p>Pennycook, Matthew and Matthew Whittaker, 2012: "Low Pay Britain 2012", Resolution Foundation, September 2012.</p> <p>Schmitt, John, 2012: "Low wage lessons", Centre for Economic and Policy Research (CEPR), January 2012.</p>

Short name	Earnings by deciles (2a3)
Name	Nominal monthly / hourly earnings of employees by deciles (local currency)
Dimension and sub-dimension	2. Income and benefits from employment a. Income from employment b. Non-wage pecuniary benefits
Measurement objectives	<p>The objective of this measure is to describe the wage distribution in a given country. With the use of decile ratios, the level of wage inequality within a country (i.e., the disparity between the highest earners and lowest earnings) can be assessed. Although there is no “standard” or optimal earnings decile ratio value, the higher the ratio, the greater the earnings disparity.</p> <p>Analyses by gender and vulnerable populations are particularly important for this indicator.</p>
Formula	<p>First, calculate monthly and hourly median earnings by decile, i.e., the values that divide an ordered sample into ten equally numerous subsets (according to national circumstances, weekly earnings may be used instead).</p> <p>If only weekly earnings are available, multiply these values by 4.3 to obtain approximate average monthly earnings; to obtain hourly earnings, divide weekly earnings by weekly usual hours worked.</p> <p>Next, to create a measure for assessing inequality, use decile ratios: 9th decile divided by the 1st decile (d_9/d_1); 9th decile divided by the 5th decile (d_9/d_5); 5th decile divided by the 1st decile (d_5/d_1).</p> <p>In case there are quality concerns due to the data source, <i>quintiles</i> (q_5/q_1, q_5/q_3, q_3/q_1) may be used as an alternative.</p>
Concepts and definitions	<p><i>Earnings</i>: gross monthly and hourly earnings from main-job employment (i.e., wages). Any inclusions or exclusions (e.g., tips, bonuses, shift premiums and overtime) should be clearly stated in all metadata. Depending on national circumstances, the distribution of earnings in secondary jobs might be reported complementarily.</p> <p><i>Employees</i> (age 15+): Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>Due to the existing differences regarding the data sources for earnings, no definitive recommendation is possible. Three main data sources should be considered, according to the availability and quality of the sources within each jurisdiction:</p> <ul style="list-style-type: none"> Household surveys, such as labour force surveys, income surveys and household budget surveys

Short name	Earnings by deciles (2a3)
	<ul style="list-style-type: none"> • Establishment surveys (e.g., the Structure of Earnings Survey of the European Statistical System) • Administrative records, such as income tax records and social security registers <p>Each source has merits and a decision about preferred source should be taken according to data quality and data availability in a given country.</p> <p>Household surveys generally provide full worker coverage, including those in paid employment, self-employment and informal employment. In addition, household surveys tend to be a rich source of additional characteristics of workers, which allow further analysis and the calculation of indicators for specific groups of workers.</p> <p>Worker coverage in establishment surveys is often limited to paid workers in medium to large establishments, excluding those engaged in self-employment and in smaller enterprises. Establishment surveys may also exclude those employed in certain industries, as well as workers remunerated predominately by a share of the profits (e.g., salaried directors and managers) as well as those paid on a commission basis without a retainer (e.g., outworkers, subcontracted workers). The income data collected relates to the earnings concept and tends to include those elements paid directly and regularly by the employer (total cash earnings) but may exclude irregular payments, income in kind and end of year bonuses. However, as the information is directly provided by the employer, it is often considered to be highly accurate.</p> <p>Worker coverage of administrative records, such as social security records, often includes workers in paid employment and in self-employment who are covered by the administrative system. It may miss those in informal employment, who are usually not covered. Income coverage of those in paid employment generally includes total earnings and, in some cases, social security contributions. For those in self-employment, administrative records generally include net profit or entrepreneurial income. Administrative data, however, may not be available in breakdowns by key relevant socio-economic or socio-demographic characteristics of the employed persons, thus preventing the calculation of indicators for specific categories of workers.</p>
Recommended metadata	<ul style="list-style-type: none"> • Periodicity • Population coverage (e.g., coverage of economic activities, small businesses, age minimum or maximum) • Wage exclusions/inclusions (e.g., tips, commissions) <p>Some enterprise surveys use different concepts of hours worked (e.g., contractual hours). Any difference in the hours concept should be acknowledged in the metadata.</p>

Short name	Earnings by deciles (2a3)
Recommended disaggregation	<ul style="list-style-type: none"> • Total employees, full-time employees and part-time employees • Sex • Age groups (at minimum, ages 15-24, 25-54, 55+) • Educational attainment • Vulnerable populations (e.g., Aboriginal peoples, immigrants) • Industry • Occupation <p>Decile ratios may be combined across groups. For example, 9th earnings decile of non-Aboriginal peoples compared with 1st earnings decile of Aboriginal peoples (in addition to the ratio of 9th and 1st earnings deciles of Aboriginal peoples).</p>
Interpretation guidelines	<p>The greater the ratio, the greater the disparity in wage earners within the jurisdiction or socio-demographic group. Analysed over time, a declining ratio indicates reduced disparity.</p> <p>For comparisons over time (as well as across countries), earnings estimated should be used on a commonly denominated basis, i.e., as real earnings accounting for purchasing power differences.</p>
Relation to other indicators	<p>While low ratios signify less disparity in wages, it is important to look at the mean and median wages themselves. For example, if the ratio appears low but wages are also considered low by the jurisdiction, it can signify less wage disparity but not necessarily better conditions for workers.</p> <p>Note that monthly (and weekly) earnings are directly affected by average usual hours worked per week (AWH). Since AWH can vary by group, either different AWH should be acknowledged when analysing the monthly/weekly earnings deciles, or the median hourly earnings deciles should be used instead.</p> <p>Indicators within Dimensions 2 and 3 should be examined together. There is also a strong relationship to indicator 1c1 (“Pay gap between groups”).</p>
International comparisons	<p>Use of ratios allows for easier international comparability, since differences in wage values can be set aside. However, it is important to document the statistical concepts and methodologies that are behind the wage data, in order to clearly identify the degree of comparability that is possible.</p> <p>International comparisons of earnings distributions should also take into account mean (and median) earnings, adjusted for purchasing power.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Wage data are not collected directly from the EU-LFS. Country-specific sources are necessary within the EU.</p>

Short name	Earnings by deciles (2a3)
Further readings	OECD, 2011: "Divided we Stand: Why Inequality Keeps Rising", 2011 (Chapter 1)
	U.S. Bureau of Labour Statistics, 2012: "Usual Weekly Earnings of Wage and Salary Workers, Fourth Quarter 2012", Friday January 18, 2013. Available at: www.bls.gov/news.release/pdf/wkyeng.pdf
	Cholezas, Ioannis and Panos Tsakloglou, 2007: "Earnings Inequality in Europe: Structure and Patterns in Inter-temporal Changes", Institute for the Study of Labour, IZA DP #2636, February 2007. (Mainly gini coefficients, logs and regression analysis)
	ILO, 2012-13: "Global Wage Report 2012-13: Wages and Equitable Growth". Available at: http://www.ilo.org/global/research/global-reports/global-wage-report/2012/lang--en/index.htm
	European Union (EU), 2012: "Employment and Social Developments in Europe 2012" (Chapter 5). Available at: http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7315
UNECE, 2011: "Canberra Group Handbook on Household Income Statistics", Second Edition, 2011 (Chapter 6, Data analysis and dissemination). Available at: http://unece.org/fileadmin/DAM/stats/groups/cgh/Canberra_Handbook_2011_WEB.pdf	

Short name	Employment-related income of self-employed (2a4)
Name	Employment-related income of self-employed by deciles (local currency)
Dimension and sub-dimension	<p>2. Income and benefits from employment</p> <p>a. Income from employment</p> <p>b. Non-wage pecuniary benefits</p>
Measurement objectives	<p>The objective of this measure is to assess the level of income inequality among the self-employed within a country — the disparity between the highest earning self-employed and lowest. Although there is no standard income quintile ratio value, the higher the ratio, the greater the income disparity.</p> <p>Analyses by gender and vulnerable populations are particularly important for this indicator (subject to the information available from the data source).</p>
Formula	<p><i>Average employment-related income</i>: Total gross annual or monthly self-employment income from employment divided by the number of self-employed.</p> <p><i>Income equality ratio</i>: First, calculate annual or monthly median self-employment income by quintile, i.e., the values that divide an ordered sample into five equally numerous subsets (according to national circumstances, weekly income may be used instead).</p> <p>Next, to create a measure for assessing inequality, use quintile ratios: 5th quintile divided by the 1st quintile (q_5/q_1); 5th quintile divided by the 3rd quintile (q_5/q_3); 3rd quintile divided by the 1st quintile (q_3/q_1).</p>
Concepts and definitions	<p>Income: gross annual/monthly income from main self-employment job, before taxes and other deductions. Any inclusions or exclusions should be clearly stated in all metadata. It is recommended to deduct any contributions to compulsory social security that the self-employed have made on behalf of themselves, and add any benefits from such schemes. Contributions to voluntary insurance schemes, and the benefits of these, are not considered. For details, one can refer to the Canberra group definition (see <i>Further readings</i>, below). Depending on national circumstances, the employment-related income in secondary self-employment jobs might be reported complementarily.</p> <p>Self-employed aged 15 and over.</p>
Recommended data source(s)	National Labour Force Survey (LFS) or other household earnings/income survey. In most countries, data on employment-related income is available from household surveys. If possible, data should be taken from a Labour Force Survey. Otherwise, surveys covering household earnings or income could be a suitable alternative. However, these surveys usually have a smaller sample size and have higher nonresponse rates.
Recommended	<ul style="list-style-type: none"> • Periodicity

Short name	Employment-related income of self-employed (2a4)
metadata	<ul style="list-style-type: none"> • Population coverage • Wage exclusions/inclusions (e.g., commissions) • Nonresponse and measurement errors
Recommended disaggregation	<p>If data source and sample size permit, disaggregate by:</p> <ul style="list-style-type: none"> • Sex • Age groups (at minimum 15-24, 25-54, 55+) • Vulnerable populations (e.g., Aboriginal peoples, immigrants). <p>Given the heterogeneity of the self-employed, disaggregation by occupation or industry of work could be beneficial (as source and sample size permit).</p> <p>Quintile ratios may be combined across groups. For example, the 5th income quintile of self-employed men compared with the 1st income quintile of self-employed women (in addition to the ratio of the 5th and 1st income quintiles of men).</p>
Interpretation guidelines	<p>Median employment-related income from self-employment may also be used in addition to the mean.</p> <p>The greater the ratio, the greater the disparity in self-employed earners within the jurisdiction or socio-demographic group. Over time, a declining ratio indicates reduced disparity.</p> <p>Note that self-employed may have other sources of income, such as employee income and investments. This indicator only measures differences in distribution among the self-employed income portion. Furthermore, the self-employed are considered a rather difficult-to-reach population group and measuring self-employment income is methodologically challenging.</p> <p>For comparisons over time (as well as across countries), income from employment of self-employed should be estimated on a commonly denominated basis, i.e., as real income from employment accounting for purchasing power differences.</p>
Relation to other indicators	<p>While low ratios signify less disparity in self-employment income, it is important to look at average self-employed income itself. For example, if the ratio appears low but self-employment income is also considered low by the jurisdiction, it can signify less income disparity but not necessarily better conditions among the self-employed.</p> <p>The number of self-employed within the jurisdiction and the share of all employment within the jurisdiction provide important context for the data.</p> <p>Indicators within Dimensions 2 and 3 should be examined together.</p>
International	Use of ratios allows for easier international comparability, since differences

Short name	Employment-related income of self-employed (2a4)
comparisons	in wage values can be set aside. However, it is important to document the statistical concepts and methodologies that are behind the wage data, as to clearly identify the degree of comparability that is possible.
Recommended calculation in the EU-LFS or other international surveys	Wage data are not collected directly from the EU-LFS. Country-specific sources are necessary within the EU.
Further readings	<p>OECD, 2011: "Divided we Stand: Why Inequality Keeps Rising" (Chapter 1)</p> <p>Meager N, Court and Moralee, 1994: "Self-employment and distribution of income", Brighton: The Institute for Manpower Studies.</p> <p>Cholezas, Ioannis and Panos Tsakloglou, 2007: "Income Inequality in Europe: Structure and Patterns in Inter-temporal Changes", Institute for the Study of Labour, IZA DP #2636, February 2007. (Mainly gini coefficients, logs and regression analysis)</p> <p>ILO, 1998: Resolution concerning the measurement of employment-related income. Adopted by the Sixteenth International Conference of Labour Statisticians (October 1998). Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087490/lang--en/</p> <p>UNECE, 2011: "Canberra Group Handbook on Household Income Statistics", Second Edition, 2011 (Chapter 3, Income measurement). Available at: http://unece.org/fileadmin/DAM/stats/groups/cgh/Canberra_Handbook_2011_WEB.pdf</p>

Sub-dimension 2b: Non-wage pecuniary benefits

Short name	Paid leave entitlement (2b1)
Name	Percentage of employees entitled to paid annual leave
Dimension and sub-dimension	<p>2. Income and benefits from employment</p> <p>a. Income from employment</p> <p>b. Non-wage pecuniary benefits</p>
Measurement objectives	<p>Paid annual leave is part of modern labour laws. However, even if the principle of paid annual leave is widespread and largely acknowledged, not all employees are necessarily entitled to this privilege. Temporary workers, part-time workers or workers with special statuses may not be entitled to paid leave.</p> <p>Self-employed workers are excluded, since the concept of paid leave does not make sense in their case.</p>
Formula	$\frac{\text{Number of employees entitled to paid annual leave}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p><i>Annual leave</i>: defined with respect to national practices.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>Entitlement to paid annual leave may be conditional upon the profile of the employee (seniority, status, etc.). The recommended source should provide these elements. Hence it is recommended to use a household based labour force survey.</p> <p>If the information is available in administrative registers or establishment surveys, they may also be used. They are, in fact, preferred if they provide more reliable and accurate information than a labour force survey.</p>
Recommended metadata	<p>As a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage and geographic coverage should be made available. Any deviation from the above definitions and recommendations should be documented as well.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Economic activity (ISIC): sections or aggregations of them • Occupation (ISCO): major groups or aggregations of them • Full-time vs. part-time workers • Workers in temporary jobs vs. workers in permanent jobs
Interpretation guidelines	<p>Paid annual leave is part of modern labour laws. It is an important element of work-life balance. Entitlement to paid leave may also have a positive effect on overall job satisfaction and overall health status of the worker.</p>
Relation to other indicators	<p>Entitlement to paid leave should be considered in conjunction with the mean number of days employees are entitled to (2b2) and the mean number of days actually taken (2b3). The indicator can be complemented by legal indicators from the ILO Database of Conditions of Work and</p>

Short name	Paid leave entitlement (2b1)
	Employment Laws.
International comparisons	<p>Entitlement may be low for workers in particular situations, such as part-time workers with low hours and workers on temporary contracts. In countries where these groups are important, entitlement may be low. It makes sense to analyse the situation of part-timers and workers on temporary contracts separately.</p> <p>The indicator might be difficult to interpret in countries in which the reduced access to leave entitlements is compensated through a higher hourly pay.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Target population:</p> <ul style="list-style-type: none"> • STAPRO = 3 <p>Disaggregation:</p> <ul style="list-style-type: none"> • NACE3D • ISCO4D • FTPT • TEMP <p>The variables HWUSUAL, YSTARTWK and MSTARTWK may also be useful for identifying entitled workers.</p>
Further readings	<p>Ray R. and J. Schmitt, 2007: No-vacation nation USA - a comparison of leave and holiday in OECD countries. European Economic and Employment Policy Brief 3-2007. ETUI-ERHS.</p> <p>ILO. Database of Conditions of Work and Employment Laws. Available at: http://www.ilo.org/dyn/travail/travmain.home</p>

Short name	Days of paid leave entitlement (2b2)
Name	Mean number of days of paid annual leave per year to which employees are entitled
Dimension and sub-dimension	2. Income and benefits from employment <ol style="list-style-type: none"> a. Income from employment b. Non-wage pecuniary benefits
Measurement objectives	<p>Paid annual leave is part of modern labour laws. Usually, the laws define a minimum amount of paid annual leave. Workers can often negotiate a higher amount of days via individual or collective agreements with their employers. The effective number of days a worker is entitled to may also depend on the worker's situation and status.</p> <p>Self-employed workers are excluded, since the concept of paid leave does not make sense in their case.</p>
Formula	$\frac{\sum_i \text{Days of paid leave to which employee } i \text{ is entitled}}{\text{Total number of employees}}$
Concepts and definitions	<p><i>Paid annual leave</i>: the period during which a worker is off work while continuing to (1) receive an income and (2) be entitled to social protection. Other forms of paid leave, which are not considered annual leave, include public holidays, sick leave, weekly rest and maternity and parental leave.</p> <p><i>Annual leave</i>: defined with respect to national practices.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	A household survey or administrative register. An establishment survey, such as the European structure of earnings survey, may be used as well.
Recommended metadata	As a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage, and geographic coverage should be made available. Any deviation from the above definitions and recommendations should be documented as well. The legal minimum requirement should also be reported.
Recommended disaggregation	<ul style="list-style-type: none"> • Economic activity (ISIC): sections or aggregations of them • Occupation (ISCO-08): major groups or aggregations of them • Full-time vs. part-time workers • Workers in temporary jobs vs. workers in permanent jobs <p>A breakdown by status may be considered if it makes sense in the national context (apprentices, civil servants, etc.).</p>
Interpretation guidelines	Paid annual leave is part of modern labour laws. It is an important element of work-life balance. Entitlement to a higher number of days of paid leave can have a positive impact on job quality. More days of paid leave may translate into a higher level of overall job satisfaction and better overall

Short name	Days of paid leave entitlement (2b2)
	<p>health of the worker.</p> <p>Even if paid leave is available in many countries, the number of days can vary significantly from one country to another. Moreover, within a country, there may be differences according to the profiles of the workers and their workplaces. Hence it is important to analyse the number of days employees are entitled to by the breakdowns recommended above.</p>
Relation to other indicators	<p>This indicator should be compared to the percentage of workers entitled to paid leave (2b1) and the number of days actually taken (2b3). The indicator may be complemented by legal indicators from the ILO Database of Conditions of Work and Employment Laws.</p> <p>One may expect that the number of days of entitled paid leave is strongly correlated with the number of days actually taken. If the link is weaker, it could suggest that there is pressure on the employees not to use all the days they are entitled to, or in some instances, employees may take payment in lieu of days off. A large gap between indicators 2b2 and 2b3 may also indicate a high volume of work. In a sense, it can be interpreted as overtime work at the yearly level.</p> <p>The number of days a worker is entitled to can also be compared to actual hours worked per year. The latter tend to be higher in countries where the number of days of annual leave is lower.</p>
International comparisons	<p>Entitlement may be low for workers in particular situations, such as part-time workers with low hours and workers on temporary contracts. In countries where these groups are important, entitlement may be low. It makes sense to analyse the situation of part-timers and workers on temporary contracts separately.</p> <p>International comparisons need to take into account the social and cultural context of paid annual leave in different countries. It is also important to consider differences regarding the number of public holidays in different countries.</p>
Recommended calculation in the EU-LFS or other international surveys	Not applicable.
Further readings	<p>Ray R. and J. Schmitt, 2007: No-vacation nation USA - a comparison of leave and holiday in OECD countries. European Economic and Employment Policy Brief 3-2007. ETUI-ERHS.</p> <p>ILO. Database of Conditions of Work and Employment Laws. Available at: http://www.ilo.org/dyn/travail/travmain.home</p>

Short name	Actual days of paid leave (2b3)
Name	Mean number of days of paid annual leave used per employee during the reference year
Dimension and sub-dimension	2. Income and benefits from employment <ul style="list-style-type: none"> a. Income from employment b. Non-wage pecuniary benefits
Measurement objectives	<p>Paid annual leave is part of modern labour laws. The number of days taken during the reference year gives an indication of possible differences between entitlement to annual leave and the actual use of it. It provides valuable information regarding work-life balance and the possibility to recuperate from work.</p> <p>Self-employed workers are excluded, since the concept of paid leave does not make sense in their case.</p>
Formula	$\frac{\sum_i \text{Number of days of paid annual leave taken by employee } i}{\text{Total number of employees}}$ <p>The indicator should only be computed for full-time workers or a breakdown by full-time and part-time should be provided.</p>
Concepts and definitions	<p><i>Paid annual leave</i>: the period during which a worker is off work while continuing to (1) receive an income and (2) be entitled to social protection. Other forms of paid leave, which are not considered annual leave, include public holidays, sick leave, weekly rest, maternity and paternity leave as well as and parental leave.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>Household surveys, such as a Labour Force Survey or a Time Use Survey, provide, in addition to the variable of interest, a number of background characteristics that can be used for disaggregation. Moreover, household surveys often rely on international standards and definitions, which will enhance comparability between countries.</p> <p>Establishment surveys, such as labour costs surveys, may be used as well, and are, in fact, preferred if they provide more reliable and accurate information than household surveys.</p> <p>Administrative registers may be used as well and, again, are preferred if they provide higher quality data.</p> <p>In some countries, calculation of the volume of labour within the context of National Accounts includes estimations of the number of days of paid annual leave used per employee, based on several data sources. This may be a useful source of information.</p>

Short name	Actual days of paid leave (2b3)
Recommended metadata	<p>For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage and geographic coverage are made available. Any deviation from the above definitions and recommendations should be documented as well. The metadata should also be clear on the formula used, e.g., if the days have been converted into full-time units or not.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Full-time vs. part-time workers • Economic activity (ISIC): sections or aggregations of them • Occupation (ISCO-08): major groups or aggregations of them • Workers with temporary vs. permanent contracts <p>The full-time / part-time breakdown is particularly important. As per the definition, the indicator should be expressed in full-time units. As these may be difficult or even impossible to obtain from part-time workers, the only group for which there are comparable results over time and across countries are full-time workers. Hence this group should be identifiable.</p>
Interpretation guidelines	<p>Paid annual leave is part of modern labour laws. It is an important element for work-life balance. However, entitlement to a certain number of days of paid leave gives only a partial picture. Entitlement data must also be supplemented by the actual number of days a worker takes.</p> <p>A higher number of days of paid leave has a positive impact on job quality. More days of paid leave may translate into a higher level of overall job satisfaction and better overall health of the worker.</p>
Relation to other indicators	<p>This indicator has to be analysed jointly with indicators 2b1 and 2b2 on entitlement to paid annual leave. Higher entitlement may lead to a higher number of actual days of annual leave taken.</p> <p>One may expect that the number of days of entitled paid leave is strongly correlated with the number of days actually taken. If the link is weaker, it could suggest that there is pressure on the employees not to use all the days they are entitled to, or in some instances, employees may take payment in lieu of days off. A large gap between indicators 2b2 and 2b3 may also indicate a high volume of work. In a sense, it can be interpreted as overtime work at the yearly level.</p> <p>It is also interesting to see the link with indicators 3a1 and 3a2, the mean weekly hours usually worked per employed persons and the percentage of employed persons usually working 49 hours or more per week.</p> <p>Annual leave taken can also be compared to actual hours worked per year. The latter tend to be higher in countries where the number of days taken is lower.</p> <p>A high number of temporary workers can have an impact on this indicator,</p>

Short name	Actual days of paid leave (2b3)
	since entitlement may be lower among these workers. Regardless of entitlement, workers on temporary contracts may be more reluctant to take advantage of paid annual leave, since their job situation is less secure.
International comparisons	<p>Actual leave taken may be low for workers in particular situations, such as part-time workers with low hours and workers on temporary contracts. In countries where these groups are important, actual leave taken may be low. It makes sense to analyse the situation of part-timers and workers on temporary contracts separately.</p> <p>International comparisons need to take into account the social and cultural context of paid annual leave in different countries. It is also important to consider differences regarding the number of public holidays in different countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>It is possible to obtain an estimate via the EU-LFS by combining information from the following variables:</p> <ul style="list-style-type: none"> • Target population: STAPRO = 3 • Disaggregation: NACE3D, ISCO4D, FTPT, TEMP • The following variables of the EU-LFS can be used to calculate the indicator, as shown in the sample code in appendix HWUSUAL, FTPT, NOWKREAS, HOURREAS
Further readings	<p>Ray R. and J. Schmitt, 2007: No-vacation nation USA - a comparison of leave and holiday in OECD countries. European Economic and Employment Policy Brief 3-2007. ETUI-ERHS.</p> <p>ILO. Database of Conditions of Work and Employment Laws. Available at: http://www.ilo.org/dyn/travail/travmain.home</p>

Short name	Sick leave entitlement (2b4)
Name	Percentage of employees entitled to paid sick leave
Dimension and sub-dimension	2. Income and benefits from employment a. Income from employment b. Non-wage pecuniary benefits
Measurement objectives	<p>Paid sick leave is a major element of modern social security systems. Nevertheless, there can be workers not entitled to paid sick leave, such as temporary workers, part-time workers or workers in special statuses.</p> <p>Self-employed workers are excluded, since the concept of paid sick leave does not make sense in their case.</p>
Formula	$\frac{\text{Number of employees entitled to paid sick leave}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p><i>Sick leave</i>: defined with respect to national practices.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>Entitlement to paid sick leave may be conditional upon the profile of the worker (seniority, status, etc.). The recommended source should be one providing these elements. Hence it is recommended to use a household based labour force survey.</p> <p>If the information is available in administrative registers or establishment surveys, they may also be used. They are, in fact, preferred if they provide more reliable and accurate information than a labour force survey.</p> <p>In the absence of empirical data, the legal requirements for sick leave should be described, as well as the percentage of employees covered by these requirements. Note that the legal requirements may not coincide with the actual percentage entitled to paid leave.</p>
Recommended metadata	For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage and geographic coverage are made available. Any deviation from the above definitions and recommendations should be documented as well.
Recommended disaggregation	<ul style="list-style-type: none"> • Economic activity (ISIC): sections or aggregations of them • Occupation (ISCO-08): major groups or aggregations of them • Full-time vs. part-time workers • Workers in temporary jobs vs. workers in permanent jobs <p>A breakdown by status may be considered if it makes sense in the national context (apprentices, civil servants, etc.)</p>
Interpretation guidelines	Paid sick leave protects the workers from loss of income due to absence from work for health reasons. Entitlement to paid sick leave is positively

Short name	Sick leave entitlement (2b4)
	<p>related to quality of employment. A higher (lower) share of entitled workers means higher (lower) quality of employment.</p> <p>Legal and institutional parameters are the main drivers behind changes in entitlement rate.</p>
Relation to other indicators	<p>The share of workers entitled to paid sick leave is mainly shaped by legislation and institutions. It can thus be useful to analyse the indicator jointly with legal context information. An overview on the legal provisions for sick leave in 32 European countries (including the duration and source of the continued payment of wages and salaries) can be found at the Mutual Information System on Social Protection (MISSOC; see further readings).</p> <p>Atypical forms of employment can also have an impact on entitlement rate. Temporary workers and part-timers (especially those working a low number of hours) are less likely to be entitled to paid sick leave. Hence it is useful to analyse the entitlement rate together these forms of atypical employment.</p> <p>This indicator should also be analysed in conjunction with the indicators 2b5 and 2b6 on the number of days a worker is entitled to and the days of sick leave actually taken.</p>
International comparisons	<p>In international comparisons, the extent of atypical employment should be taken into account. Moreover, it is useful to have a look at the broader picture that emerges when taking into account indicators 2b5 and 2b6 as well as information about the legal and institutional context.</p> <p>The indicator might be difficult to interpret in countries in which the reduced access to sick leave entitlements is compensated through a higher hourly pay.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>It is not possible to give a universal recommendation on how to compute this indicator in the EU-LFS, since entitlement rules are different from country to country. However, the following variables may be used:</p> <ul style="list-style-type: none"> • Target population: WSTATOR = 1 or 2 • Disaggregation: NACE3D, ISCO4D, FTPT, TEMP, STAPRO <p>The variables HWUSUAL, YSTARTWK and MSTARTWK may also be useful for identifying the entitled workers.</p>
Further readings	<p>MISSOC - Mutual Information System on Social Protection. Available at http://www.missoc.org/MISSOC/index.htm</p>

Short name	Days of sick leave entitlement (2b5)
Name	Mean number of days of paid sick leave per year to which employees are entitled
Dimension and sub-dimension	2. Income and benefits from employment <ol style="list-style-type: none"> a. Income from employment b. Non-wage pecuniary benefits
Measurement objectives	<p>Paid sick leave is a major element of modern social security systems. Nevertheless, some workers may not be entitled to paid sick leave, such as temporary workers, part-time workers or workers in special statuses.</p> <p>Even if the majority of workers are entitled to paid sick leave, there may be differences within and between countries in the number of days a worker can take.</p>
Formula	$\frac{\sum_i \text{Days of paid sick leave to which employee } i \text{ is entitled}}{\text{Total number of employees}}$
Concepts and definitions	<p><i>Sick leave</i>: defined with respect to national practices.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>The source containing the most accurate and complete information should be used.</p> <p>In countries with high collective bargaining coverage, databases on collective pay agreements could be used to estimate this indicator. Indeed, such information is typically included in collective agreements.</p> <p>As is the case with entitlement, the number of days one is entitled to may be conditional upon the profile of the employee (seniority, status, etc.). Hence a household based labour force survey, which includes these characteristics, could be used as well.</p> <p>If the information is available in administrative registers or establishment surveys, they may also be used.</p> <p>If empirical results are not available, the legal entitlements should be described. Note that the legal requirements may not coincide with the actual number of days a worker is entitled to.</p>
Recommended metadata	For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage and geographic coverage are made available. Any deviation from the above definitions and recommendations should be documented as well.
Recommended disaggregation	<ul style="list-style-type: none"> • Economic activity (ISIC): sections or aggregations of them • Occupation (ISCO-08): major groups or aggregations of them

Short name	Days of sick leave entitlement (2b5)
	<ul style="list-style-type: none"> • Full-time vs. part-time workers • Workers in temporary jobs vs. workers in permanent jobs <p>A breakdown by status may be considered if it makes sense in the national context (apprentices, civil servants, etc.).</p>
Interpretation guidelines	<p>Paid sick leave protects workers from loss of income due to absence from work for health reasons. A higher number of days gives the worker a better chance to recover from health problems. It is thus an important element of health promotion.</p> <p>Legal and institutional parameters are the main drivers behind changes in the number of days to which employees are entitled.</p>
Relation to other indicators	<p>The number of days employees are entitled to is mainly shaped by legislation and institutions. It can thus be useful to analyse it jointly with legal context information.</p> <p>Atypical forms of employment can have an impact on the number of days of entitlement. Temporary workers and part-timers (especially those working a low number of hours) have less days of sick leave at their disposal. Hence it is useful to analyse this indicator for these forms of atypical employment.</p> <p>This indicator should also be analysed in conjunction with indicators 2b4 (entitlement rate) and 2b6 (days of sick leave actually taken).</p>
International comparisons	<p>In international comparisons, the extent of atypical employment should be factored in. Moreover, it is useful to have a look at the broader picture that emerges when taking into account indicators 2b4 and 2b6, as well as information about the legal and institutional context.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Not applicable.</p>
Further readings	<p>MISSOC - Mutual Information System on Social Protection. Available at http://www.missoc.org/MISSOC/index.htm</p>

Short name	Actual days of sick leave (2b6)
Name	Mean number of days of paid sick leave used per employee during the reference year
Dimension and sub-dimension	2. Income and benefits from employment <ol style="list-style-type: none"> a. Income from employment b. Non-wage pecuniary benefits
Measurement objectives	Paid sick leave is a major element of modern social security systems. Even if the majority of workers are entitled to paid sick leave, there may be differences within and between countries in the number of days a worker is actually taking.
Formula	$\frac{\sum_i \text{Number of days of paid sick leave taken by employee } i}{\text{Total number of employees}}$ <p>The indicator should only be computed for full-time workers or the full-time and part-time breakdown should be provided.</p>
Concepts and definitions	<p><i>Sick leave</i>: defined with respect to national practices.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>Household surveys, such as a Labour Force Survey or a Time Use Survey. These surveys provide, in addition to the variable of interest, a number of background characteristics that can be used for disaggregation. Moreover, household surveys often rely on international standards and definitions, which will enhance comparability between countries.</p> <p>If the information is available in administrative registers or establishment surveys, they may also be used. They are, in fact, preferred if they provide more reliable and accurate information than a household survey.</p> <p>In some countries, calculation of the volume of labour within the context of National Accounts includes estimations of the number of days of sick leave used per employee, based on several data sources. This may be a useful source of information.</p>
Recommended metadata	For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage and geographic coverage are made available. Any deviation from the above definitions and recommendations should be documented as well. The metadata should also be clear on the formula used, e.g., if the days have been converted into full-time units or not.
Recommended disaggregation	<ul style="list-style-type: none"> • Full-time vs. part-time workers • Economic activity (ISIC): sections or aggregations of them • Occupation (ISCO-08): major groups or aggregations of them • Workers with Temporary vs. permanent contracts

Short name	Actual days of sick leave (2b6)
	<p>The full-time/part-time breakdown is particularly important. As per the definition, the indicator should be expressed in full-time units. As these may be difficult or even impossible to obtain from part-time workers, the only group for which there are comparable results over time and across countries are full-time workers. Hence this group should be identifiable.</p> <p>The distinction between temporary and permanent contracts may also be important for international comparisons.</p>
Interpretation guidelines	<p>The relationship between the days of sick leave taken and the quality of employment is ambiguous. Poor working conditions may translate into a higher number of days of absence. In this case, there is a negative correlation between days of absence and quality of employment. On the other hand, a high number of days of absences can come from a higher entitlement rate and a higher number of days to which the employee is entitled. In this case, the workers take more days of sick leave because they are entitled to them. Hence, the correlation between days of absence and quality of employment can also be positive. Presenteeism is sometimes seen as an indicator of poor employment quality.</p>
Relation to other indicators	<p>This indicator has to be analysed jointly with indicators 2b4 and 2b5 on entitlement to paid sick leave. A higher entitlement rate may lead to a higher number of days of sick leave taken.</p> <p>There is also a possible correlation with occupational injury rates. More occupational injuries may translate into more absences for sickness. Moreover, a deterioration of workplace relationships (Dimension 7) may translate into more absences for health reasons.</p> <p>Workers' compensation can also have an impact on absence for sickness. The level of earnings (2a1, 2a3 and 2a4) as well as fairness matters (2b2 and 1c2) can also have an impact on sick leave taken.</p>
International comparisons	<p>International comparability may be hampered by the computation of full-time equivalents.</p> <p>As explained above, there may be a link between entitlement and the number of days taken. Hence, it is recommended to analyse these indicators jointly.</p> <p>A high number of temporary workers can have an impact on this indicator, since entitlement may be lower among these workers. Regardless of entitlement, workers on temporary contracts may be more reluctant to take advantage of paid sick leave, since their job situation is less secure.</p>
Recommended calculation in the EU-LFS or other	Not applicable.
Further readings	

DIMENSION 3: WORKING TIME AND WORK-LIFE BALANCE**Sub-dimension 3a: Working hours**

Short name	Mean weekly working hours (3a1)
Name	Mean weekly hours usually worked per employed person
Dimension and sub-dimension	3. Working hours and work-life balance <ol style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>The mean number of hours usually worked per employed person provides information of the length of a usual or typical working week, measured as an average. The indicator is also an indirect measure of how much time employed persons can dedicate to activities other than employment and might be interpreted as an indirect indicator on work-life balance.</p> <p>By referring to a typical week, the indicator excludes temporary absences from work and in such a way provides more comparable data over time and place than hours actually worked. Using a typical week avoids seasonal variations in working hours, levels out differences in the length of holidays and number of bank holidays between countries and increases the comparability between sexes, since employed persons temporarily on family leave will not report reduced working time. This also makes the indicator more useful for certain types of social analysis (ICLS 2008).</p>
Formula	$\frac{\sum_i \text{Number of hours usually worked per week by employed person } i}{\text{Total number of employed persons}}$
Concepts and definitions	<p><i>Hours usually worked</i>: Defined according to the resolution of the 18th ICLS in 2008. The indicator includes regular paid and unpaid extra hours and work done at home. It excludes the travelling time between home and workplace and the main meal break. Employed persons with non-response should be dropped from the calculation (see glossary).</p> <p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and generally allows disaggregations by economic activity and demographic variables such as sex, age group, etc.</p> <p>The concept of hours usually worked is best captured through an LFS collected in households. The international harmonisation of the EU-LFS contributes to better international comparability.</p> <p>If an LFS is not available, other household or individual surveys with an appropriate employment module may be used instead.</p>

Short name	Mean weekly working hours (3a1)
Recommended metadata	For this indicator, it is recommended that as a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs), legal minimum working age and/or legal or typical retirement age.
Recommended disaggregation	<ul style="list-style-type: none"> • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Sex • Age • Full-time vs. part-time workers • Economic activity (ISIC) • Education • Occupation (ISCO) <p>Countries with a significant share of employed persons holding more than one job should additionally refer to the working time in all jobs held by each employed person, if possible.</p>
Interpretation guidelines	The hours usually worked, as measured in the LFS, describes the hours worked in the main job. In case of multiple job-holders the indicator is somewhat misleading since it does not show the total number of hours spent at work. In case the hours vary considerably over time, the average of hours actually worked per week over the past four weeks is recommended as a measure of usual hours. This is why the indicator is more relevant for countries with predominantly regular working hours.
Relation to other indicators	<p>Weekly hours usually worked may be sensitive to the business cycle, although to a lesser degree than hours actually worked. It is therefore recommended to analyse the indicator together with context indicators, the employment rate and the mean actual working hours. Average working time might decrease during recessions, while employment in long working hours might increase (as layoffs increase the workload of the remaining workers).</p> <p>The indicator should also be analysed together with the indicators of Dimension 2 (Income and benefits from employment).</p> <p>The length of mean hours worked per employed person seems to correlate with GDP (OECD 2010); shorter working hours are typically found in well off countries. Increased productivity contributes to higher pay and may thus decrease the need to work excessive hours.</p>
International comparisons	<p>The indicator is strongly influenced by:</p> <ul style="list-style-type: none"> • Self-employment rate (self-employed typically working longer hours than employees) • Part-time rate • Female employment rate (women typically working shorter hours than men)

Short name	Mean weekly working hours (3a1)
	<ul style="list-style-type: none"> • Share of multiple-job-holders (the indicator measuring only hours in the main job) • Share of employment above retirement age • the structure of economic activity (e.g., those working in agriculture having typically long working times) <p>For international comparisons, it is recommended to additionally analyse the indicator for full-time workers, women and men separately, self-employed/employees separately as well as provide an additional figure on working time in all jobs held by each employed person</p>
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate and disaggregate this indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • HWUSUAL • SEX • AGE • FTPT • STAPRO • NACE • ISCO
Further readings	<p>ILO, 1919: Convention Limiting the Hours of Work in Industrial Undertakings to Eight in the Day and Forty-eight in the Week, ILO Convention No. 1, 1919. Link: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312146</p> <p>ILO, 1930: Hours of Work (Commerce and Offices) Convention, ILO Convention No. 30, 1930. Link: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:262717002882079::NO:12100:P12100_INSTRUMENT_ID:312175:NO</p> <p>Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time, Official Journal L 299, 18.11.2003, p. 9–19.</p> <p>ILO, 2007: Decent Working Time: Balancing Workers' Needs with Business Requirements. Geneva: International Labour Office 2007.</p> <p>White, Joanne; Beswick, Johanna, 2003: Working Long Hours. Health and Safety Laboratory, HSL/2003/02, 2003.</p> <p>Kodz, J. et al., 2003: Working Long Hours: a Review of the Evidence: Volume 1 – Main Report. Employment Relations Research Series ERRS16, UK Department of Trade and Industry, 2003.</p>

Short name	Long working hours (3a2)
Name	Percentage of employed persons usually working 49 hours or more per week
Dimension and sub-dimension	3. Working hours and work-life balance <ul style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>The indicator on long working hours provides information about the share of persons in employment whose hours usually worked exceed 48 hours per week. It is an indicator of exposure to overwork, i.e., persons having a working time that exceeds the threshold beyond which can have negative effects on workers not only on workers' health, but also on their safety (for instance increasing injury hazard rates) and on work-life balance.</p> <p>It is recommended to use the 48-hour threshold to construct the indicator in order to enhance international data comparability. The principle of the 8-hour day or the 48-hour week threshold was first adopted in ILO Convention No. 1 (Hours of Work (Industry) Convention, 1919) and later in Convention No. 30 (Hours of Work (Commerce and Offices) Convention, 1930). This threshold was referenced in 2008 in the Resolution concerning the measurement of working time.</p> <p>National thresholds used to define long working hours might complement the information provided for the indicator.</p>
Formula	$\frac{\text{Number of employed persons usually working 49 hours or more per week}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Hours usually worked</i>: Defined according to the resolution of the 18th ICLS in 2008 (see glossary).</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A Labour Force Survey (LFS) collected in households is the recommended data source, as it permits one to estimate the number of employed persons and generally allows disaggregations by economic activity and demographic variables such as sex, age group, etc.</p> <p>The concept of hours usually worked is best captured through an LFS collected in households. The international harmonisation of EU-LFS contributes to better international comparability. If an LFS is not available other household surveys with an appropriate employment module may be used instead.</p>
Recommended metadata	As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs),

Short name	Long working hours (3a2)
Recommended disaggregation	<p>definition of hours threshold and geographic coverage should be provided.</p> <ul style="list-style-type: none"> • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Sex • Age • ISCO-08 major groups (particularly managers vs. non-managers) • Full-time workers only • Economic activity (ISIC) <p>In order to further differentiate workers by very long working hours, one might disaggregate the sub-group of employed persons usually working 60 hours or more per week (breakdown suggested by the 2008 ICLS <i>Resolution concerning the measurement of working time</i>).</p> <p>Countries with a significant portion of employed persons holding more than one job should additionally refer to the working time in all jobs held by each employed person.</p>
Interpretation guidelines	<p>Working long hours might affect different dimensions of quality of employment. Long working hours can have a strong negative impact upon the work-life balance and can adversely affect physical as well as mental well-being. Some studies also suggest that long working hours have a negative effect on motivation, absence, staff turnover, and productivity and tend to increase injury hazards (Kodz et al. 2003; ILO 2007).</p> <p>It should be noted that long working hours are perceived differently by individuals in different employment situations and in different countries. Apart from personality-related factors, the perception of long working hours is mediated, e.g., by occupation, the control over work hours and rest breaks, and the type of the task (White/Beswick 2003).</p> <p>Depending on the labour market situation, the percentage of self-employed persons and managers with long working hours is often much higher; long hours are typical also in agricultural work.</p> <p>Employment in long working hours should be analysed for differences between men and women. Given that employment by definition of the ILO is restricted to gainful employment, the percentage of men working long hours is often higher than the percentage of women. Information regarding other forms of work like unpaid household services (available from time use surveys), might be used as a complementary input.</p>
Relation to other indicators	<p>Employment in long working hours might be sensitive to the business cycle. It is therefore recommended to analyse the indicator together with context indicators, in particular the GDP growth, the employment rate and the mean actual working hours. Average working time might decrease during recessions, while employment in long working hours might increase (as</p>

Short name	Long working hours (3a2)
	<p>layoffs increase the workload of the remaining workers).</p> <p>The indicator should also be analysed together with the indicators of Dimension 2 (Income and benefits from employment).</p>
International comparisons	<p>The indicator is strongly influenced by:</p> <ul style="list-style-type: none"> • Self-employment rate (self-employed typically working longer hours than employees) • Part-time rate (high part-time rate may lower the share of those working long hours) • Female employment rate (women typically work shorter hours than men) • Economic activity structure (e.g., those working in agriculture having typically long working times) <p>For international comparisons, it is recommended to additionally analyse the indicator for the full-time workers only, women and men separately, self-employed/employees separately as well as provide an additional figure on working time in all jobs held by each employed person.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate and disaggregate this indicator it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Usual hours worked per week: $49 \leq HWUSUAL < 98$ • Target population: employed persons in private households (HHTYPE = 1 and WSTATOR in (1, 2)) • SEX • AGE • FTPT • STAPRO • ISCO4D (for major group 1)
Further readings	<p>ILO, 1919: Convention Limiting the Hours of Work in Industrial Undertakings to Eight in the Day and Forty-eight in the Week, ILO Convention No. 1, 1919. Link: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312146</p> <p>ILO, 1930: Hours of Work (Commerce and Offices) Convention, ILO Convention No. 30, 1930. Link: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:262717002882079::NO:12100:P12100_INSTRUMENT_ID:312175:NO</p> <p>Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time, Official Journal L 299, 18.11.2003, p. 9–19.</p>

Short name	Long working hours (3a2)
	<p data-bbox="442 248 1331 315">ILO, 2007: Decent Working Time: Balancing Workers' Needs with Business Requirements. Geneva: International Labour Office 2007.</p> <p data-bbox="442 371 1318 439">White, Joanne; Beswick, Johanna, 2003: Working Long Hours. Health and Safety Laboratory, HSL/2003/02, 2003.</p> <p data-bbox="442 495 1353 595">Kodz, J. et al., 2003: Working Long Hours: a Review of the Evidence: Volume 1 – Main Report. Employment Relations Research Series ERRS16, UK Department of Trade and Industry, 2003.</p>

Short name	Involuntary part-time work (3a3)
Name	Percentage of employed persons working part time for the main reason that they did not find a full-time job
Dimension and sub-dimension	3. Working hours and work-life balance <ol style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	The percentage of employed persons who consider themselves in part-time work involuntarily, i.e., for the main reason of not having found full-time employment. This can be an indication of underemployment and a person's weak labour market status. Persons with involuntary part-time work may have difficulties to make ends meet.
Formula	$\frac{\text{Number of employed persons in part - time employment because they have not found full - time employment}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Part-time employment</i> defined according to the resolution of the 18th ICLS in 2008, Annex, para 4 (see glossary).</p> <p><i>Involuntary part-time workers</i> are defined as persons working part time for the main reason of not having found full-time employment.</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and generally allows disaggregations by economic activity and demographic variables such as sex, age group, etc.</p> <p>The concept of part-time work and reasons for it are best captured through a LFS collected in households. The international harmonisation of EU-LFS contributes to better international comparability. If an LFS is not available, other household or individual surveys with an appropriate employment module may be used instead.</p>
Recommended metadata	As a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage and job coverage (main job or all jobs) should be made available. Furthermore, information on the list of reasons why the respondent is working part-time used in the questionnaire should be provided.
Recommended disaggregation	<ul style="list-style-type: none"> • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Sex • Age • Education

Short name	Involuntary part-time work (3a3)
	<ul style="list-style-type: none"> • Economic activity (ISIC) • Occupation (ISCO 1-digit level)
Interpretation guidelines	<p>Working few hours per week for the reason of not having found full-time employment can be interpreted as a form of underemployment. It might indicate a low income level and weak labour market status.</p> <p>Whether voluntary or involuntary, part-time jobs are often of lesser quality than comparable full-time jobs in terms of hourly wages, non-wage benefits, and career development opportunities. Since women form the majority of part-time workers, the issue is strongly linked to gender equality and fair treatment in employment (ILO 2007).</p> <p>On the other hand, the line between involuntary and voluntary part-time employment may sometimes be blurred. It is possible that a person would prefer and need a full-time job but is unable to take such employment e.g., due to problems in care arrangements. Thus, he or she might declare working part-time for family or personal responsibilities (e.g., looking after children) and not for the reason of not having found a full-time job.</p> <p>The occurrence of multiple job holders should be investigated before interpreting the results. Having two or more part-time jobs being equivalent to a full-time job has other consequences than having only one part-time job.</p>
Relation to other indicators	<p>The prevalence of involuntary part-time employment may be sensitive to the business cycle. During the recession, full-time employment might be difficult to find. It is therefore recommended to analyse the indicator together with context indicators such as the employment rate and part-time employment rate. However, it is also possible that the share of part-time employment increases at the same time as the share of involuntary part-time decreases if e.g., parents of small children or aged workers are financially encouraged to reduce their working hours.</p> <p>Inability to find a full-time job and to make ends meet may lead to a need to have several part-time jobs, which makes it interesting to analyse this indicator with the share of multiple job-holders.</p> <p>Part-time work may also mean atypical working hours such as work in the evening, weekends or sporadic “minihours”. It is interesting to analyse this indicator with the indicators of Sub-dimension 3b.</p> <p>The indicator should also be analysed together with the indicators of Dimension 2 (Income and benefits from employment).</p>
International comparisons	<p>The indicator is strongly influenced by:</p> <ul style="list-style-type: none"> • Part-time rate • Female employment rate (women more frequently work part-time)

Short name	Involuntary part-time work (3a3)
	For international comparisons, it is recommended to analyse the indicator separately for women and men as well as for self-employed and employees separately.
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate and disaggregate this indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • FTPTREAS • SEX • AGE • STAPRO • ISCO • ISCED
Further readings	ILO, 2007: Decent Working Time: Balancing Workers' Needs with Business Requirements. Geneva: International Labour Office 2007.

Short name	Distribution of weekly working hours (3a4)
Name	Employment by weekly hours usually worked (hours in standardised hour bands)
Dimension and sub-dimension	3. Working hours and work-life balance <ol style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	This indicator aims to describe the distribution of weekly hours usually worked. It provides more detailed information than the mean hours usually worked indicator. Mean values always hide information. For instance, two groups might have exactly the same mean, but in one of the groups, the vast majority are concentrated in one hour band (e.g., 35-39 hours), while in the another group, working hours are polarised including a lot of overlong working weeks and a lot of short mini hours. The indicator tells about heterogeneity/homogeneity of the length of working week among certain groups or within certain context.
Formula	$\frac{\text{Number of employed persons whose usual weekly working hours fell within a selected hour band}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Hours usually worked:</i> Defined according to the resolution concerning the measurement of working time, adopted by the 18th ICLS in 2008 (see glossary). Hours usually worked include regular paid or unpaid extra hours and work done at home.</p> <p><i>Standardised hour bands:</i> According to the resolution concerning the measurement of working time, adopted by the 18th ICLS in 2008, these hour bands may be of four or five hours: (1) 1-4 hours, (2) 5-9 hours, (3) 10-14 hours, (4) 15-19 hours, (5) 20-24 hours, (6) 25-29 hours, (7), 30-34 hours, (8) 35-39 hours, (9) 40-44 hours, (10) 45-49 hours, (11) 50-54 hours, (12) 55-59 hours, (13) 60-64 hours, (14) 65-69 hours, (15) 70 hours or more. The following groups might also be reported: (1) 1-14 hours, (2) 40 hours, (3) up to and including 48 hours, (4) 60 hours or more.</p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits to estimate the number of employed persons and generally allows disaggregations by economic activity and demographic variables such as sex, age group, etc.</p> <p>The concept of hours usually worked is best captured through an LFS collected in households. The international harmonisation of EU-LFS contributes to better international comparability. If an LFS is not available other household surveys with an appropriate employment module may be used instead.</p>

Short name	Distribution of weekly working hours (3a4)
Recommended metadata	As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided.
Recommended disaggregation	<ul style="list-style-type: none"> • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Sex and age • Full-time workers only • Economic activity (ISIC) <p>Countries with a significant portion of employed persons holding more than one job should additionally refer to the working time in all jobs held by each employed person.</p>
Interpretation guidelines	<p>The distribution of employed population by their hours usually worked in hour bands tells about the pattern in the division of labour in a certain country or at a certain point in time. For instance, in one country women may typically work very short hours, which is compensated by men typically working very long hours, while in another country the distribution of working hours is relatively equal between sexes.</p> <p>Long working hours can have a strong negative impact upon work-life balance and can adversely affect physical as well as mental well-being (see 3a2).</p> <p>On the other hand, short working hours may indicate underemployment or difficulties to take over normal working hours due to care responsibilities (see 3a3).</p> <p>However, the percentage of employed persons working short hours does not give any information about whether the short hours represent underemployment, engagement in other responsibilities (e.g., family care) or a genuine choice taken by the worker. Neither does it reveal whether there is a temporary arrangement in place (e.g., partial care leave, temporary disability) or if short hours are part of a more permanent employment arrangement.</p> <p>It should be noted that long/short working hours are perceived differently by individuals in different employment situations and in different countries.</p>
Relation to other indicators	Length of working hours is sensitive to the business cycle. It is therefore recommended to analyse the indicator together with context indicators, in particular GDP growth, the employment rate and mean actual working hours. Average working time may decrease or stay the same during recessions, but this may hide a polarisation of working hours. For a certain group of employed persons, e.g., in services and retail trade, less work may be available and working hours may get shorter. In other sectors, layoffs may increase the workload of the remaining workers, leading to longer

Short name	Distribution of weekly working hours (3a4)
	<p>working hours.</p> <p>The indicator should be analysed together with the other indicators of Sub-dimension 3a.</p> <p>The indicator should also be analysed together with indicators of Dimension 2 (Income and benefits from employment).</p>
International comparisons	<p>The indicator is strongly influenced by:</p> <ul style="list-style-type: none"> • Self-employment rate (self-employed typically working longer hours than employees) • Part-time rate • Female employment rate (women typically work shorter hours than men) • Economic activity structure (e.g., those working in agriculture typically work longer hours) <p>For international comparisons, it is recommended to additionally analyse the indicator for the full-time workers only (taking into account possible differences in the national definitions of part-time work), women and men separately, self-employed/employees separately as well as provide an additional figure on working time in all jobs held by each employed person.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate and disaggregate the indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Hours usually worked per week: HWUSUAL • Target population: employed persons in private households (HHTYPE = 1 and WSTATOR in (1, 2)) • SEX • AGE • FTPT • STAPRO • ISCO4D (for major group 1)
Further readings	

Short name	Multiple job-holders (3a5)
Name	Percentage of employed persons working more than one job
Dimension and sub-dimension	3. Working hours and work-life balance <ol style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	Multiple-job holder (percentage) – proportion of employed workers who have more than one job or business.
Formula	$\frac{\text{Number of employed persons working more than one job}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Employed persons</i> who have more than one job (as employee or self-employed).</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits to estimate the number of employed persons and generally allows disaggregations by economic activity and demographic variables such as sex, age group, etc.</p> <p>The number of jobs a person holds can best be captured through an LFS. The international harmonisation of EU-LFS contributes to better international comparability in that regard.</p> <p>If an LFS is not available, other household surveys with an appropriate employment module may be used instead.</p> <p>Data obtained from administrative registers might be considered as a secondary option, if they allow identifying the number of jobs per person. Still administrative registers often only have a restricted coverage of employed persons, e.g., do not include self-employed persons or persons in informal employment.</p>
Recommended metadata	As a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period and population coverage should be provided.
Recommended disaggregation	<ul style="list-style-type: none"> • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) in the first and secondary job • Occupation (ISCO-08) in the first and secondary job • Full-time vs. part-time workers • Economic activity (ISIC) in the first and secondary job • Hours usually worked in the first and secondary job • Income from employment in the first and secondary job <p>Further disaggregations:</p>

Short name	Multiple job-holders (3a5)
	<ul style="list-style-type: none"> • Educational attainment • Sex • Age <p>In order to further differentiate workers by very long working hours, one might disaggregate the sub-group of employed persons working 60 hours or more per week (breakdown suggested by the 2008 ICLS <i>Resolution concerning the measurement of working time</i>).</p> <p>Countries with a significant share of employed persons holding more than one job should additionally refer to the working time in all jobs held by each employed person.</p>
Interpretation guidelines	<p>The multiple-job holder defined broadly is one who earns money from several jobs. When one holds two different jobs, it normally means one is the principal job and the other is the second job. According to the Resolution on statistics of work, employment and labour underutilisation adopted by the Nineteenth ICLS, the main job is that with the longest hours usually worked.</p> <p>To work more than in one job, also referred to as “moonlighting”, may indicate that the earnings of one job are not enough to make the ends meet (especially in case the main job is part-time and/or in certain ISCO-groups with lower socio-economic status). On the other hand, to have another job may be associated to an occupation of high socio-economic status, e.g., in the case of professional consultation work done beside the main job. For instance, medical doctors employed in public health care may receive patients in private medical centres as well. If possible on the basis of national surveys, it is recommended to report the reasons for having multiple jobs.</p>
Relation to other indicators	<p>Employment in more than one job may be sensitive to the business cycle. It is therefore recommended to analyse the indicator together with context indicators such as the employment rate.</p> <p>The indicator should also be analysed together with indicators of the Dimension 2 (Income and benefits from employment).</p>
International comparisons	<p>Since comparable data on reasons for having multiple jobs is not available, a comparison of multiple job-holders in different ISCO or ISCED –groups could be useful.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate and disaggregate the indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • EXIST2J • SEX • AGE • FTPT

Short name	Multiple job-holders (3a5)
	<ul style="list-style-type: none"> • STAPRO • ISCO4D (for major group 1)
Further readings	<p>Averett, S., 2001: Moonlighting: Multiple Motives and Gender Differences Applied Economics, 33, pp. 1391-1410.</p> <p>Hipple, S., 2010: Multiple jobholding during the 2000s. In: Monthly Labour Review, July 2010, pp. 21-33.</p> <p>ILO, 2004: What is multiple job-holding? Information Sheet No. WT-19. Available at: http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_169672.pdf</p>

Sub-dimension 3b: Working time arrangements

Short name	Night work (3b1)
Name	Percentage of employed persons who usually work at night
Dimension and sub-dimension	3. Working hours and work-life balance <ul style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>Indicators measuring working time arrangements provide information about atypical working time. The indicator aims to measure how many and which persons are more exposed to working at night. Working at night impacts on balancing work and family life and could lead to health problems.</p> <p>Nevertheless, some forms of working time arrangements can result from a personal choice and are not considered burdensome.</p> <p>Statistics on working time are needed to implement, monitor and evaluate policies and programmes dedicated to the balance of work and family life.</p>
Formula	$\frac{\text{Number of employed persons who usually work at night}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Work during the night:</i> The definitions of “night” vary considerably among countries, so that it is not easy to establish a strictly common basis for all. As defined for the EU-LFS, night work must be considered as work done during the usual sleeping hours. As foreseen by directive 2003/88/EC, the definition of usual sleeping hours can vary by country but, in any case, it should include hours between midnight and 5 a.m.</p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and it allows disaggregation by economic activity and demographic variables such as sex, age group, etc.</p> <p>The EU-LFS also provides information about atypical work such as work at night and its international harmonisation contributes to a better comparability.</p> <p>If an LFS is not available, other household surveys with an appropriate employment module may be used instead.</p>
Recommended metadata	It is recommended to make available metadata on the source (periodicity, breaks in series, etc.), on the reference period, on the population, job coverage (main job or all jobs) and the definition of night working hours and the frequency used to calculate usual work.

Short name	Night work (3b1)
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees); apprentices • Occupation (ISCO-08) • Full-time vs. part-time workers • Economic activity (ISIC) • Number of hours per week usually worked • Number of children • Age of youngest child <p>In particular countries with a significant share of employed persons holding more than one job should additionally provide information regarding employed persons usually working at night in their secondary job(s).</p>
Interpretation guidelines	<p>The frequency “usually” is relevant for this indicator but it is important to keep in mind that, in addition to the persons working usually at night, some others do it “occasionally”.</p> <p>Night work can have significant impact on the health of the workforce, disturbing effects on the body’s circadian rhythms, on sleep cycles, and also inducing sleep deprivation. This can cause psychological and emotional problems, including depression, stress and nervousness.</p> <p>In addition, night work has negative effects on family and social relationships. Night work can have a negative impact upon the work-life balance and can adversely affect physical as well as mental well-being.</p> <p>Community law directives contain more specific rules on night work for younger workers, for workers who are pregnant or breastfeeding, and for workers who have recently given birth.</p>
Relation to other indicators	<p>Night work, more common in so-called “24-hours” society, may be in relation with employment rate.</p> <p>To obtain a complete image of the atypical working times, this indicator should be analysed together with the indicator about work in the evening and on the weekend.</p> <p>The indicator should also be analysed together with indicators of Sub-dimension 3c: Balancing work and non-working life.</p>
International comparisons	<p>This indicator can be influenced by the distribution of the different sectors of economic activity in a country. Work at night is more frequent in hotels and restaurants, in transportation and storage, and in health and social</p>

Short name	Night work (3b1)
	work. For international comparisons, it is therefore recommended to additionally analyse the indicator by economic activity and occupation.
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate and disaggregate this indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Target population: employed persons who usually work at night (NIGHTWK=1). “Usually” is defined as working at nights at least half of the days worked in a reference period of four weeks preceding the end of the reference week. • SEX • AGE • NATIONAL (national and non-national) • FTPT • STAPRO • NACE3D (main categories) • ISCO4D • HWUSUAL
Further readings	<p>ILO, 1990: Night Work Convention, 1990 (No. 171), Convention concerning Night Work (Entry into force: 04 Jan 1995) Adoption: Geneva, 77th ILC session (26 Jun 1990) - Status: Up-to-date instrument (Technical Convention). Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C171</p> <p>ILO, 1990: Night Work Recommendation, 1990 (No. 178), Recommendation concerning Night Work. Adoption: Geneva, 77th ILC session (26 Jun 1990) - Status: Up-to-date instrument (Technical Convention). Available at: http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO:12100:P12100_INSTRUMENT_ID:312516</p> <p>Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time, Official Journal L 299, 18.11.2003, p. 9–19. Available at: http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=en&numdoc=32003L0088&model=guichett</p> <p>ILO, 2007: Decent Working Time: Balancing Workers’ Needs with Business Requirements. Geneva: International Labour Office 2007. Available at: http://www.ilo.org/travail/whatwedo/publications/WCMS_145391/lang--en/index.htm</p> <p>European Commission: Detailed report on the implementation by Member States of Directive 2003/88/EC concerning certain aspects of the organisation of working time (“The Working Time Directive”).</p>

Short name	Night work (3b1)
	<p data-bbox="564 248 1385 349">Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2010:1611:FIN:EN:PDF</p> <p data-bbox="480 409 1402 613">Niu S. et al., 2011: The effect of shift rotation on employee cortisol profile, sleep quality, fatigue, and attention level: a systematic review. In: Journal of Nursing Research, 19, –pp. 68-81. Available at: http://journals.lww.com/jnr-twna/Abstract/2011/03000/The_Effect_of_Shift_Rotation_on_Employee_Cortisol.10.aspx</p>

Short name	Evening work (3b2)
Name	Percentage of employed persons who usually work in the evening
Dimension and sub-dimension	3. Working hours and work-life balance <ul style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>Indicators measuring working time arrangements provide information about atypical working time. The indicator aims to measure how many and which persons are more exposed to working in the evening. Working in the evening impacts on balancing work and family life and could lead to health problems.</p> <p>Nevertheless, some forms of working time arrangements can result from a personal choice and are not considered burdensome.</p> <p>Statistics on working time are needed to implement, monitor and evaluate policies and programmes dedicated to the balance of work and family life.</p>
Formula	$\frac{\text{Number of employed persons who usually work in the evening}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Usually working in the evening</i> is defined as working in the evening at least half of the days worked in a reference period of four weeks preceding the end of the reference week. The definitions of “evening” vary considerably among countries so that it is not easy to establish a strictly common basis for all. As defined for the EU LFS, evening work must be considered to be work done after the usual hours of working time in this Member State, but before the usual sleeping hours (ref. directive 2003/88/EC). It should include hours between 6 p.m. and midnight.</p> <p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and it allows disaggregation by economic activity and demographic variables such as sex, age group, etc.</p> <p>The EU-LFS also provides information about atypical work as for example work in the evening and its international harmonisation contributes to a better comparability.</p> <p>If an LFS is not available other household surveys with an appropriate employment module may be used instead.</p>
Recommended metadata	<p>It is recommended to make available metadata on the source (periodicity, breaks in series, etc.), on the reference period and on the population and job coverage (main job or all jobs). Furthermore, the definition of what is considered as evening and as usual in the data source used should be</p>

Short name	Evening work (3b2)
	specified.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees); apprentices • Occupation (ISCO-08) • Full-time vs. part-time workers • Economic activity (ISIC) • Number of hours per week usually worked • Number of children • Age of youngest child <p>In particular countries with a significant share of employed persons holding more than one job should additionally provide information regarding employed persons usually working in the evening in their secondary job(s).</p>
Interpretation guidelines	<p>Working in the evening can have negative effects on the conciliation of work and family life, especially if there are children in the household. Nevertheless, for some persons, this specific working time arrangement can also mean more flexible working times and, in combination, better opportunities to combine work and family life.</p> <p>The frequency “usually” is relevant for this indicator but it’s important to keep in mind that, in addition to the persons working usually in the evening, some others do it “occasionally”.</p>
Relation to other indicators	<p>In order to obtain a complete image of the atypical working times, this indicator should be analysed together with the indicator about work at night and on the weekend.</p> <p>The indicator should also be analysed together with indicators of Sub-dimension 3c: Balancing work and non-working life.</p> <p>Work in the evening may be in relation with the employment rate of the country.</p>
International comparisons	<p>This indicator can be influenced by the distribution of the different sectors of economic activity in a country. Work in the evening is more frequent, e.g., in hotels and restaurants, transportation and storage, and health and social work. For international comparisons, it is therefore recommended to additionally analyse the indicator by economic activity and occupation.</p>
Recommended calculation in the EU-LFS or other international	<p>To calculate and disaggregate this indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Target population: employed persons who usually work in the evening (EVENWK=1); “Usually” is defined as working in the evenings at least

Short name	Evening work (3b2)
surveys	<p>half of the days worked in a reference period of four weeks preceding the end of the reference week.</p> <ul style="list-style-type: none"> • SEX • AGE • NATIONAL (national and non-national) • FTPT • STAPRO • NACE3D (main categories) • ISCO4D • HWUSUAL
Further readings	<p>Boulin, J.-Y., et al. (eds.), 2006: Decent working time: New trends, new issues. Geneva: International Labour Office. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/--publ/documents/publication/wcms_071859.pdf</p> <p>ILO, 1990: Night Work Convention, 1990 (No. 171), Convention concerning Night Work (Entry into force: 04 Jan 1995) Adoption: Geneva, 77th ILC session (26 Jun 1990) - Status: Up-to-date instrument (Technical Convention). Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C171</p> <p>ILO, 1990: Night Work Recommendation, 1990 (No. 178), Recommendation concerning Night Work. Adoption: Geneva, 77th ILC session (26 Jun 1990) - Status: Up-to-date instrument (Technical Convention). Available at: http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO:12100:P12100_INSTRUMENT_ID:312516</p> <p>Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time, Official Journal L 299, 18.11.2003, p. 9–19. Available at: http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=en&numdoc=32003L0088&model=guichett</p> <p>ILO, 2007: Decent Working Time: Balancing Workers' Needs with Business Requirements. Geneva: International Labour Office 2007. Available at: http://www.ilo.org/travail/whatwedo/publications/WCMS_145391/lang--en/index.htm</p>

Short name	Weekend work (3b3)
Name	Percentage of employed persons who usually work on the weekend
Dimension and sub-dimension	<p>3. Working hours and work-life balance</p> <ul style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>Indicators measuring working time arrangements provide information about atypical working time. The indicator aims to measure how many and which persons are more exposed to working during the weekend. Working during the weekends impacts on balancing work and family life.</p> <p>Nevertheless, some forms of working time arrangements can result from a personal choice and are not considered burdensome.</p> <p>Statistics on working time are needed to implement, monitor and evaluate policies and programmes dedicated to the balance of work and family life.</p>
Formula	<p>Percentage of employed persons who usually work on the weekend. The definition of the “weekend” should be according to the national legislations. “Usually” is defined as working at least two days on the weekend in a reference period of four weeks preceding the end of the reference week.</p> $\frac{\text{Number of employed persons who usually work on the weekend}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Usually working on the weekend:</i> The definition of the “weekend” should be according to the national legislation. “Usually” is defined as working at least two days on the weekend in a reference period of four weeks preceding the end of the reference week.</p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and it allows disaggregation by economic activity and demographic variables, such as sex, age group, etc.</p> <p>The EU-LFS also provides information about atypical working time as for example working at Saturdays or Sundays and its international harmonisation contributes to a better comparability.</p> <p>If an LFS is not available, other household surveys with an appropriate employment module may be used instead.</p>
Recommended metadata	It is recommended to make available metadata on the source (periodicity, breaks in series, etc.), on the reference period, on the population, job coverage (main job or all jobs) and the definition of weekend work and the

Short name	Weekend work (3b3)
	frequency used to calculate usual work. If a minimum of hours worked on the weekend are required it should also be mentioned.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Day worked (Saturday, Sunday, both) • Number of hours worked on the weekend • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees); apprentices • Occupation (ISCO-08) • Economic activity (ISIC) • Full-time vs. part-time workers • Number of children • Age of youngest child <p>In particular countries with a significant share of employed persons holding more than one job should additionally provide information regarding employed persons usually working on the weekend in their secondary job(s).</p>
Interpretation guidelines	<p>Working on the weekend might have an impact on the family life and the social life as well as on the organization of the leisure time and the work-life balance.</p> <p>This form of working time arrangement can be a personal choice and an opportunity to conciliate work and family life which means there are also positive effects.</p> <p>It is important to differentiate between work on Saturdays, Sundays or both days as it might affect the organization of weekend in a different way.</p>
Relation to other indicators	<p>This indicator should be analysed together with the other indicators of working time arrangements.</p> <p>The indicator can also be analysed together with indicators of Sub-dimension 3c: Work-life balance</p>
International comparisons	<p>This indicator could be influenced by the distribution of the economic activity in the countries. In some sectors (hotel industry, retail business, transportation and storage, health and social work for example), work on the weekend is very common.</p> <p>The national law relating to the working times and the retail business (opening hours) might also influence the indicator in international comparison.</p>
Recommended	To calculate and disaggregate this indicator, it is recommended to use the

Short name	Weekend work (3b3)
<p>calculation in the EU-LFS or other international surveys</p>	<p>following EU-LFS variables:</p> <ul style="list-style-type: none"> • Target population: employed persons who usually work on the weekend (SATWK=1 or SUNWK=1); “Usually” is defined as working at least two days on the weekend in a reference period of four weeks preceding the end of the reference week. • SEX • AGE • NATIONAL (national and non-national) • FTPT • STAPRO • NACE3D (main categories) • ISCO4D • HWUSUAL
<p>Further readings</p>	<p>ILO, 2004: Information Sheet No. WT-10: Weekend work. Available at: http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_170725.pdf</p> <p>Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time, Official Journal L 299, 18.11.2003, p. 9–19. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0088:EN:NOT</p> <p>European Commission, 2010: Detailed report on the implementation by Member States of the Working Times Directive, 2010. Available at: http://ec.europa.eu/social/BlobServlet?docId=6426&langId=en</p>

Short name	Flexible work schedule (3b4)
Name	Percentage of employees with a flexible work schedule
Dimension and sub-dimension	<p>3. Working hours and work-life balance</p> <ul style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>The indicator of flexible working hours provides information about the flexibility to choose working times and it focuses on the flexibility for the employee rather than the employer.</p> <p>There are different types of flexible work schedules and it is useful to distinguish the different forms: employees with fully fixed starting and finishing times, employees with some flexibility and employees with full flexibility in determining their starting and finishing times. More research and experiences are still needed for this indicator.</p>
Formula	$\frac{\text{Number of employees without fixed starting and finishing times}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p><i>Work schedules:</i> the choice of the variables depends on their availability in the chosen questionnaire (for example: working times: fix/not fix; block times: yes/no; annual / weekly / daily working time).</p> <p><i>Employees (age 15+):</i> Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>The European Working Condition Survey (EWCS) or a Labour Force Survey (LFS) are recommended. These data sources allow disaggregation by different variables (demographic variables, economic activity, etc.).</p> <p>Similar data are available, also for some non-European countries, from the International Social Survey Programme (ISSP; module on work organization 2005, 2015).</p> <p>The EU-LFS ad-hoc modules 2004 on “work organisation and working time arrangements” and 2010 on “reconciliation of work and family life” provide some information about flexible work schedules (although different operationalisations are possible). There will presumably be a repetition of the 2010 module in 2018 and a module on “Work organisation and working time arrangements” in 2019.</p> <p>If there is no information about work schedules from a national LFS or the EWCS, other household surveys with an appropriate employment module may be used instead.</p>
Recommended metadata	It is recommended to make available metadata on the source (periodicity, breaks in series, etc.), on the reference period, on the population and job

Short name	Flexible work schedule (3b4)
	coverage (main job or all jobs) and on the type of flexibility in work schedules.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Economic activity (ISIC) • Occupation (ISCO-08 major group 1) • Full-time vs. part-time workers • Working hours • Number of children • Age of youngest child
Interpretation guidelines	<p>Regarding the conciliation between work and private life, a higher flexibility in organizing working times can be positive for the employees.</p> <p>However, the flexibility does not only depend on the given work schedule but also on the actual amount of work and the employers' interests also influence the real flexibility.</p> <p>Some forms of flexibility can also lead to risks to the health of workers (see EWCS: "Flexible forms of work and employment can lead to specific health risks").</p> <p>In certain jobs, the working hours are irregular because of the type of activity (for example hotel industry) and not because of flexible working hours. Flexible working hours have to be considered as the autonomy of employees to decide about their hours.</p>
Relation to other indicators	This indicator should be analysed together with the other indicators of the sub-dimension "working time arrangements" (3b), indicators of earnings (2a1 or 2a3) and the working hours (3a1, 3a2).
International comparisons	<p>The flexible work schedules might be influenced by the distribution of the economic activity and the distribution of occupations in the countries.</p> <p>Cultural and social factors might also have an impact on the kind of contract and the relation between employers and employees.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>The information about flexible work schedules in the LFS is covered in ad-hoc modules 2004, 2010 and presumably in 2018 and 2019. The intention is to include the variable in the core EU LFS in the near future.</p> <p>One variable originally prepared for the module 2015 provides information on working time arrangements (VARIWT):</p> <ul style="list-style-type: none"> • Working times are fully determined by employer or organization • Working times can be adapted with certain restrictions • Working times are fully determined by worker

Short name	Flexible work schedule (3b4)
	<p>European Working Conditions Survey covers the variable as well:</p> <p>Q37: Do you work... (same number of hours every day; same number of days every week; same number of hours every week; fixed starting and finishing times; on call; shifts)</p> <p>Q39: How are your working time arrangements set?</p> <p>A similar variable is included in the International Social Survey Programme (ISSP; module on work organization 2005, 2015).</p>
Further readings	<p>Eurofound, 2010: Comparative analysis of working time in the European Union. Available at: http://www.eurofound.europa.eu/docs/ewco/tn0803046s/tn0803046s.pdf</p> <p>Eurofound, 2008: Employment security and employability: A contribution to the flexicurity debate. Available at: http://www.eurofound.europa.eu/publications/htmlfiles/ef0836.htm</p> <p>Eurofound, 2011: Flexible working time arrangements and gender equality. Available at: http://www.eurofound.europa.eu/ewco/2011/01/EU11010311.htm</p> <p>ILO: International Classification by Status in Employment (ICSE). Available at: http://laborsta.ilo.org/applv8/data/icsee.html</p> <p>EWCS, 2003: Flexible forms of work and employment can lead to specific health risks. Available at: http://www.eurofound.europa.eu/ewco/2003/10/DE0310NU01.htm</p>

Sub-dimension 3c: Work-life balance

Short name	Employment rate of mothers and fathers (3c1)
Name	Percentage of women, resp. men aged 20-49 years who are employed with and without children under compulsory school age
Dimension and sub-dimension	<p>3. Working hours and work-life balance</p> <p>a. Working hours</p> <p>b. Working time arrangements</p> <p>c. Work-life balance</p>
Measurement objectives	<p>The balance between work and family life is difficult for parents with young children. Having children affects the position of people in the labour market. It is important to know what different impact childcare responsibilities have on the employment rates of both sexes.</p> <p>The indicator tries to compares the distribution of care responsibilities of mothers and fathers. A lower employment rate of mothers as compared to fathers indicates that mothers more frequently stop work due to family responsibilities and may potentially face disadvantages regarding different aspects of quality of employment (e.g., income, career prospects). The comparison of mothers and fathers to women and men without children under compulsory school age gives an impression of the share of mothers and fathers who resign from employment for a certain time in order to take care of their family, which will potentially be accompanied by disadvantages.</p> <p>International agreements and conventions:</p> <ul style="list-style-type: none"> • ILO Convention No.156- Workers with Family Responsibilities, 1981 • ILO Convention No.175- Part-Time Work Convention, 1994
Formula	<p>This indicator refers to the proportion of women and men aged 20-49 years with children below compulsory school age who are in employment. It is the ratio between the two rates and thus compares the respective rates of women and men. The indicator should be calculated as:</p> $\frac{\text{Employment rate of women who have children under compulsory school age}}{\text{Employment rate of men who have children under compulsory school age}}$ <p>Where the employment rate of women who have children under compulsory school age is calculated as:</p>

Short name	Employment rate of mothers and fathers (3c1)
	<p style="text-align: center;"> Number of employed women <u>who have children under compulsory school age</u> Total number of women who have children under compulsory school age </p> <p style="text-align: center;"> $\times 100$ </p> <p>And the employment rate of men who have children under compulsory school age is calculated as:</p> <p style="text-align: center;"> Number of employed men <u>who have children under compulsory school age</u> Total number of men who have children under compulsory school age </p> <p style="text-align: center;"> $\times 100$ </p>
Concepts and definitions	<p><i>Employed persons:</i> Employment defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p> <p><i>Children living in the household by age</i></p> <p>The age interval for this indicator should be the working persons aged 20-49. The age limits should be considered in each country according to the different laws in each country.</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and it allows disaggregation by economic activity and demographic variables such as sex, age group, etc.</p> <p>The EU-LFS also provides information on the number and age of children living households. Its international harmonisation has the additional advantage of a better comparability between countries.</p> <p>If not available, other household surveys with an employment module.</p>
Recommended metadata	<p>It is recommended to make available metadata on the source (periodicity, breaks in series, etc.), on the reference period, on the population, job coverage (main job or all jobs). This indicator should be disaggregated by sex, economic activity and by geographical area and social/ethnic groups in order to portray any differences of parents from different backgrounds.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Full-time vs. part-time workers • Educational attainment • Age • Marital status • Number of children • Age of youngest child

Short name	Employment rate of mothers and fathers (3c1)
	<ul style="list-style-type: none"> • Economic activity (ISIC) • Occupational group (ISCO) • Income
<p>Interpretation guidelines</p>	<p>The ratio of the employment rates for women and men with children under compulsory school age reflects the maximum level that employed women and men with children can reach: a higher ratio indicates good conditions for working women and a good balance between work and non-working life. However, the higher ratio might also be attributed to economic difficulty, which forces women to return to work despite inconvenient conditions.</p> <p>In many cases it is sufficient (and eases interpretation) to compare the employment rate of men with children under compulsory school age to the employment rate of men under compulsory school age without constructing a ratio of the two rates. These employment rates should also be compared to the employment rate of mothers who do not have children under the compulsory school age and the employment rate of fathers who do not have children under compulsory school age.</p>
<p>Relation to other indicators</p>	<p>It would be informative to analyse this indicator together with data on GDP, labour force participation rate and unemployment rate.</p> <p>The indicator should also be analysed together with indicators of Dimension 3 (Working time and work-life balance).</p>
<p>International comparisons</p>	<p>For each indicator to be comparable across time and countries, it is crucial that countries use similar concepts and methods in their calculation. The age bands for under compulsory school education vary from country to country.</p>
<p>Recommended calculation in the EU-LFS or other international surveys</p>	<p>To calculate and disaggregate this indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Target population: employed persons (HHTYPE = 1 and WSTATOR in (1, 2)) • SEX • AGE, below compulsory school age • FTPT • STAPRO • ISCO4D
<p>Further readings</p>	<p>ILO, 1981: ILO Convention No.156- Workers with Family Responsibilities, 1981. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312301:NO</p> <p>ILO, 1994: ILO Convention No.175- Part-Time Work Convention, 1994. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::</p>

Short name	Employment rate of mothers and fathers (3c1)
	NO:12100:P12100_ILO_CODE:C175

Short name	Possibility to work at home (3c2)
Name	Percentage of employed persons whose working arrangements offer the possibility to work at home
Dimension and sub-dimension	3. Working hours and work-life balance <ol style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>The possibility to work at home is the indicator of flexibility in the organization of working time.</p> <p>International agreements and conventions:</p> <ul style="list-style-type: none"> • Home Work Convention, 1996, No.177
Formula	$\frac{\text{Number of employed persons whose working arrangements offer the possibility to work at home}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Possibility to work at home:</i> The possibility to work at home means doing any work related to the person's current jobs at home but a least one hour in a reference week (including regular hours and overtime). The actual homework might be used as a proxy if the possibility to work at home is not available.</p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and it allows disaggregation by economic activity and demographic variables such as sex, age group, etc.</p> <p>The EU-LFS only provides information on persons in employment actually working at home. In the absence of corresponding data from a Labour Force Survey it can also be retrieved from another Social Survey.</p>
Recommended metadata	<p>For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks ins series, etc.), reference period and population coverage in provided. Breakdowns of the indicator by component groups such as sex, industries, occupational group, and status in employment provides measures by which to evaluate the relative differences in percentage of employed persons whose working arrangements offer the possibility to work at home.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Economic activity (ISIC) • Occupational group (ISCO) • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Full-time vs. part-time workers

Short name	Possibility to work at home (3c2)
	<ul style="list-style-type: none"> • Educational attainment • Age of youngest child • Number of children • Sex
Interpretation guidelines	<p>Balance between work and daily life is a challenge that all workers face. The possibility to work at home provides an opportunity for employed persons to work hours that are compatible with their other commitments (e.g., child care) by allowing them to determine their own work schedule.</p> <p>However, working from home can also be problematic. The possibility to work at home may easily result in overwork. It is also easily translated into blurring boundaries between work and leisure, which may have a negative impact on non-working life. Another issue that may arise is constant “contactability” (contact with colleagues).</p> <p>For some, working at home can have some benefits; for example, it enables parents to spend more time with their children or have more time for themselves. Conversely, working at home often reduces opportunities to partake in collective activities.</p> <p>The inability to balance work and family responsibilities may have a negative effect on individual and family health and well-being.</p>
Relation to other indicators	<p>The indicator should be analysed together with data on GDP, labour force participation rate and unemployment rate, hours of work.</p> <p>The indicator should also be analysed together with indicators of the Dimension 3 (Working time and work-life balance).</p>
International comparisons	<p>For each indicator to be comparable across time and countries, it is crucial that countries use similar concepts and methods in their calculation.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate and disaggregate this indicator it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Target population: employed persons (HHTYPE = 1 and WSTATOR in (1, 2)) • Person usually or sometimes works at home (HOMEWK=1,2) • SEX • AGE • FTPT • STAPRO • ISCO4D
Further readings	<p>ILO, 1996: Home Work Convention, 1996, No.177. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C177</p>

Short name	Possibility to work at home (3c2)
	<p data-bbox="481 250 1369 353">European Commission, 2009: Flexible working time arrangements and gender equality, European Commission. Available at: http://ec.europa.eu/social/BlobServlet?docId=6182&langId=en</p> <p data-bbox="481 407 1369 542">Eurostat, 2009: Reconciliation between work, private and family life in the European Union. Available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-78-09-908/EN/KS-78-09-908-EN.PDF</p> <p data-bbox="481 595 1184 667">OECD, 2014: OECD Family Database, OECD, Paris. Available at: www.oecd.org/social/family/database</p>

Short name	Commuting time (3c3)
Name	Mean duration of commuting time between work and home (one way)
Dimension and sub-dimension	3. Working hours and work-life balance <ol style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	Being employed not only involves the time spent at the workplace, but often also considerable time spent commuting. The indicator provides an estimate for the usual time spent to get from home to the place of work.
Formula	The average daily time in minutes employed persons spend commuting from home to work one way.
Concepts and definitions	<p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p> <p><i>One way commuting time from home to main job</i></p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and it allows disaggregation by economic activity and demographic variables such as sex, age group, etc.</p> <p>In the absence of Labour Force Survey records, data from Social Surveys could be used or through a mobility survey or other household survey. In particular, Time Use Surveys can be a suitable data source, as they usually provide detailed information on commuting time.</p>
Recommended metadata	For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period and population coverage are provided. Breakdowns of the indicator by component groups such as sex, industries, occupational group, and status in employment provides measures by which to evaluate the relative differences in mean duration of commuting time between work and home.
Recommended disaggregation	<ul style="list-style-type: none"> • Region • Degree of urbanisation • Economic activity (ISIC) • Occupation (ISCO) • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Full-time vs. part-time workers • Sex • Mode of transport
Interpretation guidelines	For people with jobs outside of the home, travel to and from the workplace can extend the working day and shorten leisure and family time. Furthermore, commuting time between work and home can also be stressful, tiring and expensive.

Short name	Commuting time (3c3)
Relation to other indicators	<p>It would be informative to analyse this indicator together with data on GDP, labour force participation rate and unemployment rate.</p> <p>The indicator should also be analysed together with indicators of the Dimension 3 (Working time and work-life balance).</p>
International comparisons	<p>For each indicator to be comparable across time and countries, it is crucial that countries use similar concepts and methods in their calculation.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>The EU-LFS does currently not cover commuting time. A variable on commuting time will probably be included in the ad-hoc module 2019 on work organization and working time arrangements.</p>
Further readings	<p>ONS, 2014: Commuting and Personal Well-being, 2014. Available at: http://www.ons.gov.uk/ons/rel/well-being/measuring-national-well-being/commuting-and-personal-well-being--2014/art-commuting-and-personal-well-being.html</p> <p>Roberts, J, R. Hodgson, and P. Dolan, 2009: It's driving her mad: gender differences in the effects of commuting on psychological well-being. In: Journal of Health Economics 30, pp. 1064-76.</p> <p>Stutzer, A and B. Frey, B., 2008: Stress that doesn't pay: the commuting paradox. In. Scandinavian Journal of Economics 110, pp. 339-366.</p>

Short name	Care leave entitlement (3c4)
Name	Percentage of employed persons entitled to leave for care responsibilities for children or adults
Dimension and sub-dimension	3. Working hours and work-life balance <ul style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>This indicator is designed to give information on employed persons entitled to get additional paid leave in order to meet their care responsibilities for children or dependent adults.</p> <p>The purpose of this indicator is to assess the prevalence of extra paid rights for care responsibilities in order to facilitate the reconciliation between care responsibilities and work.</p>
Formula	$\frac{\text{Number of employed persons entitled to leave for care responsibilities for children or adults}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Entitlement to additional leave for care responsibilities:</i> Care includes all care responsibilities for spouse, own children (up to 15) and parents who need care because of disability or illness. Care leave should be included regardless of whether the employer continues to pay the wage or salary, whether (parts of) the wage or salary paid as a social benefit or whether the care leave is unpaid (see recommended breakdowns).</p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits to estimate the number of employed persons and it allows disaggregation by economic activity and demographic variables such as sex, age group, etc.</p> <p>In the EU, for 2010 and 2018, the EU LFS provides corresponding information. In the absence of Labour Force Survey records, some of the data can also be obtained from the administrative data on child care.</p> <p>Data from labour force surveys should be used for the denominator of the indicator.</p>
Recommended metadata	<p>For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks ins series, etc.), reference period and population coverage is provided. Breakdowns of the indicator by component groups such as sex, age, industries and occupation should be added.</p> <p>Background information on national legal regulations of care leave</p>

Short name	Care leave entitlement (3c4)
	entitlements or if and how agreements on industrial or enterprise level are made.
Recommended disaggregation	<ul style="list-style-type: none"> • Number of days of additional leave • Continued payment of (parts of) wage or salary by employer or as social benefit • Duration of continued payment of wage or salary • Level of continued payment of wage or salary • Entitlement by law, agreement etc. • Leave on a full- or part-time basis • Economic activity (ISIC) • Occupational group (ISCO) • Full-time vs. part-time workers • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees)
Interpretation guidelines	<p>Paid leave can help employed persons balance the demands of work and family.</p> <p>Additional paid leave is essential for working women and men to fulfil care responsibilities and at the same time stay fully in employment, pursue a professional career, have a sufficient income and also meet personal needs like recovery. It is important for the quality of family life.</p> <p>A high ratio indicates favourable conditions for employed persons and a good basis for the reconciliation between work and non-working life.</p>
Relation to other indicators	<p>In order to assess the impact of changes in this indicator on labour market, it is important to analyse the trends together with the gender specific labour force participation, employment rate and prevalence of part-time work especially among women.</p> <p>The indicator should also be analysed together with the indicators of Dimension 3 (Working hours and work-life balance).</p>
International comparisons	<p>Nationally different ways of regulating additional leave have to be known for international comparisons. Also the prevalence of part-time work or overall flexibility of working time regimes has to be taken into account.</p> <p>In general, for each indicator to be comparable across time and countries, it is crucial that countries use similar concepts and methods in their calculation. In particular, it is important that countries use data that are similar in terms of worker.</p>
Recommended calculation in the EU-LFS or other international	<p>To calculate and disaggregate this indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Target population: employed persons (HHTYPE = 1 and WSTATOR in (1, 2))

Short name	Care leave entitlement (3c4)
surveys	<ul style="list-style-type: none"> • General possibility to take days of for family reasons (POSORGWT=1); only in 2010 • For further breakdowns FTPT (part-time work), ISCO4D (occupation)
Further readings	<p>ILO, 1981: ILO Convention: Workers with Family Responsibilities, 1981(No. 156). Available at: http://www.ilo.org/gender/Informationresources/Publications/WCMS_114192/lang--en/index.htm</p> <p>UN, 1989: The UN Convention on the Rights of the Child</p>

Short name	Parental leave (3c5)
Name	Percentage of parents with a job, who are currently on parental leave.
Dimension and sub-dimension	<p>3. Working hours and work-life balance</p> <p>a. Working hours</p> <p>b. Working time arrangements</p> <p>c. Work-life balance</p>
Measurement objectives	<p>Assess the share of parents having previously worked in their job who use the possibility to take parental leave in order to be able to take care of a recently born child without completely dropping out of employment. Parental leave refers to longer periods of leave with the right to return to one's job that is normally taken after maternity and paternity leave, respectively.</p> <p>National legislation and statistical practices with regard to parental leave vary greatly among countries. It may be taken by one or both parents and in the latter case mostly is done in a consecutive manner. Mostly there is a defined maximal period for that a leave can be taken. Normally a benefit is paid to compensate for the loss of salary or income from employment during that time.</p> <p>International agreements and conventions:</p> <ul style="list-style-type: none"> • The Workers with Family Responsibilities Convention, 1981 (No. 156). • The Workers with Family Responsibilities Recommendation, 1981 (No. 165). • Maternity Protection Recommendation, 2000 (No. 191). • The Social Security (Minimum Standards) Convention, 1952 (No. 102) • The Workers with Family Responsibilities Convention, 1981 (No. 156)
Formula	<p>Percentage of parents aged 20 to 49 years, who are in employment but are in full-time parental leave during the reference period.</p> $\frac{\text{Number of parents with a job (aged 20 - 49) receiving parental leave during the reference week}}{\text{Total number of parents with a job (aged 20 - 49)}} \times 100$
Concepts and definitions	<p><i>Currently taking parental leave:</i> Parental leave is defined according to national legislation and covered by the indicator irrespective of whether the state or employer or some agency pays a compensation of benefit for it.</p> <p><i>Persons with a job:</i> Employed persons defined according to the resolution of the 19th ICLS in 2013 (see glossary) plus persons with a job in which they have worked previously and to which they have a guarantee to return to following the end of the leave.</p> <p>The age interval for this indicator should be the working parents (e.g., persons aged 20-49 years). The age limits should be considered in each</p>

Short name	Parental leave (3c5)
	country according to the different laws in each country.
Recommended data source(s)	<p>Administrative data on parental leave. Social insurance provides comprehensive information for the numerator of this indicator). When reliable administrative data are available, these should also be considered as a data source for the denominator.</p> <p>In the absence of reliable administrative records, data from a Labour Force Survey, social survey or other household surveys could be used.</p> <p>The EU-LFS provides the information that persons in employment do not work because of parental leave. Its international harmonisation has the advantage of better comparability between countries.</p>
Recommended metadata	<p>For this indicator as a minimum it is recommended that metadata on the source (periodicity, breaks ins series, etc.), reference period and population coverage in provided.</p> <p>Detailed information on the national regulations concerning parental leave like eligibility, length etc. has to be documented as well as changes in the regulations over time. Metadata should also specify whether the person on leave has the right to return to the same job or job type or are just guaranteed employment at their previous employer.</p> <p>Breakdowns of the indicator by component groups such as sex, industries, occupational group, and status in employment provides measures by which to evaluate the relative differences in percentage of parents in parental leave.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Parental leave with or without benefits • Full-time or part-time parental leave • Length of parental leave • Right to return to the same job or type of job vs. right to return to the same employer • Sex • Sub-age groups • Economic activity (ISIC) • Occupational group (ISCO) • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Full-time vs. part-time workers • Job tenure
Interpretation guidelines	Parental leave is the possibility available to either parent of obtaining leave of absence, without relinquishing employment and with rights resulting from employment being safeguarded, within a period immediately following maternity leave.

Short name	Parental leave (3c5)
	<p>The use of parental leave interacts with the national specification of maternity (paternity). For sound interpretation, both have to be considered together.</p> <p>Maternity leave aims to protect working women during their pregnancy and recovery from childbirth. In contrast parental leave refers to a longer term leave for one or both parents, allowing them to take care of an infant or young child, usually following the maternity or paternity leave. Parental leave supports employed persons <i>in having children, without it being necessary for parents to give up their employment or experience a drastic decrease in their standard of living</i>. Thus, it supports the overall objectives of an improved reconciliation of work and family life, increased labour market participation of women and gender equality.</p> <p>The systems of parental leave differ significantly from one country to another. There is considerable variation concerning eligibility, the maximum duration, the value and duration of payment, flexibility in its use, e.g., between both parents or concerning the age range of the child.</p> <p>An increasing share in the indicator corresponds to an improvement of the quality of employment in this dimension. A lower value can indicate difficulties in balancing or reconciling work-family responsibilities which might have a negative effect on individual and family health and well-being.</p>
Relation to other indicators	<p>It would be informative to analyse this indicator together with data on the gender specific employment rate and labour force participation rate and prevalence of part-time employment among employed women.</p> <p>The indicator should also be analysed together with the indicators of Dimension 3 (Working hours and work life balance).</p>
International comparisons	<p>The various national regulations concerning parental leave are the essential background for comparisons. Details of the regulations (see general interpretation guidelines) assessed in its effects on share and length of the usage. The length of the existence of parental leave rights in a country has an additional effect on its prevalence.</p> <p>In general, for each indicator to be comparable across time and countries, it is crucial that countries use similar concepts and methods in their calculation.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate and disaggregate this indicator, it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Target population: WSTATOR = 2 and NOWKREAS=6 • Break downs: FTPT (part-time), STAPRO (self-employed, employee,...), ISCO4D (occupation)
Further readings	ILO, 1981: The Workers with Family Responsibilities Convention, 1981 (No.

Short name	Parental leave (3c5)
	<p>156). Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312301:NO</p> <p>ILO, 1981: The Workers with Family Responsibilities Recommendation, 1981 (No. 165). Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312503:NO</p> <p>ILO, 2000: Maternity Protection Recommendation, 2000 (No. 191). Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312529:NO</p> <p>ILO, 2010: Maternity at work: A review of national legislation. Findings from the ILO's Conditions of Work and Employment Database. Second edition, 2010.</p>

Short name	Child care use (3cx) (experimental)
Name	Percentage of employed parents with children under compulsory school age using child care
Dimension and sub-dimension	3. Working hours and work-life balance <ol style="list-style-type: none"> a. Working hours b. Working time arrangements c. Work-life balance
Measurement objectives	<p>This indicator is designed to give information on employed parents who are currently using child care. Finding appropriate care for their children while working is a problem faced by many parents in employment. Provision of child care is an important foundation for reconciling work and family life.</p> <p>The purpose of this indicator is to assess the extent to which child care can be used by employed persons.</p> <p>International agreements and conventions:</p> <ul style="list-style-type: none"> • ILO Convention: Workers with Family Responsibilities, 1981(No. 156) • The UN Convention on the Rights of the Child
Formula	$\frac{\text{Number of households with at least one employed parent with access to child care and with children under compulsory school age}}{\text{Total number of households with at least one employed parent and with children under compulsory school age}} \times 100$ <p>If no suitable data for the rate are available, alternatively the ratio between number of places in child care facilities and the number of children in the age group could be calculated.</p>
Concepts and definitions	<p><i>Employed persons:</i> Employment defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p> <p><i>Household</i></p> <p><i>Child care:</i> This indicator measures the actual use of childcare by calculating the percentage of employed persons with children under compulsory school age (according to national circumstances).</p> <p>Three types of child care from outside the household can be distinguished :</p> <ul style="list-style-type: none"> • Family (informal) childcare from parents, grandparents or other family members living outside the household • Non-family (formal) childcare by: <ul style="list-style-type: none"> - A nanny, childminder or babysitter in the child's home. - A childcare centre. Their set-up differs considerably from country to country, as well as the age groups of the children attending. The centres can be called day-care centres, nurseries, crèches,

Short name	Child care use (3cx) (experimental)
	<p>kindergarten, pre-primary school, nursery school or early childhood education centre.</p> <p>Households that use external child care support, where at least one parent is in employment and one child under compulsory school age.</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits one to estimate the number of employed persons and it allows disaggregation by economic activity and demographic variables such as sex, age group, etc.</p> <p>For the EU the LFS provides for 2010 information on the use of child care facilities. The Statistics on Income and Living Conditions (SILC) provide information on the use (hours) of childcare in institutions, from child-minders or other relatives on a yearly basis but measures labour status only as self-defined economic status not in compliance with the ILO concept. The international harmonisation of EU-LFS and -SILC has the additional advantage of a better comparability between countries.</p> <p>Data can also be obtained from household surveys and censuses which include questions on child care. In the absence of the above, some of the data can also be obtained from the administrative data on child care.</p>
Recommended metadata	<p>For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks ins series, etc.), reference period and population coverage and the forms of external child care covered is provided.</p> <p>The existence of national legislation that supports external child care or even gives the right for child care to parents should be documented.</p> <p>Breakdowns of the indicator by component groups such as sex, industries, occupational group, and status in employment should be added.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Form of external child care • Marital status or parents • Number of children • Age of youngest child • One or both parents in employment • One or both parents in part-time employment • Household income • Region, degree of urbanisation
Interpretation guidelines	<p>Finding a suitable balance between work and life is a challenge for all persons in employment but especially for parents. Child care is recognised as a critical factor when meeting full-time employment. In most countries, looking after children was traditionally considered to be a responsibility of women. With this increasing labour market participation of women they are more and more confronted with conflicting interests. Access to child care</p>

Short name	Child care use (3cx) (experimental)
	<p>can help parents, particularly mothers, to ensure continuity in their careers. Access to child care increases women's full access to employment and gender equality.</p> <p>This indicator measures the actual use of child care. To measure the complete offer of theoretically accessible child care services is rather difficult because the individual understanding of accessibility limited by distance, quality or costs may be different. The existence of suitable offers or eligibility criteria may not be known by households. The reasons for not using an existing infrastructure might be quite different. Actually helpful for reconciliation is only used child care.</p> <p>A higher percentage of access to child care indicates good conditions for working parents and a feasible reconciliation between work and family life. However, the higher ratio might also be attributed to economic difficulties of a household, which forces parents to return to work despite demanding care responsibilities or the wish to concentrate on it by one of the parents.</p>
Relation to other indicators	<p>In order to assess the impact of changes in this indicator on the labour market, it is important to analyse the trends together with data on GDP, labour force participation rate and unemployment rate, hours of work.</p> <p>The indicator should also be analysed together with the other indicators of this dimension.</p>
International comparisons	<p>For each indicator to be comparable across time and countries, it is crucial that countries use similar concepts and methods in their calculation. In particular, it is important that countries use data that are similar in terms of worker.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>EU LFS does not provide data on access to child care. For 2010 it only collects data on the use of centre based child care (CHILDCAR) or if the lack of suitable facilities is an obstacle to labour market participation (NEEDCARE).</p>
Further readings	<p>Hein, C. and N. Cassirer, 2010: Workplace solution for childcare. Geneva: ILO 2010.</p> <p>ILO, 1981: ILO Convention: Workers with Family Responsibilities, 1981(No. 156). Available at: http://www.ilo.org/gender/Informationresources/Publications/WCMS_114192/lang--en/index.htm</p> <p>UN, 1989: The UN Convention on the Rights of the Child.</p>

DIMENSION 4: SECURITY OF EMPLOYMENT AND SOCIAL PROTECTION**Sub-dimension 4a: Security of employment**

Short name	Fixed-term contracts (4a1)
Name	Percentage of employed persons aged 25 years and older with a fixed-term contract
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	This indicator measures the share of employed persons whose employment is reduced by the fact that they have a fixed-term employment contract. It informs about the part of employees who are at risk to have to look for a new job after a certain time. This situation can lead to stress, insecurity and financial risk.
Formula	$\frac{\text{Number of employed persons with a fixed - term contract}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<i>Status in employment</i> (according to the International Classification of Status in Employment (ICSE-93)) (see glossary) <i>Fixed-term contract</i> (see glossary). <i>Employed persons</i> : Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary). The lower age boundary is 25 years. Nevertheless, it is recommended to also consider the 15- to 24-year olds as separate group (see interpretation guidelines). The indicator refers to the main job, i.e., the job with the largest weekly number of hours usually worked.
Recommended data source(s)	A household-based Labour Force Survey (LFS) is the recommended data source, as it permits to estimate the number of employed persons and generally allows disaggregations by economic activity and demographic variables such as sex, age group, etc. The concept of fixed-term contracts is best captured through an LFS. The international harmonisation of EU-LFS contributes to better international comparability. If an LFS is not available other household surveys with an appropriate employment module may be used instead.
Recommended metadata	For this indicator, it is recommended that, as a minimum, metadata on the source (periodicity, breaks in series, etc.), reference period, population coverage, geographic coverage, and definition of job tenure, including operational definition, are made available.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Duration of contract

Short name	Fixed-term contracts (4a1)
	<ul style="list-style-type: none"> • Full-time / part-time • Reason for having a temporary job • Occupation (ISCO) • Economic activity (ISIC) • Job tenure
Interpretation guidelines	<p>Fixed-term contracts can be a factor of risk, related to stress and insecurity and financial risk. However, a permanent position can also be perceived as insecure depending on the situation, for example during a crisis or when some jobs will be cut in the future.</p> <p>The distinction between two target groups (15 to 24 years; 25 years and older) is important as the first group consists of a big part of persons in vocational training and in the education process, apprentices and students having a holiday job. This may reflect a higher share of fixed-term contracts and maybe also a personal choice to have a fixed-term contract.</p> <p>As a fixed-term contract can differ between some days and several years, it is important to consider the duration of the contract as an important breakdown. The duration may influence the job insecurity.</p>
Relation to other indicators	<p>This indicator should be analysed in combination with the perceived job security (4a5).</p> <p>It may also be interesting to investigate the reason why the person has a fixed-term contract, as some persons may have a personal preference to have a fixed-term contract.</p> <p>Number of persons who found their job through a temporary employment agency and are paid by this agency (4a6)</p> <p>The economic situation as context indicator: are there more fixed-term contracts in times of economic downturn? The percentage of persons with fixed-term contract may also decrease in times of crises as jobs based on fixed-term contracts are often eliminated quicker than jobs based on open-ended contracts.</p>
International comparisons	<p>The national legislation influences certainly the proportion of employees with fixed-term contracts in a country. The national context and the way of regulating dismissal should be taken into consideration when interpreting the number of fixed-term and open-ended contracts. Also the percentage of self-employed needs to be considered for international comparison.</p> <p>As this indicator can be calculated with the LFS variables, international comparison is feasible.</p>
Recommended calculation in the	Main variables in the EU-LFS:

Short name	Fixed-term contracts (4a1)
EU-LFS or other international surveys	<ul style="list-style-type: none"> • STAPRO • TEMP • AGE <p>Disaggregations:</p> <ul style="list-style-type: none"> • SEX • NATIONAL • TEMPDUR • TEMPREAS • TEMPAGCY
Further readings	<p>Eichhorst, W., 2014: Fixed-term contracts. Are fixed-term contracts a stepping stone to a permanent job or a dead end? IZA World of Labour 45. Available at http://wol.iza.org/articles/fixed-term-contracts-1.pdf</p> <p>Gash, V., 2008: Bridge or trap? Temporary workers' transition to unemployment and to the standard employment contract. European Sociological Review 24, pp. 651–668.</p> <p>OECD, 2013: Protecting jobs, enhancing flexibility: A new look at employment protection legislation. In: OECD Employment Outlook 2013. OECD Publishing, Paris 2013, pp. 65-126.</p>

Short name	Job tenure (4a2)
Name	Percentage of employed persons aged 25 years or over whose number of years of tenure at the current job or with the current employer is (1) < 1 year, (2) 1 – less than 5 years (3) 5 – less than 10 years and (4) ≥ 10 years
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	<p>The job tenure indicator measures the length of time workers have been in their current job or with their current employer and is valuable for analysing the stability of employment relationships, and ultimately, the degree of job insecurity that workers may face.</p> <p>It should be noted that the job tenure measured as start time does not measure the length of temporary contracts, but the length of time workers have been in their current job or with their current employer. In some countries, the use of successive temporary contracts is common. For instance, a person may have been employed by the same employer e.g., for 3 years, but this time consist of several successive temporary contracts.</p>
Formula	$\frac{\text{Number of employed persons whose job tenure falls in length of time } i}{\text{Total number of employed persons}} \times 100$ <p>Where i refers to the above-mentioned job tenure time bands.</p>
Concepts and definitions	<p><i>Job tenure</i> (see glossary): number of months/years since the person started working for his/her current employer or as self-employed.</p> <p><i>Employed persons aged 25 years and over</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary). Many young people between 15 and 24 years of age are in a transition phase from school to work and may undergo frequent interruptions in employment, including paid summer employment or short paid apprenticeships. Therefore, persons under 25 years are excluded from the target population.</p> <p>It is recommended to compute supplementary job tenure indicators for the population aged 15 to 24 years. Job tenure time bands for this population need to be specified by each country according to its national circumstances (e.g., minimum education leaving age).</p>
Recommended data source(s)	The preferred official national data source for these indicators is a household-based Labour Force Survey (LFS), as it permits one to estimate the number of employed persons and allows disaggregation by gender, age group, educational attainment, professional status, economic activities, etc. Such disaggregation may be required when analysing job tenure statistics in a cross-country perspective. If an LFS is not available, other household surveys with an appropriate employment module may be used instead.
Recommended	For this indicator, it is recommended that, as a minimum, metadata on the

Short name	Job tenure (4a2)
metadata	source (periodicity, breaks in series, etc.), reference period, population coverage, geographic coverage, and definition of job tenure, including operational definition, are made available.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Educational attainment (ISCED) • Status in employment (ISCE-93), particularly self-employed workers vs. employees • Fixed-term contracts • Economic activity (ISIC) • Occupation (ISCO)
Interpretation guidelines	<p>A large proportion of workers with short job tenure and a low proportion of workers with long job tenure may be indicative of relatively lower employment stability and security.</p> <p>Not only is job instability a major source of financial stress, but it also affects the well-being of workers in various ways. Job insecurity has been shown to reduce job satisfaction, as well as the commitment to the organization and job involvement.</p>
Relation to other indicators	<p>Job tenure indicators may be sensitive to the business cycle and should be analysed in relation to GDP growth and unemployment rate. In particular, the proportion of workers with short job tenure may tend to fall during an economic downturn. This results from both reduced hiring and lay-offs of newly-hired workers; therefore, it does not indicate a “true” improvement in job quality.</p> <p>Job tenure indicators and the share of workers with fixed-term contracts are two complementary approaches of employment stability. In such a country, the labour market is highly dual, but employment stability could be relatively high.</p>
International comparisons	<p>International comparability is affected by a number of factors:</p> <ul style="list-style-type: none"> • Comparability in concepts and definitions, thresholds, like different concept definitions used for employment, job tenure bands, different geographic coverage, etc. • The mean education leaving age: job tenure among young adults will be lower if young people stay longer at school. • The proportion of self-employed workers: while business cycle is the main determinant of the employment stability of self-employed workers, job stability among employees is affected by both the business cycle, human resources practices and the employment protection legislation. For international comparisons, it is recommended to analyse job tenure indicators separately for these two categories of workers. • The employment rate of women: depending on family-friendly policies

Short name	Job tenure (4a2)
	<p>in force and cultural preferences, women may have more frequent career interruptions (related to childbirth and caretaking responsibilities) than men, and therefore, shorter job tenure.</p> <ul style="list-style-type: none"> • The industry composition: because of the seasonal nature of a number of economic activities (e.g., tourism), job tenures will tend to be shorter in countries where such activities are relatively widespread.
<p>Recommended calculation in the EU-LFS or other international surveys</p>	<p>To calculate the indicator it is recommended to use the following EU-LFS variables:</p> <ul style="list-style-type: none"> • Time in months since the person started current employment (derived variable STARTIME) • Targeted population: employed persons in private households, aged 25 and over (HHTYPE = 1 and WSTATOR in (1, 2) and AGE ≥ 25) <p>Recommended disaggregations:</p> <ul style="list-style-type: none"> • STATPRO (employee vs. self-employed), AGE, SEX, HATLEV1D (level of education – 3 levels), NACE3D
<p>Further readings</p>	<p>Auer, P. and S. Cazes (eds.), 2002: Employment Stability in an Age of Flexibility: Evidence from Industrialized countries. Geneva, International Labour Office.</p> <p>Cazes, S. and M. Tonin, 2010: Employment protection legislation and job stability: A European cross-country analysis. In: International Labour Review 149: 261 - 285.</p> <p>ILO, 2013: Decent Work Indicators. Concepts and definitions, ILO Manual second version, 2013, Geneva http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_223121.pdf</p>

Short name	Own account worker rate (4a3)
Name	Percentage of employed persons who are own-account workers
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	<p>According to the Resolution concerning the International Classification of Status in Employment (ICSE), adopted by the 15th ICLS (Geneva, January 1993), own-account workers are those workers who, working on their own account or with one or more partners, hold a self-employment job and have not engaged on a continuous basis any employees to work for them during the reference period. The partners may or may not be members of the same family or household.</p> <p>This indicator provides information regarding the proportion of workers whose status in employment may place them at a higher degree of economic risk than other employed persons.</p> <p>Differentiation between the employed person who is in a self-employment job and their enterprise, which may be characterised as unincorporated.</p>
Formula	$\frac{\text{Number of own account workers}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Own account worker</i> (according to the International Classification of Status in Employment (ICSE-93)) (see glossary).</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>The preferred official national data source for these indicators is a household-based Labour Force Survey (LFS), as it permits one to comprehensively estimate the number of own account workers and allows disaggregation by sex, age group, educational attainment, professional status, economic activities, etc. Such disaggregation may be required when analysing own account workers in a cross-country perspective.</p> <p>If an LFS is not available, other household surveys with an appropriate employment module may be used instead, and employment-related administrative records may serve as an additional source. Nonetheless, such sources may have limitations related to periodicity, geographic coverage or coverage of economic activities and worker coverage about which data users should be made aware.</p>
Recommended metadata	It is recommended that information on the data source, data reference period, population coverage, definitions used for own-account workers and contributing family workers, and geographic coverage be made easily available to data users.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex

Short name	Own account worker rate (4a3)
	<ul style="list-style-type: none"> • Age • Nationality • Occupation • Full-time vs. part-time • Economic activity (ISIC) • Employment-related income
Interpretation guidelines	<p>Some own-account workers (that is, workers holding self-employment jobs who may be working alone or with one or more partners and have not hired any employees on a continuous basis) may have inadequate employment conditions (for example, inadequate employment-related income and excessive hours) and jobs of short duration. This may be especially true in developing countries among many own-account informal sector enterprises and own-account subsistence agriculture production units. Own-account workers may also be subject to reduced social protection. Thus, high levels of the indicator may point to inadequate employment conditions.</p>
Relation to other indicators	<p>In order to establish actual employment quality deficits among own-account workers, the indicator should be analysed together with other indicators, including informal employment of own-account workers, employment-related income of such workers relative to cost of living, excessive hours and social protection coverage.</p>
International comparisons	<p>The social protection of own account workers might be subject to differences in national legislation. This should be taken into account when comparing data internationally.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Main variables in the EU-LFS:</p> <ul style="list-style-type: none"> • STAPRO (2 = “Self-employed without employees”) <p>Disaggregation:</p> <ul style="list-style-type: none"> • SEX • YEARBIRD • NATIONAL • ISCO4D • NACE3D (main sectors) • FTPT
Further readings	<p>Eurofound, 2010: Self-employed workers: Industrial relations and working conditions. Dublin: European Foundation for the Improvement of Living and Working Conditions.</p> <p>ILO, 1993: Resolution concerning the International Classification of Status in Employment (ICSE), adopted by the Fifteenth International Conference of Labour Statisticians, Geneva, January 1993. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087562.pdf</p>

Short name	Own account worker rate (4a3)
	ILO, 2013: Decent Work Indicators. Concepts and definitions, ILO Manual second version, 2013, Geneva: ILO. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_223121.pdf

Short name	Self-employed with one client (4a4)
Name	Percentage of self-employed workers with only one client
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	<p>The indicator measures the percentage of self-employed who indicated that they usually have only one client. The indicator is a proxy for economically dependent self-employment, i.e., self-employed who enjoy only limited entrepreneurial freedom. Recent labour market developments make the traditional distinction between employees and self-employed more and more difficult. It has been argued that both are no longer distinct alternatives, but rather two ends of a continuum that includes a large number of hybrid types of employment. The group of self-employed workers often has different characteristics in terms of employment security. Self-employed workers who work for only one client usually have limited entrepreneurial freedom and in this respect share some characteristics of employees. At the same time, their level of employment security (and often also social protection) is often lower than in the case of employees.</p>
Formula	$\frac{\text{Number of self - employed persons with only one client}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Status in employment</i> (according to the International Classification of Status in Employment (ICSE-93)) (see glossary).</p> <p><i>Usual number of clients.</i></p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data on self-employed persons with only one client should be collected in household or population surveys, for instance Labour Force Surveys. Since they do not cover the information required, establishment surveys or administrative data are usually not suitable for the indicator.</p> <p>In Europe, the European Working Conditions Survey 2010 (EWCS) provides data on self-employed persons with only one client. The EWCS provides harmonised data for 34 European Countries. It should be noted that the sample size limits the possibilities for detailed analyses at the national level. For instance, in the case of small sub-populations, like self-employed with only one clients, this restricts possible analyses.</p>
Recommended metadata	<p>It is recommended that information on the data source, data reference period, population coverage, definitions used for own-account workers and number of clients, and geographic coverage be made easily available to data users.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age

Short name	Self-employed with one client (4a4)
	<ul style="list-style-type: none"> • Nationality • Occupation • Full-time vs. part-time • Job tenure • Economic activity (ISIC) • Income from employment
Interpretation guidelines	<p>Self-employment is difficult to identify and characterise. As many studies show, there is no simple characterisation of a self-employed worker, and comparative studies underline the variety of situations that could be considered as self-employment. In Europe, there is currently neither a straightforward definition of self-employment nor of self-employed workers. Moreover, there are blurred situations where self-employed workers perform work under an entrepreneurial status while being in a “dependent” (subordinate) position. It is usually assumed that the main characteristic of self-employment is an entrepreneurial way of working.</p> <p>An entrepreneur is characterised by specific powers, such as autonomy of decision-making in organizing work and hiring people, financial independence and related responsibility and constraints. Therefore having more than one client could be considered the marks of “genuine” self-employed. This indicator should be analysed in combination with percentage of employed persons who are own-account workers and work in unincorporated enterprise and with percentage of temporary employees.</p> <p>As regards autonomy in work, self-employed workers with only one client is often closer to being an employee rather than others self-employed.</p> <p>The European Working Conditions Survey (EWCS) 2010 in total used four parameters to analyse self-employed without employees. Apart from generally having no more than one client, further items are the receipt of a regular (e.g., monthly) payment, the ability to hire staff when needed, and the possibility to take important decisions how to run the business.</p>
Relation to other indicators	<p>This indicator should be analysed in combination with the percentage of own-account workers (4a4), the informal employment rate (4a5) and the employment-related income of self-employment (2a4).</p>
International comparisons	<p>Some difficulties concerning international comparability derive from the specific features of national contexts and legal frameworks.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>The indicator cannot currently be calculated on the basis of the EU-LFS. We recommend using Question Q6_1 of the EWCS 2010.</p>
Further readings	<p>Eichhorst, W. et al., 2011: Social protection rights of economically dependent self-employed workers. Brussels: European Parliament. Available</p>

Short name	Self-employed with one client (4a4)
	<p data-bbox="564 248 1385 315">at: http://www.europarl.europa.eu/committees/en/studiesdownload.html?languageDocument=EN&file=92570</p> <p data-bbox="483 371 1385 510">Eurofound, 2012: Fifth European Working Conditions Survey. Luxembourg: Publications Office of the European Union. Available at: http://www.eurofound.europa.eu/pubdocs/2011/82/en/1/EF1182EN.pdf</p> <p data-bbox="483 566 1394 741">Eurofound, 2010: Self-employed workers: Industrial relations and working conditions. Dublin: European Foundation for the Improvement of Living and Working Conditions. Available at: http://www.eurofound.europa.eu/docs/comparative/tn0801018s/tn0801018s.pdf</p>

Short name	Perceived job security (4a5)
Name	Percentage of employed persons who state that they might lose their job in the following 6 months
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	The indicator intends to capture the job security as perceived by the respondent. The information should be used to complement other indicators on security of employment, like job tenure or the percentage of employed persons with fixed-term contracts. Job security as perceived by the workers may not be closely related to the formal stability of their jobs. Only a combination of both types of indicators will provide a comprehensive picture regarding employment security.
Formula	$\frac{\text{Number of employed persons who indicate that they might lose their job in the next six months}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p>Perception of likelihood to lose the jobs in the next six months.</p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data on employed persons who indicate they might lose their job in the next six months should be collected in household or population surveys, e.g., Labour Force Surveys. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.</p> <p>In Europe, the European Working Conditions Survey 2010 (EWCS) provides data on self-perceived job security. The EWCS provides harmonised data for 34 European Countries. It should be noted that the sample size limits the possibilities for detailed analyses at the national level.</p>
Recommended metadata	Data on the source, reference period, population coverage and geographic coverage, the definition and operational definitions (item of questionnaire) of perceived job security.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Occupation (ISCO-08) • Full-time vs. part-time • Duration of work • Economic activity (ISIC)

Short name	Perceived job security (4a5)
	<ul style="list-style-type: none"> Earnings / Income from employment
Interpretation guidelines	The perception of job insecurity might be more prevalent in countries where unemployment is higher, in particular long-term unemployment rate, and/or spending on labour market policies is lower. On the other hand, perceived of job security is linked to flexicurity policies.
Relation to other indicators	<p>For a comprehensive analysis of security of employment, the indicator should be analysed together with the other indicators of the sub-dimension, in particular the percentage of employed persons with fixed-term contracts (4a1), job tenure (4a2), and the percentage of persons employed via a temporary employment agency (4a8). Furthermore, the indicator should be analysed together with differences between population groups regarding other aspects of quality of employment.</p> <p>This indicator should be analysed in combination with context information including the unemployment rate, the long-term unemployment rate and the unemployment insurance system.</p>
International comparisons	<p>The question of the EWCS 2010 (q77a) allows for comparisons over time and space.</p> <p>As the indicator measures the self-perception of respondents, the responses might be influenced by cultural and institutional differences. This could also restrict the international comparability of the indicator. Furthermore, measures of self-perception are particularly sensitive to the survey implementation (e.g., question wording, sequence of questions, survey topic). For international comparisons, results from internationally harmonised surveys (like the LFS or the EWCS) should be preferred.</p>
Recommended calculation in the EU-LFS or other international surveys	The indicator is not available in the EU-LFS: It is recommended to use question q77a of the EWCS 2010.
Further readings	<p>Eurofound, 2012: Fifth European Working Conditions Survey. Luxembourg: Publications Office of the European Union. Available at: http://www.eurofound.europa.eu/pubdocs/2011/82/en/1/EF1182EN.pdf</p> <p>Erlinghagen M., 2008: Self-Perceived Job Insecurity and Social Context: A Multi-Level Analysis of 17 European Countries, In: European Sociological Review, 24, pp. 183–197. Available at: http://www.sociologia.unimib.it/DATA/Insegnamenti/13_3334/materiale/2.3.%20erlinghagen.pdf</p> <p>Green, F., 2003: The Rise and Decline of Job Insecurity. Department of Economics Discussion Paper 05/03. Canterbury: University of Kent. Available at: https://www.econstor.eu/dspace/bitstream/10419/68072/1/377</p>

Short name	Perceived job security (4a5)
	468029.pdf Origo, F. and L. Pagani, 2009: Flexicurity and job satisfaction in Europe: the importance of perceived and actual job stability for well-being at work. In: Labour Economics 16, pp. 547-55.

Short name	Temporary employment agency workers (4a6)
Name	Percentage of persons employed via a temporary employment agency
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	Employees with an employment contract with a temporary employment agency generally are exposed to a higher risk of losing their job and often (depending on national circumstances) receive a lower pay and have less favourable working conditions.
Formula	$\frac{\text{Number of persons employed via a temporary employment agency}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<i>Status in employment</i> (according to the International Classification of Status in Employment (ICSE-93)) (see glossary). <i>Contract with a temporary employment agency</i> (see glossary). <i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).
Recommended data source(s)	A household-based Labour Force Survey (LFS) is the recommended data source, as it permits to estimate the number of persons employed via a temporary employment agency and generally allows disaggregations by economic activity and demographic variables such as sex, age group, etc. The concept of employment via a temporary employment agency can approximately be captured through a LFS. The international harmonisation of EU-LFS contributes to better international comparability. If LFS is not available other household surveys with an appropriate employment module may be used instead. Alternatively, an employment-based establishment survey or data from administrative registers might be additional sources, depending on data availability in a given country.
Recommended metadata	Data on the source, reference period, population coverage and geographic coverage, definition and operational definition of indicator.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Occupation • Full-time vs. part-time • Type of working time arrangement (e.g., zero hours contract, min-max contract or fixed number of hours paid for) • Provision of paid services provided by the employer (e.g., accommodation or transport) • Economic activity (ISIC)

Short name	Temporary employment agency workers (4a6)
	<ul style="list-style-type: none"> • Earnings • Job tenure
Interpretation guidelines	Employees employed via a temporary employment agency are generally exposed to a higher risk of losing their job and often (depending on national circumstances) receive a lower pay and have less favourable working conditions. It should be taken into consideration that the conditions of temporary agency work may vary according to factors like the economic activity, the occupation and the region.
Relation to other indicators	This indicator should be analysed in combination with the other indicators on security of employment, in particular the percentage of employed persons with fixed-term contracts (4a1), job tenure (4a2), and the perceived job security. As the indicator can be sensitive to the business cycle (temporary employment agency being often dismissed first in times of crisis and hired first in times of economic recovery) it should be analysed together with context information regarding the short-term economic trends (e.g., GDP growth rate).
International comparisons	The national legislation influences certainly the proportion of persons employed via a temporary employment agency.
Recommended calculation in the EU-LFS or other international surveys	<p>Main variables in the EU-LFS:</p> <ul style="list-style-type: none"> • TEMPAGCY (1="Yes") <p>Disaggregation:</p> <ul style="list-style-type: none"> • TEMP • TEMPDUR • TEMPREAS • ISCO4D • NACE3D (main sectors) • FTPT
Further readings	<p>Arrowsmith, J., 2006: Temporary agency work in an enlarged European Union. Report for the European Foundation for the Improvement of Living and Working Conditions, Luxembourg.</p> <p>Houseman, S., A. Kalleberg and G. Erickcek, 2003: The role of temporary agency employment in tight labour markets. In: Industrial and Labour Relations Review, 57, pp. 105-127.</p> <p>ILO, 2011: Global Dialogue Forum on the Role of Private Employment Agencies in Promoting Decent Work and Improving the Functioning of Labour Markets in Private Services Sectors. Final report of the discussion. Geneva: ILO.</p>

Short name	Lack of formal contract (4a7)
Name	Percentage of employed persons without formal contracts or without pay slip / pay stub
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	This indicator measures the share of workers for whom the terms of their job are not subject to a formal employment contract (or, alternatively, who do not receive a pay slip/pay stub). Although the presence of these documents do not provide better employment security per se, they can be used as a proxy for an exposure to higher risks of losing the job and lower levels of social protection.
Formula	$\frac{\text{Number of employed persons without a formal contract}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Existence of a formal contract</i> (depending on national circumstances, existence of a pay slip or pay stub could be used alternatively).</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based Labour Force Survey (LFS) is the recommended data source, as it permits to comprehensively estimate the number of persons without a formal contract and generally allows disaggregations by economic activity and demographic variables such as sex, age group, etc. Still, the concept of working without a formal contract is only rarely included in Labour Force Surveys. Alternatively, household survey or working conditions survey covering the concept might be used.</p> <p>In contrast, an employment-based establishment survey or data from administrative registers are usually no suitable sources, as they often do not cover persons in informal employment.</p>
Recommended metadata	Data on the source, reference period, population coverage and geographic coverage, definition and operational definition of indicator.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Status in employment according to the ICSE-93 (permanent and temporary employees) • Occupation • Full-time vs. part-time • Economic activity (ISIC) • Earnings • Job tenure
Interpretation	Working without a formal contract (without pay slip/pay stub) is any paid

Short name	Lack of formal contract (4a7)
guidelines	work for which the terms of the job (like pay, working time, entitlement to paid leave) are not formally specified. Informal contracts can be a factor of risk as they can lead to ambiguities regarding what the worker can expect from the employer, e.g., regarding protection against dismissal, paid leave, sick leave or earnings. It should be noted that the absence of formal contracts is not limited to informal employment or undeclared employment.
Relation to other indicators	This indicator should be analysed in combination with the other indicators on security of employment, for instance the informal employment rate (4a6).
International comparisons	<p>The national legislation influences certainly the proportion of employees without contracts in a country.</p> <p>Individuals may be reluctant to declare that they are working without a formal contract.</p> <p>This indicator cannot be calculated with the LFS variables, yet the EWCS 2010 includes some information.</p>
Recommended calculation in the EU-LFS or other international surveys	The indicator is not available in the EU-LFS. It is recommended to use question q7 of the EWCS 2010.
Further readings	<p>ILO, 2013: Measuring Informality: a Statistical Manual on the informal sector and informal employment. Geneva: ILO 2013. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_222979.pdf</p> <p>Chen, M. A., 2012: The Informal Economy: Definitions, Theories and Policies. WIEGO Working Paper No 1, August 2012, Cambridge, MA: WIEGO. Available at: http://wiego.org/sites/wiego.org/files/publications/files/Chen_WIEGO_WP1.pdf</p>

Short name	Precarious employment (experimental) (4ax1)
Name	Percentage of employed persons who are in precarious employment (as defined in ICSE-93)
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	The precarious employment rate provides information regarding the share of the employed whose contract of employment, whether verbal or written, is of relatively short duration or whose contract can be terminated on short notice. It measures workers' vulnerability both in case of employees and self-employed. An increasing trend in the indicator corresponds to a decrease of quality of employment, as it points to an increasing number of jobs becoming unstable and/or insecure.
Formula	$\frac{\text{Number of persons who are in precarious employment}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Precarious employment</i> (according to the International Classification of Status in Employment (ICSE-93)) (see glossary):</p> <p>According to the Resolution concerning the International Classification of Status in Employment (ICSE), adopted by the 15th International Conference of Labour Statisticians (ICLS) in January 1993, workers in precarious employment can either: (a) be workers whose contract of employment leads to the classification of the incumbent as belonging to the groups of "casual workers", "short-term workers" or "seasonal workers"; or (b) be workers whose contract of employment will allow the employing enterprise or person to terminate the contract at short notice and/or at will, with the specific circumstances to be determined by national legislation and custom. In the case of workers falling under category (a) above, workers may be classified as "employees" or "own-account workers" according to the characteristics of the employment contract. Workers under category (a) refer to the following:</p> <ul style="list-style-type: none"> • Casual workers: contracts are not expected to continue for more than a very short period. • Seasonal workers: contract duration is influenced by seasonal factors such as climate, public holidays, agriculture season, etc. • Short-term workers: contracts are expected to last for a short period, but longer than that of casual workers. <p>The common element among the precarious employment categories is the short-term nature of the employment contracts (category a) or their instability, as employers may terminate them upon short notice (category b).</p> <p><i>Expected duration of work.</i></p> <p><i>Seasonal character of work.</i></p>

Short name	Precarious employment (experimental) (4ax1)
	<p><i>Employer's possibility to end the contract at short notice.</i></p> <p><i>Employed persons (age 15+):</i> Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Labour Force Survey (LFS) which includes information about status in employment and the other characteristics required for the computation of the indicator.</p> <p>Other household surveys with an appropriate employment module may also be used to obtain the required data to calculate the indicator. Nonetheless, such sources may have limitations related to periodicity, geographic coverage or worker coverage about which data users should be made aware.</p> <p>An employment-based establishment survey (intended to capture the number of precarious jobs) may be considered only as a secondary option.</p>
Recommended metadata	Data on the source, reference period, population coverage and geographic coverage and the operational definition of precarious employment.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Occupation (ISCO-08) • Full-time vs. part-time • Economic activity (ISIC) • Earnings
Interpretation guidelines	<p>Seasonal employment may occur in key industries, such as agriculture or tourism, and hiring may be subject to special legislation which should be analysed jointly with the indicator. Seasonal employment contracts in agriculture may be defined by work gang or crew members whose working conditions (including health, safety and sanitation) and earnings may be inadequate. Similarly, workers in casual employment are often hired as day workers in sectors such as construction or agriculture where working conditions and pay can be substandard.</p> <p>Some degree of overlap may exist between this indicator and the one for informal employment, reflecting the fact that jobs in precarious employment generally lack basic social or legal protections or employment benefits. Assessing the extent to which self-employment jobs are precarious could be done in terms of defining the stability of the enterprises in which they work; for example, an analysis of the average time that self-employed enterprises remain in operation (disaggregated by formal/informal sector) could be carried out. It should be noted that some workers (including</p>

Short name	Precarious employment (experimental) (4ax1)
	<p>working students) may prefer casual, seasonal, or short-term jobs; hence it is important to identify whether the engagement in this type of employment is voluntary or not, given the possibility of an alternative employment situation that is not precarious.</p> <p>The indicator is earmarked as experimental as further experiences are needed regarding its operational definition and interpretation.</p>
Relation to other indicators	<p>GDP growth by sector, labour force participation rate, unemployment rate and average earnings.</p> <p>Different experiences suggest that the indicator is sensitive to changes in the business cycle, having a counter cyclical nature. An economic downturn or recession may result primarily in layoffs of employees with short-term contracts, who are often younger and less experienced workers. When an economy begins a period of expansion, businesses may wish to avert risk and keep costs down, at least initially, by cautiously hiring workers on short-term contracts. In the aggregate, the decisions of companies regarding their employees during the business cycle depend on the economic structure, product/service demand and prices in the output market, as well as labour supply.</p>
International comparisons	<p>International comparability may be hampered by the operational definition of precarious being dependent on national circumstances.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Precarious employment is currently not collected directly from the EU-LFS.</p> <p>Main variables in the EU-LFS with connection to the indicator:</p> <ul style="list-style-type: none"> • STAPRO (2 = “Self-employed without employees”; 3 = “Employee”) • TEMP (2 = “employee has temporary job/work contract of limited duration”) <p>The LFS EU-LFS does not include the required information about short-term work or instability of work.</p>
Further readings	<p>ILO, 1993: Resolution concerning the International Classification of Status in Employment (ICSE), adopted by the Fifteenth International Conference of Labour Statisticians, Geneva, January 1993. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087562.pdf</p> <p>ILO, 2013: Decent Work Indicators. Concepts and definitions. ILO Manual, second version, 2013, Geneva: ILO. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_223121.</p>

Short name	Informal employment (4ax2) (experimental)
Name	Percentage of employed persons in informal employment
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	<p>The Measurement objectives can be understood in one of these three ways:</p> <ul style="list-style-type: none"> • To identify the most vulnerable or economic risk exposed segment of total employment. • To identify those lacking any safety net to fall back or with more disadvantages in case things go wrong either on regard their economic activity or labour relationships. • To identify those with the least possibilities – be the jure or the facto – to count in their favour with the legal/institutional frame to protect them either as independent producers or as dependent workers. <p>The informal employment rate is defined as the percentage of persons in total employment who are in informal employment.</p>
Formula	$\frac{\text{Number of employed persons in informal employment}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Informal employment:</i> According to the guidelines adopted by the 17th International Conference of Labour Statisticians (ICLS) in 2003, informal employment is defined as the total number of informal jobs, whether carried out in formal sector enterprises, informal sector enterprises or households during a given reference period.</p> <p>The key characteristics of informal employment are that it is a job-based concept (focus on characteristics of the job) that includes: (1) all jobs (main and secondary jobs); (2) jobs in all types of production units; (3) workers in all status in employment; and (4) all branches of economic activity (agriculture and non-agriculture).</p> <p>Informal employment, which encompasses all of the jobs included in the concept of employment in the informal sector (except those which are classified as formal jobs in informal sector enterprises), refers to those jobs that generally lack basic social or legal protections or employment benefits and may be found in formal sector enterprises, informal sector enterprises or households. Informal employment includes, but is not limited to, illegal production activities (see ILO 2013).</p> <p>Informal employment includes the following types of jobs: (i) own-account workers employed in their own informal sector enterprises; (ii) employers employed in their own informal sector enterprises; (iii) contributing family workers, irrespective of whether they work in formal or informal sector enterprises; (iv) members of informal producers' cooperatives; (v)</p>

Short name	Informal employment (4ax2) (experimental)
	<p>employees holding informal jobs in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households; (vi) own-account workers engaged in the production of goods exclusively for own final use by their household, if they are considered employed given that the production comprises an important contribution to total household consumption. For operational reasons the concept is measured as the number of persons employed (and not the number of jobs) in informal employment in their main job. Where they exist, employees holding formal jobs in informal sector enterprises should be excluded from informal employment. As regards (v) above, employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (such as advance notice of dismissal, severance pay, paid annual or sick leave) (see glossary).</p> <p><i>Status in employment</i> (according to the International Classification of Status in Employment (ICSE-93)) (see glossary).</p> <p><i>Size of the economic unit</i> a self-employed person (own account worker/employer) has. Alternatively, type of registration or tax regime is a resource to identify the type of economic unit.</p> <p><i>Access to social security</i> or to the most basic services in virtue of the employment a dependent worker has: alternatively, the existence or not of a written contract giving basic labour protection or guarantees as a worker.</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>A household-based LFS is the recommended data source as it has most elements needed to distinguish employment by status and thus to apply the criteria concerning self-employed as well the criterion pertaining to dependent workers. Some LFS collect information on the size of the economic unit conducted by a self-employed person, so those in charge of micro economic units can be selected. In case an LFS lacks any elements necessary to identify what kind of economic unit a self-employed leads, the so called mixed household-establishments surveys can be implemented, where the second phase is an in depth module addressed to those already identified as self-employed in the household survey (ILO 2012).</p>
Recommended metadata	<p>It is recommended information on the data source, data reference period, population coverage and geographic coverage is made available to data users. Moreover, it is essential that data users be informed regarding the operational definition used to define informal employment:</p> <ul style="list-style-type: none"> • Job coverage (main jobs or all jobs). • The criteria used in distinguishing different categories on regard status in employment • The criteria used to identify those leading unincorporated economic units (size/registration/tax regime/account practices). In particular on

Short name	Informal employment (4ax2) (experimental)
	<p>regard self- employed in unincorporated economic units it is important to specify if independent professionals (such as medical doctors, dentists, accountants or lawyers) were included or not.</p> <ul style="list-style-type: none"> • The criteria used to identify the less protected segment of paid dependent workers/the most basic labour benefit or the most basic labour guarantee they can count on.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Educational attainment • Area of occupation (urban/rural) • Status in employment: self-employed (own account and employers), non-paid auxiliary family workers and employees (paid dependent workers) • Economic Activity (ISIC) or at least distinguishing between agricultural and non agricultural • SNA's institutional sectors (if possible), placing paid domestic workers within the household sector but in a different place of those in household enterprises • Full time / part time
Interpretation guidelines	<p>The existence of an informal economy and informal employment in a particular country is strongly influenced by such factors as the specific historical background, cultural influences, levels of development, characteristics of the economic system and the overall political and economic environment. Besides that, many similarities can be drawn between such countries. People are often simply unable to find a job in the formal part of the economy due, for example, to a shortage of employment opportunities, or a low level of formal education. Such workers have generally no other choice than to seek a job within the informal economy since they cannot afford to be unemployed.</p> <p>High taxes, bureaucratic procedures and corruption can make formal employment complicated and expensive.</p> <p>Inadequate and not carefully targeted employment policies can constrain employment in the formal sector and push workers towards informality. Low levels of job creation, combined with high unemployment and social assistance benefits below the basic level of subsistence, leave workers no other choice than to seek employment in the informal economy.</p> <p>Also rapid economic changes, as those experienced in the transition periods, are often to the disadvantage of low skilled workers who cannot adapt to the new requirements in the formal economy and are squeezed out into the informal economy. The economic situation as context indicator: are there more temporary contracts in times of economic downturn?</p>

Short name	Informal employment (4ax2) (experimental)
Relation to other indicators	<p>This indicator should be analysed in combination with GDP, employment and unemployment rate. When the share of informal employment remains more or less stationary during normal periods, it is expected it increases with recessions and decreases during the pick of the economic cycle so being countercyclical.</p> <p>Moreover it should be analysed in combination with non-standard employment and percentage of employees without formal contracts.</p>
International comparisons	<p>The national legislation influences the proportion of informal employment. As this indicator cannot be calculated with the LFS variables, the international comparison is rather difficult.</p> <p>It is very difficult to measure mainly at level of worker. It might be better to include as context indicator the percentage of irregular work (from National Accounts).</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Informal employment is not collected directly from the EU-LFS.</p>
Further readings	<p>Hussmanns, R., 2004: Measuring the informal economy: from employment in the informal sector to informal employment. Working Paper No. 53. Geneva, December 2004.</p> <p>ILO, 1993: Resolution concerning statistics of employment in the informal sector, 15th ICLS, Geneva, January 1993</p> <p>ILO, 2003: Guidelines concerning a statistical definition of informal employment, 17th ICLS, Geneva, December 2003</p> <p>ILO, 2011: A comparative Overview of Informal Employment in Albania, Bosnia and Herzegovina, Moldova and Montenegro, 2011</p> <p>ILO, 2013a: Measuring Informality: a Statistical Manual on the informal sector and informal employment, October 2013. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_222979.pdf</p> <p>ILO, 2013b: Decent Work Indicators. Concepts and definitions, ILO Manual second version, 2013, Geneva: ILO. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_223121.pdf</p> <p>Chen, M. A., 2012: The Informal Economy: Definitions, Theories and Policies. WIEGO Working Paper No 1, August 2012, Cambridge, MA: WIEGO.</p>

Short name	Informal employment (4ax2) (experimental)
	<p data-bbox="523 241 1364 353">Available at http://wiego.org/sites/wiego.org/files/publications/files/Chen_WIEGO_WP1.pdf</p> <p data-bbox="443 405 1283 582">Vanek, J., et al., 2014: Statistics on the Informal Economy: Definitions, Regional Estimates & Challenges. WIEGO Working Paper No. 2, Cambridge, MA: WIEGO. Available at: http://wiego.org/publications/statistics-informal-economy-definitions-regional-estimates-challenges.</p>

Sub-dimension 4b: Social protection

Short name	Pension insurance coverage (4b1)
Name	Percentage of employed persons who are active contributors to a pension scheme
Dimension and sub-dimension	4. Security of employment and social protection a. Security of employment b. Social protection
Measurement objectives	<p>This indicator aims to capture the share of the employed persons that is protected through a contributory pension scheme (with benefits guaranteed but not currently being received). It seeks to avoid double counting active contributors who contribute to more than one scheme.</p> <p>It does not take into account the effective coverage by non-contributory pensions which can only be assessed in terms of actual beneficiaries rather than protected persons.</p> <p>This indicator is important in terms of quality of employment as it provides information about the proportion of the employed persons that will receive a pension once reaching pensionable age. This right to income security after retirement is guaranteed by the prior payment of premiums or contributions, i.e., before the occurrence of the insured contingency. Depending on the country, this prior payment of a premium or contributions concerns persons in employment or a sub- group.</p> <p>Combined with other indicators of security of employment, contribution to social security forms part of the set of criteria suggested to define formal employment.</p>
Formula	$\frac{\text{Number of employed persons who are active contributors to a pension scheme}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Protected persons or affiliated persons</i> are persons who are insured by the social protection scheme. This includes persons who are active contributors, as well as persons who have not made any contributions or on whose behalf no contributions have been made during the reporting period but who are still protected by the scheme and would benefit should a contingency arise (ILO 2005).⁵⁸ Protected persons have guaranteed benefits but are not necessarily currently recipients of such benefits, e.g., persons who actively contribute to social insurance and are thus guaranteed benefits for a specified contingency.</p>

⁵⁸ ILO: ILO Social Security Inquiry 2005 Manual (Geneva, 2005). Available at: <http://www.socialsecurityextension.org/gimi/gess/RessFileDownload.do?ressourceId=6622>

Short name	Pension insurance coverage (4b1)
	<p><i>Active contributors</i>, a subset of the affiliated or protected population, are insured individuals who have made at least one contribution to the scheme or on whose behalf at least one contribution has been made during the reporting period (e.g., the preceding 12-month period).</p> <p>This indicator considers contributions for entitlement to periodic cash retirement benefits but here this is restricted to old-age contributory basic schemes. Contributors to supplementary schemes in addition to the basic old-age pension scheme, i.e., “second pillar” schemes, are excluded to avoid double counting. In countries where voluntary coverage is effectively implemented usually as a result of incentives to join (e.g., co-financed by the employer), this indicator should include those voluntarily covered.</p> <p><i>Basic schemes</i> are social protection schemes that guarantee a basic level of protection. (By means of comparison, supplementary schemes are social protection schemes that top up cash benefits granted by the basic scheme, or extend the coverage of the basic scheme.)</p> <p>According to the concept definition, “basic” scheme does not refer to the level of benefits. In particular, it is not to be understood as referring to a minimum level of benefits; it may well be that the benefits provided by a basic scheme are fairly generous. The distinction between basic schemes and supplementary schemes rather reflects the relationship between different types of benefits.</p> <p>Please see also the Resolution concerning the development of social security statistics, adopted by the 9th International Conference of Labour Statisticians in April-May 1957.</p> <p>The <i>pensionable age</i> is defined according national circumstances, taking into the legal or standard retirement age. This age can vary both between and within countries, depending on the sector of activity, occupation, gender and so on.</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary). The target population includes employed persons below the statutory pensionable age, for example, 15 to 64.</p>
Recommended data source(s)	<p>Administrative record data from old-age pension schemes often give the most up-to date and comprehensive information to calculate the numerator for this indicator. However, the availability and quality of such data vary across countries, and across schemes within countries. Very often, administrative data trace certain administratively registered events (such as payment of contributions or benefits) rather than the persons behind such events. This may lead to double counting, in particular when aggregating administrative data. For example, a person can be contributing to the same</p>

Short name	Pension insurance coverage (4b1)
	<p>scheme through more than one job, or to more than one scheme covering the same contingency, or be receiving similar types of benefits from more than one source.</p> <p>Data from national household surveys (Labour Force Surveys in particular and Household Budget Surveys) can be used to estimate the numerator provided that persons contributing to an old-age pension scheme can be identified. Household surveys have the advantage of reducing the risk of double counting active contributors since the person is counted and not the contribution record (note that a person may contribute to more than one scheme).</p> <p>Establishment surveys may be used as an alternative source to estimate the numerator only when the information is not available from either administrative records or household surveys. One should bear in mind however that establishment surveys are limited to jobs of employees rather than employed persons. They can however be used as a benchmark rather than a substitute of Labour Force Survey data. When using establishment survey data, adequate care should be taken to ensure adequate geographic, industry coverage, etc.</p> <p>The source for the denominator will preferably be Labour Force Survey data.</p>
Recommended metadata	<p>For this indicator, it is recommended that as a minimum, metadata on the source (type of source, indication of the scheme(s) for which data are collected as well as the scheme(s) which should have been covered but for which data are not available), reference period and geographic coverage be made available.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age (youth aged 15-24 and adults aged 25-64) • Nationality • Status in employment (if social protection covers other groups than employees) • Economic activity (including agricultural and non-agricultural activities) • Public or private sector activities.
Interpretation guidelines	<p>The scope of this indicator is limited to contributory pension schemes which still represent a large majority of the existing pension schemes. However, some non-contributory schemes now exist, notably in developing countries, covering a larger part of the population than the contributory schemes which are limited to formal economy workers. Hence, the results (levels and changes over time) should be analysed in relation to the contextual information, in particular regarding the type of pension schemes and combination of schemes existing in the country: contributory schemes, provident funds, universal or targeted schemes; defined benefit versus defined contribution schemes; and, private versus public schemes.</p>

Short name	Pension insurance coverage (4b1)
	<p>This indicator of effective coverage should be analysed together with additional information on:</p> <ul style="list-style-type: none"> • The proportion of older persons above retirement age receiving an old age pension. When measuring the extent of effective coverage, a distinction has to be made between coverage measured in terms of protected persons (objective of indicator 4b1) and coverage measured in terms of actual beneficiaries which takes into account both contributory and non-contributory old age pension schemes. • Actual take up rates and benefit levels for employed persons and the population (if not available, at least in relation to statutory information on the legal replacement rate). • Information on the statutory provisions concerning eligibility for contributory benefits: groups covered, the minimum contributory period required for being eligible for any periodic benefit (like a partial pension); the minimum contributory period required for a full periodic benefit or pension (possibly different for men and women). • An estimate of the extent of statutory coverage, i.e., a quantification of the groups covered, according the law, by a contributory pension scheme. In estimating the extent of the statutory coverage, the information on the groups covered by statutory schemes for a given branch in national legislation is used, as well as available statistical information on the number of persons concerned at the national level.
Relation to other indicators	<p>The proportion of employed persons contributing to an old age pension scheme is usually strongly correlated with the proportion of employees (with a formal employment contract) in total employment which is also correlated with the level of GDP per capita. It is therefore recommended to analyse the indicator together with context indicators, in particular the GDP per capita and the proportion of persons aged 65 and over in employment.</p> <p>Old age pension schemes in some countries cover the labour force. That is, in addition to contributions by employed persons into these schemes, unemployed persons may contribute to an old-age pension scheme, in certain cases, on a voluntary basis. The present indicator, which is limited to employed persons, should be analysed in combination with a context indicator that includes groups statutorily covered by old age pension schemes. This is to assess the extent to which unemployed persons or other groups outside employment are also protected.</p> <p>The indicator should also be analysed together with the indicators of Dimension 2 (Income and benefits from employment, in particular Non-wage pecuniary benefits) and Sub-dimension 4a (Security of employment).</p>
International comparisons	<p>Differences in geographic coverage, age coverage, concept definitions should be kept in mind when comparing data across countries for this indicator. Also the time reference periods may differ (e.g., annual average versus a total figure for December) which will affect data comparability across countries.</p>

Short name	Pension insurance coverage (4b1)
	International comparisons need to take into account the substantial differences in national pension insurance systems. In particular, international comparisons of the indicator are particularly difficult in case of countries, in which pension insurance is not contingent on employment.
Recommended calculation in the EU-LFS or other international surveys	Not applicable.
Further readings	<p>CEPAL, 2012: Eslabones de la desigualdad Heterogeneidad estructural, empleo y protección social. Santiago de Chile: CEPAL. Available at: http://www.eclac.org/publicaciones/xml/2/47382/Eslabones_de_la_desigualdad.pdf</p> <p>Eurostat, 2012: ESSPROS Manual. The European System of integrated Social Protection Statistics (2012 edition). Available at: http://www.social-protection.org/gimi/gess/RessFileDownload.do?ressourceId=31988</p> <p>ILO, 1952: The Social Security (Minimum Standards) Convention, 1952 (No. 102). Available at: http://www.ilo.org/ilolex/cgi-lex/convde.pl?C102</p> <p>ILO, 1967: Invalidity, Old-age and Survivors' Benefits Recommendation, 1967(No.131). Available at: http://www.ilo.org/ilolex/cgi-lex/convde.pl?C128</p> <p>ILO, 2005: ILO Social Security Inquiry 2005 Manual. Geneva: ILO. Available at: http://www.socialsecurityextension.org/gimi/gess/RessFileDownload.do?ressourceId=6622</p> <p>ILO, 2012: Measuring informality: A statistical manual on the informal sector and informal employment, International Labour Office – First edition –Geneva: ILO, 2012. Available at: http://www.ilo.org/global/statistics-and-databases/WCMS_182299/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators. Concepts and definitions. ILO Manual, second version, 2013, Geneva: ILO. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_223121.</p> <p>ILO, 2014: World Social Protection Report 2014-15. Building economic recovery, inclusive development and social justice. Geneva: ILO 2014. Available at: http://ilo.org/global/research/global-reports/world-social-security-report/2014/lang--en/index.htm</p>

Short name	Unemployment insurance coverage (4b2)
Name	Percentage of employees that are active contributors to an unemployment insurance scheme
Dimension and sub-dimension	4. Security of employment and social protection <ul style="list-style-type: none"> a. Security of employment b. Social protection
Measurement objectives	<p>This indicator aims to capture the share of employees protected for the contingency of unemployment through a contributory unemployment scheme. Periodic cash benefits are guaranteed in case the employee becomes unemployed but such benefits are not being received.</p> <p>It does not take into account the effective coverage by non-contributory unemployment schemes or general income support provided through social assistance which can only be assessed in terms of actual beneficiaries (i.e., unemployed who did not work even for one hour during the reference period and received unemployment benefits) rather than protected persons.</p> <p>This indicator is important in terms of quality of employment as it provides information about the proportion of employees entitled to regular periodic cash benefits (as income replacement) in case they become (involuntarily) unemployed. This right to income security in case of unemployment is guaranteed by the prior payment of premiums or contributions, i.e., before the occurrence of the insured contingency.</p> <p>Combined with other indicators of security of employment, the contribution to social security forms part of the set of criteria recommended to define formal employment, in particular in developed countries. Entitlement to lump sum payments can be more appropriate in developing countries, even though the resulting protection level is lower.</p>
Formula	$\frac{\text{Number of employees who are active contributors to an unemployment social insurance scheme}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p><i>Protected persons</i> or <i>affiliated persons</i> are persons who are insured by the social protection scheme. This includes persons who are active contributors, as well as persons who have not made any contributions or on whose behalf no contributions have been made during the reporting period but who are still protected by the scheme and would benefit should a contingency arise. Protected persons have guaranteed benefits but are not necessarily currently recipients of such benefits, e.g., employees who actively contribute to social unemployment insurance and have thus guaranteed benefits for periodic cash benefits in case they become unemployed (involuntarily). In countries where voluntary coverage is effectively implemented usually as a result of incentives to join (i.e., co-financed by the employer), this indicator should include those voluntarily covered.</p>

Short name	Unemployment insurance coverage (4b2)
	<p data-bbox="481 250 1393 385"><i>Active contributors</i>, a subset of the affiliated or protected population, are insured individuals who have made at least one contribution to the scheme or on whose behalf at least one contribution has been made during the reporting period (e.g., the preceding 12-month period).</p> <p data-bbox="481 443 1393 542">As background, the <i>full range of unemployment benefits</i> (which include cash benefits (periodic or not) as well as benefits in kind) in a given country may include the following:</p> <ul data-bbox="481 560 1393 896" style="list-style-type: none"> <li data-bbox="481 560 1393 694">• Unemployment cash periodic benefits, which may include full unemployment benefit, partial unemployment benefit, early retirement benefit for labour market reasons and in some cases vocational training allowance which can either be periodic or not, depending on countries. <li data-bbox="481 712 1393 779">• Redundancy compensation, which is classified as cash non-periodic benefits. <li data-bbox="481 797 1393 896">• Unemployment benefits in kind, which refer to mobility and resettlement, vocational training, placement services and job-search assistance and other benefits in kind. <p data-bbox="481 954 1393 1196">However, contributions toward the full range of unemployment benefits are not to be considered for estimation of the numerator. The numerator should consider only contributions for entitlement to periodic cash unemployment benefits, i.e., at least full unemployment insurance benefits or early retirement benefit for labour market reasons. In case the scheme provides only entitlement to redundancy compensation benefits in kind, contributors should be excluded from the numerator.</p> <p data-bbox="481 1254 1393 1424"><i>Full unemployment benefits</i>: benefits compensating for loss of earnings where a person is capable of working and available for work but is unable to find suitable employment or provide a minimally adequate (or better) income to persons entering or re-entering the labour market as unemployed persons.</p> <p data-bbox="481 1482 1393 1693"><i>Early retirement for labour market reasons</i>: periodic payments to older workers who retire before reaching the legal/standard retirement age due to unemployment or to job reduction caused by economic measures such as the restructuring of an industrial sector or of a business. These payments normally cease when the beneficiary becomes entitled to an old age pension.</p> <p data-bbox="481 1751 1393 1886">Data to be considered to calculate the indicator are either the annual average or the total value for December of a given year (especially when using administrative record data). The option retained for the numerator should be consistent with data used for the denominator.</p> <p data-bbox="481 1944 1393 2004"><i>Employees</i> are defined according to the International Classification of Status in Employment (ICSE), adopted by the 15th International Conference of</p>

Short name	Unemployment insurance coverage (4b2)
	<p>Labour Statisticians in January 1993 (see glossary).</p> <p>The target population for this indicator is the set of working-age <i>employees</i> below the statutory pensionable age, for example, 15 to 64. If data sources are used that do not provide information on employee age, the full set of data should be used.</p> <p>The scope of the numerator for this indicator is the set of employees contributing to an unemployment insurance scheme that provides entitlement to periodic cash unemployment benefits in case of unemployment. Employees entitled to a lump sum severance payment in place of a periodic (e.g., monthly) cash benefit as income replacement while unemployed are excluded from the numerator.</p> <p>The focus of the indicator is on public unemployment schemes. A parallel indicator could be developed to capture the proportion of employees covered for a lump sum severance payment in countries with providing severance payment in case of unemployment, In such countries, lump sum severance payment in practical terms follows the same basis of calculation regarding period of contributions and salary levels. This parallel indicator should be considered separately given that in the absence of a regular and predictable unemployment benefit, the level of income security provided to the unemployed is far lower.</p> <p>In contributory schemes, entitlement to a benefit is based on contributions from insured persons and/or their employer.</p> <p>The numerator focuses on active contributors who are a sub-group of the affiliated or protected population.</p> <p>The reference population is the total number of employees (either in formal or informal employment). As a number of countries extend the coverage to self-employed, an alternative indicator could consider total employment in both the numerator and the denominator.</p> <p>For further information refer to the Resolution concerning the development of social security statistics, adopted by the 9th International Conference of Labour Statisticians in April-May 1957.</p>
<p>Recommended data source(s)</p>	<p>Administrative record data from unemployment social insurance schemes often give the most up-to-date and comprehensive information to calculate the numerator for this indicator. However, the availability and quality of such data vary across countries, and across schemes within countries, taking into consideration that unemployment insurance mechanisms are still mainly in place in developed countries.</p> <p>Very often, administrative data trace certain administratively registered</p>

Short name	Unemployment insurance coverage (4b2)
	<p>events (such as payment of contributions or benefits) rather than the persons behind such events. This may lead to double counting, in particular when aggregating administrative data. In the case of unemployment however, this risk of double counting is limited as most countries have a single social insurance scheme. Occasionally, such a scheme is complemented by another scheme, usually non-contributory, to cover unemployed persons who do not qualify for or are no longer entitled to unemployment benefits from the contributory scheme.</p> <p>Data from national household surveys (Labour Force Surveys in particular and Household Budget Surveys) can be used provided that employees contributing to an unemployment insurance scheme can be identified and that the number of persons concerned is sufficient to provide representative results (based on a sample survey).</p> <p>Establishment surveys can possibly be an alternative source, for example data from an employee benefits survey, ensuring an adequate coverage of employees in the survey.</p> <p>The source for the denominator will preferably be census data or Labour Force Survey data.</p>
Recommended metadata	<p>For this indicator, it is recommended that as a minimum, metadata on the source (type of source, i.e., administrative, labour force survey or establishment survey), name(s) of the scheme(s) for which data are collected, reference period and geographic coverage be made available.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age (youth aged 15-24 and adults aged 25-64) • Nationality • Status in employment (if social protection covers other groups than employees) • Economic activity (including agricultural and non-agricultural activities) • Public or private sector activities.
Interpretation guidelines	<p>Unemployment social insurance schemes exist in less than 50 percent of countries worldwide. In countries where such a provision is in place, unemployment benefit schemes provide income support, usually over a limited period, to those who face temporary unemployment. The objective is to provide at least partial replacement of labour income to unemployed persons, enabling the beneficiary to maintain a certain standard of living during the transition period until a job is secured.</p> <p>The scope of this indicator is limited to active contributors to contributory unemployment schemes which still represent the large majority of unemployment schemes. This indicator of effective coverage should be analysed together with additional information on:</p> <ul style="list-style-type: none"> • Actual benefit levels expressed in nominal monthly terms in local

Short name	Unemployment insurance coverage (4b2)
	<p>currency or as a proportion of average or median earnings.</p> <ul style="list-style-type: none"> • The percentage of unemployed (non-working unemployed) receiving unemployment insurance benefits (full unemployment benefits or early retirement benefit for labour market reasons). • Information on the statutory provisions concerning eligibility for contributory benefits (such as the minimum contributory period required for being eligible for full unemployment benefits; whether all job loss is acceptable, or those dismissed/fired or those who quit are not eligible. Also specify whether those only available for part-time work are eligible for UI benefits), the maximum duration of entitlement to full unemployment benefits and subsequently the existence and duration of unemployment benefits at a reduced level (for the long-term unemployed), and the existence of unemployment provisions for young people. • An estimate of the extent of statutory coverage, i.e., the quantification of the groups covered by a contributory unemployment scheme according to national legislation. In estimating the extent of the statutory coverage, the information on the groups covered by statutory schemes for a given branch in national legislation is used, as well as available statistical information on the number of persons concerned at the national level. • Information on the existence of non-contributory unemployment benefits or general social assistance benefits to provide income to the unemployed whose entitlements to contributory unemployment insurance benefits expire or who were not eligible to contributory benefits. Information on qualifying conditions (existence of means-test for example), levels and duration of benefit from these non-contributory schemes should be provided as well. <p>Finally, it would be important to take into consideration active training, retraining and other active labour market policies to support the integration of unemployed persons into employment.</p>
<p>Relation to other indicators</p>	<p>It is important to know the level and percent distribution of employment by status in employment in order to understand the relative importance of employees (the reference population for this indicator) among employed persons in the economy.</p> <p>The proportion of employees contributing to a social insurance scheme (and notably to unemployment insurance schemes) might be correlated with the economic cycle (albeit probably less so than the number of the recipients of unemployment insurance benefits) and it is therefore recommended to analyse the indicator together with context indicators, in particular the GDP growth.</p> <p>The indicator should also be analysed together with indicators of Dimension 2 (Income and benefits from employment, in particular Non-wage pecuniary benefits) and Sub-dimension 4a (Security of employment).</p>

Short name	Unemployment insurance coverage (4b2)
International comparisons	Differences in geographic coverage, age coverage, and concept definitions should be kept in mind when comparing data across countries for this indicator. Also the time reference periods may differ (e.g., annual average versus a total figure for December) which will affect data comparability across countries.
Recommended calculation in the EU-LFS or other international surveys	Not applicable.
Further readings	<p>Eurostat, 2012: ESSPROS Manual - The European System of integrated Social Protection Statistics (2012 edition). Available at: http://www.social-protection.org/gimi/gess/RessFileDownload.do?ressourceId=31988</p> <p>ILO, 1952: The Social Security (Minimum Standards) Convention, 1952 (No. 102). Available at: http://www.ilo.org/ilolex/cgi-lex/convde.pl?C102</p> <p>ILO, 1988: Employment Promotion and Protection against Unemployment Convention, 1988 (No. 168). Available at: http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_ILO_CODE:C168</p> <p>ILO, 2012: Measuring informality: A statistical manual on the informal sector and informal employment, International Labour Office – First edition –Geneva: ILO, 2012. Available at: http://www.ilo.org/global/statistics-and-databases/WCMS_182299/lang--en/index.htm</p> <p>ILO: World Social Protection Report 2014-15. Building economic recovery, inclusive development and social justice. Geneva: ILO 2014. Available at: http://ilo.org/global/research/global-reports/world-social-security-report/2014/lang--en/index.htm</p>

Short name	Medical insurance coverage (4b3)
Name	Percentage of employed persons who are active contributors to a medical insurance plan/scheme related to their employment
Dimension and sub-dimension	4. Security of employment and social protection <ol style="list-style-type: none"> a. Security of employment b. Social protection
Measurement objectives	<p>Employment-based medical insurance (supplementary or not) can be considered a part of the compensation attached to a job. In cases where the employer provides all, or part, of the insurance premium, the medical insurance is part of the compensation package. In cases where the employed person pays the premium in full, the access to the health insurance pool at a group rate is considered both a means of access to social protection and a benefit from employment.</p> <p>The objective of this indicator is to focus on employment-based (or industry-based, occupation-based or union-based) plans because they are part of the characteristics and benefits of a job. Still, this indicator should be analysed in conjunction with the context information on mandated national/social health insurance schemes, if any. Where mandated schemes are in effect, employed persons may also have the possibility to have an employer contribution to, or contribute on a voluntary basis to, supplementary medical insurance schemes (e.g., employer-based supplementary plans). Some supplementary plans are not attached to the job and are not included here.</p>
Formula	$\frac{\text{Number of employed persons who are active contributors to an employment-based medical insurance scheme}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Active contributors</i> (see glossary).</p> <p><i>Medical insurance schemes</i> are affected by national legislation and practice. They may encompass any of the following categories or a combination of the following:</p> <ul style="list-style-type: none"> • Social health insurance (financed by both employers and employees based on national legislation/mandate for all formal sector employees and the self-employed who finance it themselves). • National health insurance (financed by employers, employees and subsidised by governments whereby employers share the contribution with their employees and the self-employed cover themselves while governments cover others e.g., poor). National health insurance is not to be confused with National Health Systems covering the whole population without any link to employment (for National Health Systems, the indicator is of limited relevance). • Employer-based insurance schemes fully funded by employers and only available for employees in one enterprise or a group of enterprises. • Employer-based supplementary insurance covering costs that are not covered (for example in national or social health insurance schemes).

Short name	Medical insurance coverage (4b3)
	<p>This insurance is funded by premiums from employers and employees, or fully funded by employers.</p> <ul style="list-style-type: none"> • Private insurance paid for by employers for their employees. <p>The self-employed may pay for private medical insurance for themselves.</p> <p>Other variations or combinations may include: insurance under national legislation that is not mandatory but for which the premium is tax exempt.</p> <p>Each country may need to indicate if coverage is for individual worker only or for family members.</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data from national household surveys (Labour Force Surveys in particular) can be used to estimate the numerator provided that employed persons who are active contributors to an employment-based health insurance scheme can be identified. Labour Force Surveys have the benefit of including information on all employed persons, both self-employed and employees. Household surveys have the advantage of reducing the risk of double counting active contributors since the person is counted and not the contribution record (note that a person may contribute to more than one scheme).</p> <p>Establishment surveys such as employee benefits surveys can be used as an alternative source to estimate the numerator, but worker coverage will be limited to employees only. Such surveys can provide information on employees who contribute to medical care premiums and/or whose employers are contributing to such premiums. Labour cost survey data may in some cases be used as a second best establishment survey source; however they would provide information only on employees for whom contributions are made by employers, but not on employees who contribute to such schemes without support from employers. When using establishment survey data, due care should be taken to ensure adequate geographic and industry coverage.</p> <p>Administrative record data from medical insurance schemes can provide up-to-date and comprehensive information to calculate the numerator for this indicator. However, the availability and quality of such data vary across countries, and across schemes within countries. Very often, administrative data trace certain administratively registered events (such as payment of contributions or benefits) rather than the persons behind such events. This may lead to double counting. (For example, a person can be contributing to the same scheme through more than one job, or to more than one scheme covering the same contingency.)</p>

Short name	Medical insurance coverage (4b3)
	<p>In countries with high collective bargaining coverage, administrative records on collective agreements that include employment-based health insurance scheme information on employees could be used as an alternative.</p> <p>The source for the denominator will preferably be Labour Force Survey data.</p>
Recommended metadata	<p>For this indicator, it is recommended that as a minimum, metadata on the source (type of source, indication of the scheme(s) for which data are collected as well as the scheme(s) which should have been covered but for which data are not available), periodicity, breaks in series, reference period, population coverage, and geographic coverage be made available. Any deviation from the above definitions and recommendations should be documented.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Status in employment • Economic activity (ISIC) • Full-time and part-time workers • Those receiving an employer contribution to the insurance premium and those who pay the whole premium • Kind of scheme: social or national insurance vs. supplementary insurance • Coverage: individual or including family members • Occupation group (ISCO-08) • Public and private sector • Size of establishment
Interpretation guidelines	<p>Having an employment-based medical insurance plan in countries with no national health insurance, or a supplementary medical plan in countries with universal plans, can be considered as a benefit, in monetary terms, but also as regards social insurance. A higher share of employed persons who are active contributors to such a plan could be interpreted as higher quality of employment.</p> <p>Compulsory public medical insurance schemes are commonplace in European countries. Their coverage and the benefits they provide may differ from country to country and a proper interpretation requires considering (please refer to the Context Information). The share of employed persons with a supplementary medical plan is affected by the availability and the generosity of compulsory public medical insurance. If a universal medical insurance system becomes more generous over time, the attractiveness of supplementary plans may lessen and the percentage of active contributors to such plans may decrease. If this happens, it does not indicate a decrease in the quality of employment. Hence, it is important to interpret this indicator jointly with context information, particularly as regards the legal context and the generosity of the universal medical</p>

Short name	Medical insurance coverage (4b3)
	<p>insurance system.</p> <p>Fiscal regulations may also affect this indicator. Indeed, for fiscal reasons, employers can have incentives to replace taxed wages by benefits in kind, tax-exempt benefits or contributions to voluntary social security schemes.</p> <p>The elements here also apply to international comparisons.</p>
Relation to other indicators	<p>The interpretation of this indicator is influenced by the legal context for providing universal health/medical insurance in a country as well as for handling employment-based insurance (e.g., tax treatment of employer and employed person contributions).</p>
International comparisons	<p>Differences in geographic coverage, age coverage, worker coverage, and concept definitions should be kept in mind when comparing data across countries for this indicator. Also the time reference periods may differ (e.g., annual average versus a total figure for December) which will affect data comparability across countries.</p> <p>The indicator is of limited use in countries with national health systems covering the whole population without any link to employment.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Not applicable.</p>
Further readings	<p>ILO, 2014: World Social Protection Report 2014-15. Building economic recovery, inclusive development and social justice. Geneva: ILO 2014. Available at: http://ilo.org/global/research/global-reports/world-social-security-report/2014/lang--en/index.htm</p>

DIMENSION 5: SOCIAL DIALOGUE

Short name	Collective bargaining coverage rate (5.1)
Name	Percentage of employees covered by collective bargaining agreements
Dimension and sub-dimension	5. Social dialogue
Measurement objectives	This indicator gives the proportion of workers in paid employment whose pay and/or conditions of employment are determined by a collective agreement. It provides a measure of the reach of collective bargaining agreements and, as such, can help in assessing and monitoring the development of industrial relations.
Formula	$\frac{\text{Number of employees whose pay and/or conditions are determined by collective agreement}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p><i>Collective bargaining</i> and <i>collective bargaining agreement</i> as defined by ILO conventions C098 and C154 and the Resolution concerning statistics of collective agreements, adopted by the Third International Conference of Labour Statisticians, 1926 (see glossary).</p> <p><i>Employees</i> (age 15+): Employees are defined according to the ICSE-1993 (see glossary). According to national circumstances, it might be useful to include all employed persons for the calculation of the indicator as defined by the Resolution on work, employment and labour underutilisation, adopted by the 19th ICLS in 2013. In this case, the indicator should be disaggregated by status in employment. The denominator used should be documented in the metadata.</p>
Recommended data source(s)	<p>Common sources for statistics on collective bargaining coverage are administrative records (maintained by unions or government agencies). The numerator and denominator should have the same coverage.</p> <p>As an alternative, establishment surveys or labour force surveys can be used.</p>
Recommended metadata	<p>The coverage and the reliability of the data sources should be documented. The type of metadata to be provided depends on the source that has been used.</p> <p>In the case of administrative records, the reliability of the data depends on whether the registration of collective agreements is compulsory. Since the duration of collective agreements may vary, care should be taken to also capture the coverage of agreements which have been registered in previous year(s) but are still valid. Possible double counting problems of workers covered by agreements that are reached at different levels should be mentioned. Also, as registered agreements possibly have no expiry date, there may be some element of under- or over-representation which should be documented. Indeed in such a case information will only have been recorded when the agreement registration was first negotiated.</p> <p>In the case of a labour force survey, the worker coverage should be</p>

Short name	Collective bargaining coverage rate (5.1)
	<p>documented. Moreover, it is possible that many workers do not know their coverage status. Thus, a question on collective bargaining coverage can suffer from item non-response and information on the quality of the responses should be provided.</p> <p>In the case of an establishment survey, the firm size and sectorial coverage should be documented. Such surveys may exclude enterprises with a small number of workers or enterprises from specific sectors (e.g., informal sector) or economic activities (e.g., agriculture).</p> <p>Information about inclusion of workers indirectly covered by one or more collective agreement (e.g., through extension clauses) should also be indicated.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Economic activity (ISIC): sections or an aggregation of them • Occupation (ISCO-08): major groups or an aggregation of them • Institutional sector: public/private • Employees with fixed-term / open ended contracts
Interpretation guidelines	<p>While this indicator gives some indication as to the exercise of collective bargaining rights, it does not necessarily reflect the direct outcome of negotiations. It does, however, reflect the particularity of the industrial relations system and type of labour regulation to which a country subscribes. This includes the number of collective agreements reached, the bargaining structure, as well as the interaction between the collective bargaining process, administrative regulations and labour law.</p> <p>Centralised collective bargaining structures tend to be associated with high coverage rates. In countries with extension mechanisms, coverage is increased to include enterprises and workers who may not have participated in actual collective bargaining negotiations.</p> <p>The indicator should supplementarily be calculated in adjusted form, excluding those who may not have the right to bargain (e.g., certain public sector employees, agricultural workers, domestic workers etc.).</p>
Relation to other indicators	<p>As this indicator is computed using the total number of employees as the denominator, the share of employees in the employed population should be kept in mind. A high collective bargaining coverage rate does not necessarily mean that the majority of employed persons have access to the benefits of collective bargaining.</p> <p>The collective bargaining coverage rate should be analysed within the national context and should be interpreted within the appropriate legal framework. In particular, the exclusion of certain groups from the right to collective bargaining should be taken into account. It is advisable to calculate an additional collective bargaining coverage rate using as a denominator the number of employees who</p>

Short name	Collective bargaining coverage rate (5.1)
	<p>actually have the right to collective bargaining.</p> <p>It is recommended to analyse this indicator together with the trade union density rate (Indicator 5.2).</p>
International comparisons	<p>The Resolution concerning statistics of collective agreements adopted by the Third International Conference of Labour Statisticians in 1926 provides guidance to countries regarding the concept definition of collective agreements and frequency of recording such agreements, as well as other key aspects of statistics on collective agreements and their principal contents. Despite the existence of this international statistical standard, there is a high degree of methodological variation across countries and over time as regards statistics of collective agreements.</p> <p>The Resolution concerning the International Classification of Status in Employment (ICSE) adopted by the Fifteenth International Conference of Labour Statisticians in 1993 provides a statistical definition of employees. Nonetheless, there are differences in operational definitions of employees across countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>This indicator cannot be calculated from the EU-LFS.</p> <p>The ICTWSS database provides international data on collective bargaining coverage, based on registers or data obtained directly from trade unions. However, none of the breakdowns is available via this source.</p> <p>It is possible to calculate an indicator on collective bargaining coverage using the European Structure of Earnings Survey.</p> <p>Since 2009, the ILO has been publishing information on collective bargaining coverage by country with annual periodicity in the ILOSTAT database.</p>
Further readings	<p>Broughton, A. and C. Welz, 2013: Impact of the crisis on industrial relations. Dublin: European Foundation for the Improvement of Living and Working Conditions. Available at: http://www.eurofound.europa.eu/eiro/studies/tn1301019s/tn1301019s.htm</p> <p>Eurofound, 2012: Social dialogue in times of global economic crisis. Dublin: European Foundation for the Improvement of Living and Working Conditions. Available at: http://www.eurofound.europa.eu/publications/htmlfiles/ef1221.htm</p> <p>ILO, 1926: Resolution concerning statistics of collective agreements. Adopted by the Third International Conference of Labour Statisticians, 1926. Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087547/lang--en/index.htm</p>

Short name	Collective bargaining coverage rate (5.1)
	<p>ILO, 2013: Decent Work Indicators - Guidelines for producers and users of statistical and legal framework indicators. Second edition, Geneva: ILO. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang-en/index.htm</p> <p>ICTWSS: Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts in 34 countries between 1960 and 2012. Available at: http://www.uva-aias.net/207</p> <p>ILOSTAT Database of labour statistics, with statistics for over 100 indicators and 230 countries, areas and territories; includes information on collective bargaining coverage rate for different disaggregations. Available at: http://www.ilo.org/ilostat</p>

Short name	Trade union density rate (5.2)
Name	Percentage of employees who are members of one or more trade unions
Dimension and sub-dimension	5. Social dialogue
Measurement objectives	The trade union density rate provides a proxy measure of workers' representation and the influence of trade unions. It gives some indication of the extent of the exercise of freedom of association and it can help in assessing and monitoring the development of industrial relations.
Formula	$\frac{\text{Number of employees who are trade union members}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p><i>Trade Unions</i> are defined as an independent workers' organization constituted for the purpose of "furthering and defending the interests of workers" according to the ILO Convention on Freedom of Association and Protection of the Right to Organize, 1948 (C087) (see glossary).</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary). According to national circumstances, it might be useful to include all employed persons for the calculation of the indicator as defined by the Resolution on work, employment and labour underutilisation, adopted by the 19th ICLS in 2013. In this case, the indicator should be disaggregated by status in employment. The denominator used should be documented in the metadata.</p>
Recommended data source(s)	<p>The preferred source is a labour force survey or a similar household survey, such as a social survey, as they can provide both the numerator and the denominator for the indicator.</p> <p>As an alternative, administrative records maintained by unions, Ministries of Labour or other official government agencies can be used. In this case it is important that the numerator and the denominator cover the same population.</p>
Recommended metadata	The metadata should describe precisely which population is covered by the indicator: geographic coverage, worker coverage, sector coverage, age, etc. If administrative registers are used, possible problems of double-counting should be mentioned, and the extent of the problem estimated. Any deviation from the recommended definitions should be documented as well.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Economic activity (ISIC/NACE): sections or an aggregation of them • Occupation (ISCO-08): major groups or an aggregation of them • Institutional sector: public/private
Interpretation guidelines	When interpreting this indicator, it is important to take note of its coverage (geographic coverage, sectors, workers, etc.). Furthermore, it is essential to keep in mind how the definitions of trade unions and trade union

Short name	Trade union density rate (5.2)
	<p>membership are operationalised by the data source.</p> <p>The indicator should supplementarily be calculated in adjusted form, excluding those who may not enjoy the right of freedom of association (e.g., certain public sector employees, domestic workers etc.).</p>
Relation to other indicators	<p>While the trade union density rate gives some indication as to the extent of the exercise of freedom of association, it needs to be analysed within the national context (e.g., whether or not workers are free to organize strikes, etc.) and thus should be interpreted within the legal, cultural and institutional context. Furthermore, the trade union density rate should not be used as the sole indicator of the bargaining power of unions. Countries with low density rates may have a very high coverage of workers through collective agreements; countries with high density rates may have very poor social dialogue. However, high density rates do not necessarily reflect a situation where the majority of employees may exercise freedom of association, such as would allow them to potentially benefit from trade union membership.</p> <p>Moreover, the exclusion of certain groups from the right to join a trade union should be taken into consideration. It is advisable to calculate an additional trade union density rate using as a denominator the number of employees who actually have the right to unionise.</p> <p>It is recommended to analyse this indicator jointly with other social dialogue indicators, in particular collective bargaining coverage as well as relevant context information concerning the legal, cultural and institutional framework of social dialogue that can contribute to the understanding of freedom of association (of workers and employers), collective bargaining and social dialogue in a given country.</p>
International comparisons	<p>In particular as regards comparisons across countries, differences in unionisation do not necessarily reflect differences in social dialogue and should always be interpreted together with information regarding the institutional, cultural, and legal context.</p> <p>As there are no internationally agreed guidelines for the collection of trade union statistics at the country level, there is a high degree of methodological variation across countries and over time.</p> <p>The Resolution concerning the International Classification of Status in Employment (ICSE) adopted by the Fifteenth International Conference of Labour Statisticians in 1993 provides a statistical definition of employees. Nonetheless, there are differences in operational definitions of employees across countries.</p>
Recommended calculation in the EU-LFS or other	<p>This indicator cannot be calculated via the EU-LFS.</p> <p>The European Values Study has questions on membership in various</p>

Short name	Trade union density rate (5.2)
international surveys	<p>organizations, including trade unions. The recommended breakdowns are available via this survey.</p> <p>The ICTWSS database provides international data on trade union density, based on registers or data obtained directly from trade unions. However, none of the breakdowns is available via this source.</p> <p>Since 2009, the ILO has been publishing information on trade union density rate by country with annual periodicity in the ILOSTAT database.</p>
Further readings	<p>Carley, Mark, 2009: Trade Union Membership 2003-2008. Dublin: European Foundation for the Improvement of Living and Working Conditions. Available at: http://www.eurofound.europa.eu/eiro/studies/tn0904019s/tn0904019s.htm</p> <p>ILO, 2013: Decent Work Indicators - Guidelines for producers and users of statistical and legal framework indicators. Second edition, Geneva: ILO. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang-en/index.htm</p> <p>ILO, 1948: Convention concerning Freedom of Association and Protection of the Right to Organize (C087). Adopted by the 31st International Labour Conference, 1948. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C087</p> <p>ICTWSS: Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts in 34 countries between 1960 and 2012. Available at: http://www.uva-aias.net/207</p> <p>European Values Study: http://www.europeanvaluesstudy.eu/</p> <p>ILOSTAT Database of labour statistics, with statistics for over 100 indicators and 230 countries, areas and territories; includes information on trade union density rate for different disaggregations. http://www.ilo.org/ilostat</p>

Short name	Days not worked due to strikes and lockout (5.3)
Name	Days not worked due to strikes and lockouts per 1000 employees (or employed persons)
Dimension and sub-dimension	5. Social dialogue
Measurement objectives	Days not worked due to strikes and lockouts inform on the direct impact of labour disputes on production. In the context of quality of employment, it can provide indirect information on the effectiveness of social dialogue in a country.
Formula	$\frac{\text{Days not worked by employees due to strikes or lockouts}}{\text{Total number of employees (or employed persons)}} \times 1000$
Concepts and definitions	<p>The concepts of <i>strike</i>, <i>lockout</i> and <i>days not worked as a result of a strike or lockout</i> are defined according to the Resolution concerning statistics of strikes, lockouts and other action due to labour disputes adopted by the Fifteenth International Conference of Labour Statisticians in 1993 (see glossary).</p> <p><i>Employees</i> (age 15+): Employees are defined according to the ICSE-1993 (see glossary).</p> <p>Depending on the analytical interest, the denominator may either include all employees (or employed persons) or be restricted to employees who actually have the right to strike. The denominator used should be documented in the metadata.</p>
Recommended data source(s)	<p>The most common data sources for statistics on strikes and lockouts are administrative records (such as records of employers' or workers' organizations and/or labour relations records).</p> <p>Establishment surveys, as well as household based sample surveys, could also be used as a source of information.</p> <p>It is important that the numerator and denominator be coherent, i.e., they should have the same worker coverage.</p>
Recommended metadata	The metadata should indicate (i) the economic activities and sectors covered; (ii) the forms of action and reasons for labour disputes covered; (iii) any lower limits fixed for the coverage of the action, in terms of the number of workers involved, duration, amount of time not worked or any combination thereof. The metadata should also be explicit about the worker coverage of the numerator and denominator.
Recommended disaggregation	<ul style="list-style-type: none"> • Economic activity (ISIC): sections or an aggregation of them
Interpretation guidelines	It is of paramount importance to analyse this indicator in the broader context of industrial relations, together with information regarding the legal and institutional context as well as other economic indicators (see below).

Short name	Days not worked due to strikes and lockout (5.3)
Relation to other indicators	It is essential to analyse this indicator within the economic and social context (especially with reference to indicators of economic growth and labour productivity), and in relation to changes in employment opportunities/earnings and in legal provisions, for example, with reference to social security, termination of employment and the right to strike.
International comparisons	<p>The Resolution concerning statistics of strikes, lockouts and other action due to labour disputes, adopted by the Fifteenth International Conference of Labour Statisticians in 1993, represents the main reference in terms of methodological standards and guidelines for labour disputes statistics. However, in spite of the existence of these standards, there can still be differences in coverage between the countries, as well as in the definitions of the main concepts used.</p> <p>The Resolution concerning the International Classification of Status in Employment (ICSE) adopted by the Fifteenth International Conference of Labour Statisticians in 1993 provides a statistical definition of employees. Nonetheless, there are differences in operational definitions of employees across countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>This indicator cannot be calculated via the EU-LFS.</p> <p>Since 2009, the ILO has been publishing information on the rate of days not worked due to strikes and lockouts by country with annual periodicity in the ILOSTAT database. The information is based on the sources of statistics available at the national level, mainly labour relations records and other types of administrative records.</p>
Further readings	<p>Resolution concerning statistics of strikes, lockouts and other action due to labour disputes. Adopted by the Fifteenth International Conference of Labour Statisticians in 1993. Available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087544/lang--en/index.htm</p> <p>ILO, 2013: Decent Work Indicators - Guidelines for producers and users of statistical and legal framework indicators. Second edition, Geneva: ILO. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang--en/index.htm</p> <p>ILOSTAT: The ILO's Database on Labour Statistics with statistics on strikes and lockouts. www.ilo.org/ilostat</p> <p>European Commission, 2013: Industrial Relations in Europe 2012. – Luxembourg: Publications Office of the European Union. Available at: http://ec.europa.eu/social/main.jsp?catId=738&langId=fr&pubId=7498</p>

Short name	Days not worked due to strikes and lockout (5.3)
	Van der Velden, S. et al. (eds.), 2007: Strikes Around the World, 1968-2005. Case Studies of 15 Countries. Amsterdam: Amsterdam University Press.

Short name	Employer organization density rate (5.x) (experimental)
Name	Percentage of employees working in enterprises belonging to an employer organization
Dimension and sub-dimension	5. Social dialogue
Measurement objectives	This indicator gives the share of employees working in enterprises belonging to an employer organization. The indicator thus aims to provide information on the coverage and representativeness of employer organizations, which are a key partner in social dialogue.
Formula	$\frac{\text{Number of employees working in enterprises belonging to an employers' organisation}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p>As defined by the 2008 System of National Accounts, an <i>enterprise</i> is an institutional unit which is a producer of goods and services. The term enterprise may refer to a corporation, a quasi-corporation, a non-profit institution or an unincorporated enterprise.</p> <p><i>Employer organizations</i> are institutions that are set up to organize and advance the collective interests of employers. Employer organizations fulfil a variety of functions. The issues of membership growth, income generation and improvement of relations with members are important for all employer organizations. The historic <i>raison d'être</i> for many employer organizations is their direct role in the collective bargaining process. However, employer organizations are also involved in influencing labour market and industrial relations environments in other ways, for example through participation in statutory bodies, consultations on labour market issues, as well as lobbying activities on behalf of their members.</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	The data for this indicator may come from business registers and employer organizations such as tax records, etc. As an alternative, establishment surveys could be used. Internationally harmonised data on employer organization membership in European countries are also available from the European Company Survey, carried out every four years since 2004.
Recommended metadata	The metadata should describe various aspects of the indicator coverage: geographic coverage, worker coverage, sector coverage (formal only or formal and informal), age, enterprise size, and economic activity. If administrative registers are used, possible problems of double-counting should be mentioned. Any deviation from the recommended definitions should be documented as well.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Occupation (ISCO-08): major groups or an aggregation of them • Economic activity (ISIC): sections or an aggregation of them

Short name	Employer organization density rate (5.x) (experimental)
	<ul style="list-style-type: none"> • Institutional sector: public/private • Enterprise size: size classes based on the number of employees
Interpretation guidelines	<p>The indicator provides information regarding the strength of enterprises that are members of employer organizations in terms of employee coverage. Thus, the higher the value of the indicator, the greater the strength in terms employee coverage of employers that are part of an organization seeking to advance the collective interests of employers. It is in essence the counterpart of the trade union density rate (when employees are used to calculate the indicator) and should be analysed together with that indicator when analysing the existence and strength (in employee numbers) of membership in social dialogue partner institutions. It should be noted that the indicator does not provide information regarding the effectiveness of employer organizations or of social dialogue in a given country.</p> <p>This indicator is likely to be restricted to formal sector enterprises, and therefore it should be analysed in light of the extent of informal sector activity in the economy. Even within the formal sector, some activities or sectors can be excluded. This can be the case for instance of small sized enterprises, public enterprises, farms, etc.</p>
Relation to other indicators	<p>As this indicator is likely to be restricted to formal sector enterprises, it is useful to consider data on the size of the informal sector, so as to inform on the overall representativeness of these organizations in terms of worker coverage.</p> <p>It is recommended to analyse this indicator jointly with other social dialogue indicators, in particular trade union density rate and collective bargaining coverage as well as information regarding the legal and institutional context of social dialogue that can contribute to the understanding of freedom of association (of workers and employers), collective bargaining and social dialogue in the country.</p>
International comparisons	<p>As there are no internationally agreed guidelines for the collection of these kinds of statistics at the country level, there can be a high degree of methodological variation across countries and over time.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Some information that can be used for the calculation of the indicator is available from the European Company Survey (see Eurofound 2013).</p>
Further readings	<p>Carley, Mark, 2010: Developments in social partner organisations – employer organisations. Dublin: European Foundation for the Improvement of Living and Working Conditions. Available at: http://www.eurofound.europa.eu/eiro/studies/tn0910049s/tn0910049s.htm</p> <p>Eurofound, 2013: Third European Company Survey: First findings. Available</p>

Short name	Employer organization density rate (5.x) (experimental)
	<p data-bbox="523 241 1359 315">at: http://www.eurofound.europa.eu/pubdocs/2013/86/en/2/EF1386EN.pdf</p> <p data-bbox="443 369 1331 544">ILO, 2013: Decent Work Indicators - Guidelines for producers and users of statistical and legal framework indicators. Second edition, Geneva: ILO. Available at: http://www.ilo.org/stat/Publications/WCMS_223121/lang-en/index.htm</p> <p data-bbox="443 598 1359 772">Convention concerning Freedom of Association and Protection of the Right to Organize (C087). Adopted by the 31st International Labour Conference, 1948. Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C087</p> <p data-bbox="443 826 1342 936">ICTWSS: Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts in 34 countries between 1960 and 2012. Available at: http://www.uva-aias.net/207</p>

DIMENSION 6: SKILLS DEVELOPMENT AND TRAINING

Short name	Training participation (6.1)
Name	Percentage of employed persons having received job-related non-formal education and training in the last 12 months
Dimension and sub-dimension	6. Skills development and training
Measurement objectives	The aim of this indicator is to capture the participation of employed persons in learning activities undertaken in order to obtain knowledge and/or learn new skills needed for a current or a future job. In order to measure in which way they improve their job-related knowledge or skills, the focus is on job-related non-formal education and training only. In the context of quality of employment, this form of training can influence employability and job security in a positive way and lead to better work motivation.
Formula	$\frac{\text{Number of employed persons who received job related nonformal education and training in the past 12 months}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Non-formal education</i> (see glossary).</p> <p><i>Job-related training</i> (see glossary).</p> <p>Job-related non-formal education and training might take place during work time or outside work time either in the workplace or outside the workplace, either paid by or not paid by one's employer.</p> <p><i>Employed persons</i>: employment defined according to the resolution of the 19th ICLS in 2013 (see glossary). The indicator should refer to employed persons of 25 to 64 years as the formal education takes an important part in the age group of 15-24 years.</p>
Recommended data source(s)	A labour force survey or other household-based survey is recommended as the data source, as it permits estimation of the number of employed persons and allows disaggregation by demographic variables such as sex, age group and economic activity. There are different internationally harmonised sources for the measurement of job-related training (see Recommended calculation in the EU-LFS or other international surveys such as the EU Adult Education Survey, the ISSP or EWCS).
Recommended metadata	As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Educational attainment level • Status in employment according to the ICSE-93

Short name	Training participation (6.1)
	<ul style="list-style-type: none"> • Self-employed workers vs. employees (in particular) • Full-time vs. part-time workers • Occupation (ISCO-08) • Economic activity (ISIC) • Training paid for by the employer vs. training paid for by the employee • Training subsidised by the state
Interpretation guidelines	<p>Participation in job-related non-formal education and training can lead to increased employability and permits workers to improve their job opportunities. Increasing earnings, better job-security and higher work motivation can also result, as well as higher participation in the labour market and lower or shorter unemployment periods (see further readings).</p> <p>Nevertheless, not all employed persons have the opportunity to participate in non-formal education and training. The type, duration, timing and costs of courses; the personal situation and availability of the worker; the relevance to the actual job; and the employer's supportiveness can all impact participation.</p> <p>Informal learning, such as on-the-job-training, is not considered here (intentional, less structured and organized), but these forms of training also have an influence on the improvement of job-related knowledge.</p> <p>As there seems to be a positive effect of job-related non-formal education and training on employed persons, an increase in participation should generally be interpreted as positive. Nevertheless, the volume of training is also relevant, as higher participation in training can lead to additional stress and work intensification.</p>
Relation to other indicators	<p>This indicator should be analysed in relation with indicator 6.2 (volume of job-related training), 6.3 (usefulness of training) and 6.6 (persons who have the opportunity to use their knowledge and skills in their current job) to capture the whole topic.</p> <p>Since participation in non-formal education may influence work motivation, this indicator could be analysed together with Sub-dimension 7b (work motivation).</p> <p>The economic context could play a role in participation of job-related training: in times of economic downturn there are less financial resources available for additional training.</p> <p>Part of collective bargaining can be measures taken to increase the employability of employees. A common analysis with indicator 5.1 may be pertinent. Participation also depends on the willingness of the employer, so it may also be interesting to compare it with 7a2, the quality of the relationship with the supervisor.</p>

Short name	Training participation (6.1)
<p>International comparisons</p>	<p>Interpretation might be difficult due to differences of national education or training systems and different behaviours regarding lifelong learning, the interplay of formal, non-formal and informal learning, the economic situation, etc.</p>
<p>Recommended calculation in the EU-LFS or other international surveys</p>	<p>As mentioned under <i>recommended data sources</i>, there are four different surveys with available information. The following variables can be used:</p> <p>EU Adult Education Survey (AES) (2007, 2011): The reference period of the AES is the 12 months before the interview; AES captures all non-formal learning activities (courses, workshops or seminars, private tuition (private lessons), guided on-the-job-training). AES refers to population aged 25-64. Job-related training can be identified for each non-formal learning activity covered. Combination of different variables to determine the target population (NFE + NFEPURP10 + any NFEPURPx for detailed information).</p> <p>LFS: Target population: employed persons participating in job-related training (COURATT=1 and COURPUR=1): The EU-LFS question about non-formal education and training refers to the last four weeks instead of the past 12 months. COURATT covers courses, workshops or seminars and private tuition (private lessons). However, guided on-the-job training should be excluded; the variable has to be crossed with the type of learning activity (COURPUR: mostly job related – this is an optional variable in the current LFS). This source is recommended to analyse the evolution of job-related non-formal education and training as the LFS provides annual data. A question about participation in education and training in the last 12 months is planned to be integrated in the EU-LFS in 2018-2020 (to be collected every 2 years).</p> <p>European Working Conditions Survey (EWCS): Types of training to improve the skills (Q61): Training paid for or provided by your employer or by yourself if self-employed (Q61Q=1), Training paid by yourself (Q61B=1). The target population in the EWCS is employed persons who have participated in continuing education or training (in the past 12 months) to improve their skills. Data of the EWCS are available every five years since 1990.</p> <p>International Social Survey Programme (ISSP): In the module on work orientation, the question about training to improve job skills over the past 12 months; data are available for the years 1989, 1997, 2005, (2015). Target population: Training to improve the job skills (Q18(N)=1).</p>

Short name	Training participation (6.1)
	<p>The age coverage is 25-64 as suggested above.</p>
<p>Further readings</p>	<p>Hansson, B., 2008: "Job-Related Training and Benefits for Individuals: A Review of Evidence and Explanations", OECD Education Working Papers, No. 19, OECD Publishing. Available at: http://www.oecd-ilibrary.org/education/oecd-education-working-papers_19939019?page=2</p> <p>Deborah Sussman, 2002: "Barriers to job-related training". Available at: http://www.statcan.gc.ca/studies-etudes/75-001/archive/e-pdf/5022962-eng.pdf</p> <p>Eurostat, 2006: Classification of learning activities manual, European Communities, ISSN 1725-0056. Available at: http://www.uis.unesco.org/StatisticalCapacityBuilding/Workshop%20Documents/Education%20workshop%20dox/2010%20ISCED%20TAP%20IV%20Montreal/NFE_CLA_Eurostat_EN.pdf</p> <p>Eurostat, 2013: EU Labour Force Survey. Explanatory Notes from 2014 onwards. Luxembourg: Eurostat. Available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/documents/EU_LFS_explanatory_notes_from_2014_onwards.pdf</p> <p>Sebastian Fritsche, 2012: "Determinants of Training Participation: A Literature Review and Empirical Support from Personal-, Job-, Employer- and Health related Factors in Germany", Netspar THESES. Available at: http://arno.uvt.nl/show.cgi?fid=128033</p> <p>EWCS, 2012: Fifth European Working Conditions Survey – Overview Report. Available at: http://www.eurofound.europa.eu/publications/htmlfiles/ef1182.htm</p> <p>EWCO, 2007: Impact of training on people's employability. Available at: http://www.eurofound.europa.eu/ewco/reports/TN0506TR01/TN0506TR01.htm</p> <p>Relevant publications on the CEDEFOP website: http://libserver.cedefop.europa.eu/F?func=find-c&ccl_term=%28wde=%28work%20based%29%20or%20wde=%28in%20plant%29%29&local_base=lllib</p> <p>OECD, 2013: OECD Skills Outlook 2013. First results from the survey of adult skills. Available</p>

Short name	Training participation (6.1)
	<p data-bbox="564 248 1390 277">at: http://skills.oecd.org/documents/OECD_Skills_Outlook_2013.pdf</p> <p data-bbox="483 338 1347 472">UNESCO, 2012: International Standard Classification of Education. ISCED 2011. Montreal: UNESCO Institute of Statistics. Available at: http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx</p>

Short name	Volume of training (6.2)
Name	Volume of job-related non-formal education and training per participant in the last twelve months (in days)
Dimension and sub-dimension	6. Skills development and training
Measurement objectives	<p>This indicator measures the intensity of non-formal education and training. The volume of training may impact not only skills and employability. Depending of the intensity of the training, it may also be a source of stress and lead to work intensification (professional and personal).</p> <p>As it is impossible to differentiate between the volume of professional and personal training in the LFS, the total volume of training is proposed as an alternative.</p>
Formula	$\frac{\text{Total annual days spent on job - related training of all participants}}{\text{Total number of employed persons who have participated in job - related non - formal education and training}} \times 100$ <p>In addition to the mean volume, the indicator should also be presented as a distribution by selected intervals of days of training:</p> $\frac{\text{Number of employed persons whose volume of job - related training fell within selected intervals}}{\text{Total number of employed persons who have participated in job - related non - formal education and training}} \times 100$ <p>Suitable intervals might be (1) less than one day, (2) 1 day, (3) 2 days, (4) 3 days, (4) 5 days, (5) 6 days, (6) 7 days, (7) 8 days, (8) 9 days, (9) 10 days, (10) 11 or more days.</p>
Concepts and definitions	<p><i>Non-formal education</i> (see glossary).</p> <p><i>Job-related training</i> (see glossary).</p> <p><i>Volume of training</i>: number of days spent on all non-formal learning activities within the last twelve months.</p> <p><i>Employed persons</i>: employment defined according to the resolution of the 19th ICLS in 2013 (see glossary). The indicator should refer to employed persons of 25 to 64 years as the formal education takes an important part in the age group of 15-24 years.</p>
Recommended data source(s)	A labour force survey or other household-based survey is recommended as the data source, as it permits estimation of the number of employed persons and allows disaggregation by demographic variables such as sex,

Short name	Volume of training (6.2)
	<p>age group and economic activity.</p> <p>There are different internationally harmonised sources for the measurement of job-related training (see Recommended calculation in the EU Adult Education Survey or other international surveys such as the EU-LFS, the ISSP, EWCS or the European Social Survey).</p>
Recommended metadata	<p>As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided. Furthermore, the coverage of non-formal training (e.g., job-related or total) should be specified. The metadata should in particular specify how training time was defined operationally in the data source used (e.g., number of hours per day; specific instructions for part-time workers).</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Educational attainment level • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Full-time vs. part-time workers • Occupation (ISCO-08) • Economic activity (ISIC) • Participation in long versus short training activities
Interpretation guidelines	<p>Participation in job-related non-formal education and training can lead to increased employability and permits workers to improve their job opportunities. The volume of the training received may have an important impact on this effect. A higher volume of training can generally be assumed to provide better opportunities to improve knowledge and skills, as well as employability and work motivation. Depending on the volume, there might also be negative effects like additional stress, lack of time or work intensification.</p> <p>As there seems to be a positive effect of job-related non-formal education on employed persons, a greater volume could be seen as positive.</p> <p>Nevertheless, the volume of training is influenced by different factors, which leads to a more difficult interpretation: the type, duration, timing and costs of courses; the personal situation and availability of the worker; the relevance to the actual job; and the employer's supportiveness can all impact volume of training. A high volume of non-formal education can be a sign of a positive attitude of employers towards continuing education but also of a perceived deficit in the qualification of employees.</p>
Relation to other indicators	<p>This indicator should be analysed in relation with indicator 6.1 (participation in job-related training), 6.3 (usefulness of training), and 6.6 (skills match) to</p>

Short name	Volume of training (6.2)
	<p>capture the whole topic.</p> <p>Part of collective bargaining can be measures taken to increase the employability of employees. A common analysis with indicator 5.1 can be pertinent. Participation also depends on the willingness of the employer, so it can also be interesting to compare it with 7a2, the quality of the relationship with the supervisor.</p> <p>Since participation in non-formal education may influence work motivation, this indicator could be analysed together with Sub-dimension 7b (work motivation).</p> <p>The economic context could play a role in participation of job-related training: in times of economic downturn there are less financial resources available for additional training.</p>
International comparisons	<p>Interpretation might be difficult due to differences of national educational or training systems and different behaviours regarding lifelong learning, the interplay of formal, non-formal and informal learning, the economic situation, etc.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>The main EU data source on training and education is the adult education survey (AES). The AES 2011 measures the length of non-formal activities, and it can be identified if the activity was job-related or not (NFEPURPx and NFENBHOUSx). The reference period is the last 12 months.</p> <p>The duration of non-formal education is also measured in the EU Labour Force Survey (LFS), but it refers to all non-formal education (not only job-related). To calculate the indicator it is recommended to use the following LFS variables:</p> <p style="padding-left: 40px;">Number of hours spent on all taught learning activities within the last four weeks (COURLEN) (i.e., job-related and also not job-related).</p> <p style="padding-left: 40px;">The reference period of the EU LFS is the last four weeks.</p> <p>The European Social Survey covers volume of training in its module on family, work and well-being in 2004 and 2010:</p> <p style="padding-left: 40px;">Question F70a: About how many days in total have you spent on this training or education in the last 12 months? Please count two half days as one whole day.</p> <p>The EWCS 2000 included a question regarding volume of work, which will probably be reintroduced in EWCS 2015:</p> <p style="padding-left: 40px;">Q.29. Over the past 12 months, have you undergone training paid for</p>

Short name	Volume of training (6.2)
	or provided by your employer, or by yourself if you are self-employed, to improve your skills or not? (IF YES) For how many days?
Further readings	<p>Hansson, B., 2008: "Job-Related Training and Benefits for Individuals: A Review of Evidence and Explanations", OECD Education Working Papers, No. 19, OECD Publishing. Available at: http://www.oecd-ilibrary.org/education/oecd-education-working-papers_19939019?page=2</p> <p>Deborah Sussman, 2002: "Barriers to job-related training". Available at: http://www.statcan.gc.ca/studies-etudes/75-001/archive/e-pdf/5022962-eng.pdf</p> <p>Sebastian Fritsche, 2012: "Determinants of Training Participation: A Literature Review and Empirical Support from Personal-, Job-, Employer- and Health related Factors in Germany", Netspar THESES. Available at: http://arno.uvt.nl/show.cgi?fid=128033</p> <p>EWCS, 2012: Fifth European Working Conditions Survey – Overview Report. Available at: http://www.eurofound.europa.eu/publications/htmlfiles/ef1182.htm</p> <p>EWCO, 2007: Impact of training on people's employability. Available at: http://www.eurofound.europa.eu/ewco/reports/TN0506TR01/TN0506TR01.htm</p> <p>OECD, 2013: OECD Skills Outlook 2013. First results from the survey of adult skills. Available at: http://skills.oecd.org/documents/OECD_Skills_Outlook_2013.pdf</p>

Short name	Usefulness of training (6.3)
Name	Percentage of employed persons whose job-related non-formal education and training has helped improve the way they work
Dimension and sub-dimension	6. Skills development and training
Measurement objectives	This indicator measures the appropriateness of job-related education and training regarding the knowledge and skilled needed to (better) carry out the tasks and duties of the job. In the context of quality of employment the indicator measures if job related training provides additional skills and knowledge that are considered useful for the current job. If this is the case and the employee is aware of this fact then this leads to a higher productivity and work motivation.
Formula	$\frac{\text{Number of employed persons whose job - related non - formal education and training has helped improve the way they work}}{\text{Total number of employed persons who have participated in job - related non - formal education and training}} \times 100$
Concepts and definitions	<p><i>Non-formal education</i> (see glossary).</p> <p><i>Job-related training</i> (see glossary).</p> <p>Non-formal education and training <i>helping to improve the way of working</i> should be measured as the perception of the respondent. The concept has been operationalised differently by different surveys. The operationalisation applied in the European Working Conditions Survey (EWCS) asks the respondent to agree or disagree with the statement “The training has helped me improve the way I work”.</p> <p>Employed persons who have <i>participated in continuing education or training (in the past 12 months)</i>.</p> <p><i>Employed persons</i>: employment defined according to the resolution of the 19th ICLS in 2013 (see glossary). The indicator should refer to employed persons of 25 to 64 years as the formal education takes an important part in the age group of 15-24 years.</p>
Recommended data source(s)	<p>A household-based or other social survey is recommended as the data source, as it permits estimation of the number of employed persons and allows disaggregation by economic activity and demographic variables such as sex, age group, etc. Since the respondent’s own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.</p> <p>In Europe, the European Working Conditions Survey 2010 (EWCS) provides data on the usefulness of training as perceived by the respondent. The EWCS provides harmonised data for 34 European Countries. It should be noted that the sample size limits the possibilities for detailed analyses at the</p>

Short name	Usefulness of training (6.3)
	national level.
Recommended metadata	As a household-based survey is recommended a minimum data information on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided.
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Educational attainment level • Status in employment according to the ICSE-93 (particularly self-employed vs. employees) • Full-time vs. part-time workers • Occupation (ISCO-08) • Economic activity (ISIC)
Interpretation guidelines	<p>Non-formal job-related training perceived as useful will generally result in increased work motivation, willingness to take on more responsibilities, higher self-confidence and a better perception of personal usefulness. There may also be an effect of work intensification due to higher job demands in relation with work performance.</p> <p>If a concerned person thinks the training did not help him or her for her actual job, the training can nevertheless be considered useful, as the person has additional skills and knowledge for a future job.</p> <p>Therefore, a high number perceiving their job related training can generally be seen as positive.</p> <p>The improvement to a worker's way of working depends on the respondent's subjective perception and qualification. Effects can be exaggerated, e. g., due to a general positive attitude about continuing education or underestimated because positive effects are not obvious. The course could provide relevant knowledge and skills, but the person might not have the right educational prerequisites to apply them or already have known all the knowledge provided by the course.</p>
Relation to other indicators	<p>This indicator should be analysed in relation with indicator 6.1 (participation in job-related training), 6.2 (volume of job-related training) and 6.6 (opportunity to use the knowledge and skills in the current job) to capture the whole topic.</p> <p>As there might be an influence of participating in non-formal education to work motivation, this indicator could be analysed together with Sub-dimension 7b (work motivation).</p>
International comparisons	Interpretation might be difficult due to differences of national education or training systems and different behaviours regarding lifelong learning, the

Short name	Usefulness of training (6.3)
	interplay of formal, non-formal and informal learning, the economic situation, etc.
Recommended calculation in the EU-LFS or other international surveys	<p>To calculate the indicator it is recommended to use the following EWCS variables:</p> <p>Types of training to improve the skills (Q61): Training paid for or provided by your employer or by yourself if self-employed (Q61A=1), Training paid for by yourself (Q61B=1)</p> <p>Training helped improve the way of work (Q61_1A=1).The target population in the EWCS is employed persons who have participated in continuing education or training (in the past 12 months) to improve their skills. Data of the EWCS are available every five years since 1990.</p> <p>In addition, the EU adult education survey (AES) has information on reasons and outcomes of non-formal learning activities. It can be identified if the activity was job-related. (NFEOUTCOME_x, NFEREASON_x)</p>
Further readings	<p>Hansson, B., 2008: "Job-Related Training and Benefits for Individuals: A Review of Evidence and Explanations", OECD Education Working Papers, No. 19, OECD Publishing. Available at: http://www.oecd-ilibrary.org/education/oecd-education-working-papers_19939019?page=2</p> <p>Deborah Sussman, 2002: "Barriers to job-related training". Available at: http://www.statcan.gc.ca/studies-etudes/75-001/archive/e-pdf/5022962-eng.pdf</p> <p>Sebastian Fritsche, 2012: "Determinants of Training Participation: A Literature Review and Empirical Support from Personal-, Job-, Employer- and Health related Factors in Germany", Netspar THESES. Available at: http://arno.uvt.nl/show.cgi?fid=128033</p> <p>EWCO, 2007: Impact of training on people's employability. Available at: http://www.eurofound.europa.eu/ewco/reports/TN0506TR01/TN0506TR01.htm</p> <p>OECD, 2013: OECD Skills Outlook 2013. First results from the survey of adult skills. Available at: http://skills.oecd.org/documents/OECD_Skills_Outlook_2013.pdf</p>

Short name	Learning at work (6.4)
Name	Percentage of employed persons whose job involves improving their skills
Dimension and sub-dimension	6. Skills development and training
Measurement objectives	<p>This indicator measures whether a person has informal, on-the-job learning possibilities at work, i.e., whether the job and working conditions make it possible to develop one's skills in a non-organized way (outside training courses or workshops).</p> <p>The indicator is based on survey information on a person's own perception of his or her developing opportunities at work; the perception of the respondent complements other information like the job characteristics, as it depends to a large degree on the person's own ability and willingness to recognise these development opportunities and seize them.</p> <p>There are no international agreements and conventions on the issue.</p>
Formula	$\frac{\text{Number of employed persons whose job involves improving their skills}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Informal learning</i>, according to the International Standard Classification of Education (ISCED 2011), is defined as forms of learning that are intentional or deliberate, but are not institutionalised. It is consequently less organized and less structured than either formal or non-formal education (see glossary).</p> <p>The variable refers to informal learning at the workplace and should ask the respondent for his or her own perception of being able to learn and improve skills from co-workers or superiors while doing their job. The operationalisation of the variable in available international surveys varies. Examples for survey questions measuring the item include:</p> <ul style="list-style-type: none"> • EWCS 2010 Q49_F: "Generally, does your paid job involve learning new things? Yes/ No"; • PIAAC D_Q13a: "In your own job, how often do you learn new work-related things from co-workers or supervisors?"; D_Q13b "How often does your job involve learning-by-doing from the tasks you perform? Never / Less than once a month / Less than once a week but at least once a month / At least once a week but not every day/ Every day" ; • ISSP Module on Work Orientation 2005, 10(Q14).h(N): "My job gives me a chance to improve my skills: Strongly agree/ Agree/ Neither agree nor disagree/ Disagree / Strongly disagree". • AES2011 INF, INFPURP1,2: "Other than the activities discussed earlier, have you deliberately tried since the last 12 months to learn anything at work or during your free time to improve your knowledge or skills? Yes, one activity; Yes, more than one activity, No." "Purpose of the activity: Mainly Job related; Mainly Personal/Non-job related reasons"

Short name	Learning at work (6.4)
	<p>When several variables are available, they all should be analysed in comparison.</p> <p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data on employed persons whose job involves improving their skills should be collected in household or population surveys, e.g., Labour Force Surveys. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator. Variables suitable to calculate this indicator are available in the following international surveys:</p> <ul style="list-style-type: none"> • European Working Conditions Survey, EWCS (2005, 2010, 2015) • Programme for the International Assessment of Adult Competencies, PIAAC (2012) • International Social Survey Programme, ISSP, Module on Work Orientation (2005, 2015) • EU Adult Education Survey, AES (2011) • European Social Survey (ESS) <p>Each of the surveys has its advantages and drawbacks. The EWCS has the advantage of being carried out regularly, while it includes only one question. Analytical potential is restricted by the fact that there is no scale, but just a yes/no answer for the question under consideration. It might be helpful to use several data sources complementarily.</p> <p>National working condition surveys may be used as complimentary information as well.</p>
Recommended metadata	<p>As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided. In addition the metadata should include a detailed description of the survey methodology. Especially important is the exact wording of the survey question(s) (including the response categories and the scale).</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Level of education • Occupation (ISCO-08) • Economic activity (ISIC) • Fixed-term vs. open-ended contracts (employees)

Short name	Learning at work (6.4)
	<ul style="list-style-type: none"> • Full-time vs. part-time workers
<p>Interpretation guidelines</p>	<p>Skills acquisition, in general, can be considered one of the most important factors in job quality (Green/Mostafa 2012), which makes this indicator, in particular, important from the point of view of employment quality. Informal, non-organized learning opportunities at work, through daily tasks, contribute highly to skills acquisition. Skills development at work only partially takes place through organized learning activities such as training; employees spend much more time on informal, non-organized learning activities than on formal learning (cf. Borghans, Golsteyn and De Grip 2006).</p> <p>Training is not always available or accessible for all – for various reasons – which makes it all the more important to be able to improve one’s skills and learn by doing in the framework of one’s normal job.</p> <p>Jobs that require problem solving and complex tasks contribute to skills improvement more than monotonous tasks; moreover, educated persons might recognise further learning opportunities in their environment and be motivated to seize them more commonly than those with less initial education.</p> <p>Taking into account the above, the percentage of employed whose job involves improving their skills tends to increase when the educational level of the employed population increases and the share of white-collar jobs increases.</p> <p>Against this background, an increase in the indicator value should generally be interpreted as a positive sign of quality of employment. It is even more positive when the increase is not only explained by the structural changes among the employed, but when an increase is visible within different sub-groups as well.</p> <p>Learning at work might be strongly correlated with the age of the respondent. It is therefore recommended to control analysis by age groups.</p>
<p>Relation to other indicators</p>	<p>This indicator should be analysed in combination with the other indicators in this dimension; job-related training and learning by doing may be closely related.</p> <p>This indicator should be analysed also in combination with the dimension of work motivation, including opportunities to influence one’s work: opportunities to influence different aspects of one’s job – for instance, to try out and vary working methods – make it more possible to acquire further skills at work compared to situations where there is little room to influence one’s way of working.</p> <p>Moreover, development opportunities and learning at work contribute to work motivation as such.</p>

Short name	Learning at work (6.4)
International comparisons	<p>International comparisons are restricted by the fact that different countries may use different surveys and questions as the basis for this indicator, depending on what is available. Comparisons can only be made between countries who share the same survey question. Results from one country, based on EWCS, and those from another, based on PIAAC, are not directly comparable due to different methodology.</p> <p>The indicator reflects to a great extent the respondent's own perception. Not only the concrete learning opportunities, but also their interpretation as such may vary culturally, which affects international comparability.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>Several variables (survey questions) are proposed for the operationalisation of this indicator, because all of them are not available for all countries. For one country, as many variables can be used as available. This increases the possibility to make comparisons between different countries.</p> <p>For the EWCS question, the percentage of "yes"-replies should be reported;</p> <p>for the PIAAC, the percentage of respondents replying "At least once a week but not every day/ Every day";</p> <p>for ISSP the percentage of those replying "strongly agree" or "agree" should be reported;</p> <p>for AES, report the percentage of people who learned informally for work-related reasons (INFPURP1 =1 or INFPURP2=1).</p>
Further readings	<p>Borghans, L., B. Golsteyn and A de Grip, 2006: Meer werken is meer leren: Determinanten van kennisontwikkeling, 's-Hertogenbosch: CINOP. (Cited in OECD 2011)</p> <p>Erault, M., 2004: Informal learning in the workplace. In: Studies in Continuing Education, 26, pp. 248-273.</p> <p>European Commission, 2013: The Survey of Adult Skills (PIAAC): Implications for education and training policies in Europe. European Commission. Education and training. Available at: http://ec.europa.eu/education/news/doc/piaac_en.pdf</p> <p>Fuller, A., 2003: The Impact of Informal Learning at Work on Business Productivity. Final Report to the DTI. Leicester: University of Leicester. Available at: http://dera.ioe.ac.uk/10436/1/Impact%2520of%2520informal%2520learning.pdf</p> <p>Green, F. and T. Mostafa, 2012: Trends in job quality in Europe. Eurofound. Publications Office of the European Union, Luxembourg.</p> <p>OECD, 2011: PIAAC Conceptual Framework of the Background. Questionnaire Main Survey. November 2011. PIAAC(2011_11)MS_BQ_ConceptualFramework.docx</p>

Short name	Employability (6.5)
Name	Percentage of employed persons whose work experience and job skills would be helpful to find another job
Dimension and sub-dimension	6. Skills development and training
Measurement objectives	<p>This indicator measures the perceived employability of a person – his or her “labour market value” based on his or her work experience, knowledge and skills acquired. The indicator might be an important input to analysing the sustainability of employment. The indicator focusses on external employability (i.e., finding a job at another employer), but might be extended to internal employability according to the analytical interest.</p> <p>The indicator is based on survey information on a person’s own perception. This indicator would be very hard to be measured in a more objective way.</p> <p>There are no international agreements or conventions on the issue.</p>
Formula	$\frac{\text{Number of employed persons whose work experience and job skills would be helpful to find another job}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p>The variable should provide information on the perception of employed persons regarding the use of their experience and job skills for finding another job. The operationalisation of the variable in available surveys varies. An example is provided by the International Social Survey Programme:</p> <p style="padding-left: 40px;">ISSP Module on Work Orientation 2005, 17(N): “If you were to look for a new job, how helpful would your present work experience and/or job skills be? Very helpful/ Quite helpful/ Not so helpful/ Not helpful at all/ Can’t choose”.</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data on employed persons whose work experience and job skills would be helpful to find another job should be collected in household or population surveys, e.g., Labour Force Surveys. Since the respondent’s own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.</p> <p>A variable suitable to calculate this indicator is available in the International Social Survey Programme (ISSP) Module on Work Orientation (2005, 2015).</p> <p>A further source might be the European Social Survey (ESS).</p> <p>National working condition surveys may be used as complimentary</p>

Short name	Employability (6.5)
	information too.
Recommended metadata	As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided. In addition, the metadata should include a detailed description of the survey methodology. Especially important is the exact wording of the survey question(s) (including the response categories and the scale).
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Level of education • Occupation (ISCO-08) • Economic activity (ISIC) • Fixed-term vs. open-ended contracts (employees) • Full-time vs. part-time workers • Internal / external employability
Interpretation guidelines	<p>In the turbulence of today's labour markets, it is more and more important that workers accumulate such skills and experience through their work that would enhance their further employability in case of redundancies and the need to look for another job.</p> <p>According to the notion of psychological contract, employees expect their employer to provide them not only with remuneration but also with job security in exchange for their labour. Since such job security is getting less common in today's labour market, the notion of a new psychological contract has emerged, whereby employers are expected to provide their employees - instead of job security - with such opportunities as skills development, training and accumulation of human capital, which would enhance their employment security, i.e., employability, in the wider context of the labour market.</p> <p>One's perceived employability is naturally dependent on economic fluctuations: when unemployment is high, even solid work experience and high skills do not guarantee good chances for finding a job in a similar way as when there is a demand for workers. Moreover, structural changes in the labour market may increase demand for certain skills and work experience while decreasing demand for other types of skills. In this case it is not only one's level of skills or work experience that matter but also in which field of the economy they are achieved.</p> <p>Thus, an increase or decrease in the indicator is not only dependent on the change in skills level among the employed but can also be explained by economic factors or even by structural changes in the labour market.</p>

Short name	Employability (6.5)
	<p>In general, an increase of the indicator value should be interpreted - with the above considerations - as a positive sign of quality of employment.</p> <p>The perceived employability depends on the respondent's subjective perception and qualification. Effects can be exaggerated, e. g., due to a general positive attitude about continuing education or underestimated.</p>
Relation to other indicators	<p>This indicator should be analysed in combination with the other indicators in this dimension. Job-related training and its usefulness and jobs involving opportunities for skills development are closely related to how beneficial skills and experience are from the point of view of employability.</p>
International comparisons	<p>The indicator reflects a person's own perception of his or her employability. The interpretation of a certain situation may vary culturally but is also bound to concrete contextual factors like the structure of economy in a country, the distribution of population's educational attainment, the structure of the labour market, etc.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>ISSP 2005, 2015, Question 17(N): Report the percentage of "very helpful" and "quite helpful" in total.</p>
Further readings	<p>European Commission, 2013: The Survey of Adult Skills (PIAAC): Implications for education and training policies in Europe. European Commission. Education and training. http://ec.europa.eu/education/news/doc/piaac_en.pdf</p> <p>OECD, 2011: PIAAC Conceptual Framework of the Background. Questionnaire Main Survey. November 2011. PIAAC(2011_11)MS_BQ_ConceptualFramework.docx</p>

Short name	Skills match (6.6)
Name	Percentage of employed persons who have the opportunity to use their knowledge and skills in their current job
Dimension and sub-dimension	6. Skills development and training
Measurement objectives	<p>This indicator is a proxy for measurement of skills match, which is a concept difficult to otherwise operationalise. The indicator reflects to what extent a person may make use of his or her knowledge, skills and experience in the present job. A small extent would indicate that the person is overqualified for the job. The indicator is based on survey information on a person's own perception. This indicator would be very hard to be measured in a more "objective" way, still it should be analysed together with information on the respondent's educational attainment and the occupation.</p> <p>There are no international agreements or conventions on the issue.</p>
Formula	$\frac{\text{Number of employed persons who have the opportunity to use their knowledge and skills in their current job}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p>The variables aim at measuring the perception of the respondent, to which degree he or she can actually apply work experience, knowledge and skills in the present job. The operationalisation of the variable in available surveys varies. An example is provided by the International Social Survey Programme:</p> <p>ISSP Module on Work Orientation 2005, 16(Q19): "How much of your past work experience and/or job skills can you make use of in your present job? Almost none / A little / A lot / Almost all / Can't choose".</p> <p>Alternative approaches of operationalisation are available from the European Working Conditions Surveys (EWCS) and the Programme for the International Assessment of Adult Competencies (PIAAC).</p> <p><i>Employed persons</i> (age 15+): Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data on employed persons who have the opportunity to use their knowledge and skills in their present job should be collected in household or population surveys, e.g., Labour Force Surveys. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.</p> <p>A variables suitable to calculate this indicator is available in the International Social Survey Programme (ISSP) Module on Work Orientation (2005, 2015).</p>

Short name	Skills match (6.6)
	National working condition surveys may be used as complimentary information as well.
Recommended metadata	As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided. In addition the metadata should include a detailed description of the survey methodology. Especially important is the exact wording of the survey question(s) (including the response categories and the scale).
Recommended disaggregation	<ul style="list-style-type: none"> • Sex • Age • Nationality • Status in employment according to the ICSE-93 (particularly self-employed workers vs. employees) • Level of education (ISCO 08) • Field of education • Occupation (ISCO-08) • Economic activity (ISIC) • Fixed-term vs. open-ended contracts (employees) • Full-time vs. part-time workers
Interpretation guidelines	<p>This indicator serves as a proxy for skills match, i.e., it serves to measure whether a person's skills and those required in the job are roughly at the same level. The approach is one-sided, measuring whether the person has opportunity to make full use of his or her skills and competences in the job or whether he or she is overqualified for the job. This can be considered more relevant and accurate information, and easier to measure, than information on underqualification.</p> <p>However, when interpreting the indicator one should bear in mind that, although the skills match in the job would be quite ok, a person probably possesses additional skills in other areas (such as artistic, linguistic etc.) which he/she might not be able to use in the job and would not even expect to. This is why the variable recommended for this indicator, a survey question from the ISSP Module on Work Orientation, focuses on the job experience and job skills, not skills in general.</p> <p>A high number and an increase in the indicator can generally be interpreted as a positive sign from the quality of employment perspective.</p> <p>The indicator relies on the respondent's subjective perception, which should be taken into account when interpreting the results.</p> <p>The subjective approach proposed for this indicator should be complemented by using disaggregations by the highest level of education and occupation.</p>

Short name	Skills match (6.6)
Relation to other indicators	<p>This indicator should be analysed in combination with the other indicators in this dimension. Opportunity to use one's skills at work is close to the opportunities to develop those skills further on the job, i.e., to the indicator on jobs involving opportunities for skills development (6.4). All this enhance employability (6.5) as well.</p> <p>The indicator should be analysed also in relation to the Dimension 7 indicators, since it is known that skills match is an important determinant of job satisfaction (Green/Mostafa 2012) and brings the issue close to work motivation.</p>
International comparisons	<p>The indicator reflects a person's own perception, which again may involve cultural interpretations. Attention should also be paid to the accuracy of translation in different countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>ISSP 2005, 16(Q19): Report the percentage of "a lot" and "almost all" in total.</p>
Further readings	<p>Green, F. and T. Mostafa, 2012: Trends in job quality in Europe. Eurofound. Publications Office of the European Union, Luxembourg.</p> <p>European Commission, 2013: The Survey of Adult Skills (PIAAC): Implications for education and training policies in Europe. European Commission. Education and training. Available at: http://ec.europa.eu/education/news/doc/piaac_en.pdf</p> <p>OECD, 2011: PIAAC Conceptual Framework of the Background. Questionnaire Main Survey. November 2011. Available at: http://www.oecd.org/site/piaac/PIAAC(2011_11)MS_BQ_ConceptualFramework_1%20Dec%202011.pdf</p>

DIMENSION 7: EMPLOYMENT-RELATED RELATIONSHIPS AND WORK MOTIVATION**Sub-dimension 7a: Employment-related relationships**

Short name	Relationship with co-workers (7a1)
Name	Percentage of employed persons who have a good relationship with their co-workers or colleagues
Dimension and sub-dimension	7. Employment-related relationships and work motivation a. Employment-related relationships b. Work motivation
Measurement objectives	The objective of the indicator is to estimate the share of employed persons who consider they have a good relationship with their co-workers or colleagues at work (and also those who have negative relationships in the workplace), on the basis of their own perception. This item is an important element of the concept of <i>good social environment</i> and is expected to have a direct (positive or negative) effect on workers' well-being and health.
Formula	$\frac{\text{Number of employed persons who report their colleagues help and support them (always or most of the time)}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p><i>Relationship towards the co-workers or colleagues</i> (in their main job): The variable should ask the respondent for his or her own perception of the relationships towards colleagues. The operationalisation of the variable in available international surveys varies. Examples for survey questions measuring the variable include the following (see recommended calculations):</p> <ul style="list-style-type: none"> • EWCS 2010 Q51 A: "Your colleagues help and support you Always/Most of the time/Sometimes/Rarely/Never"; • The ISSP module on work organization III (2005, 2015) includes a question on quality of relationship between work mates (from very good to very bad, 5- Likert scale); • The European Social Survey Work and Family modules (2004 and 2010) includes item G29 asking respondents to agree with the following statement "I can get support and help from my co-workers when needed" and it has a four category answer scale from "Not at all true" to "Very true". In addition to many European countries covered in EWCS, ESS 2004 includes Ukraine, and ESS 2010 includes Israel and Russian Federation. <p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p> <p><i>Note</i>: this question is asked to all those in employment, including both employees and self-employed.</p>
Recommended data source(s)	Data on the relationships of employed persons with their colleagues should be collected in household or population surveys, e.g., working conditions surveys or Labour Force Survey modules. Since the respondent's own

Short name	Relationship with co-workers (7a1)
	<p>perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.</p> <p>An indicator on social support by colleagues at the workplace is included in most national surveys measuring working conditions. Examples of international surveys including the variable are the European Working Conditions Survey 2010 (EWCS), the ISSP or the European Social Survey (ESS) Work and Family modules (2004 and 2010).</p> <p>The EWCS provides harmonised data for the 28 current European Member States, as well as Turkey, Montenegro, Macedonia, Albania and Kosovo, and Norway.</p>
Recommended metadata	<p>As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided.</p> <p>With regard to the comparability of the item with data from other sources/surveys, the question wording and scale of measurement shall be given specific attention.</p>
Recommended disaggregation	<ul style="list-style-type: none"> • Occupation (ISCO) • Economic activity (ISIC) • Establishment size • Institutional sector (public / private sector) • Sex • Age group • Full-time vs. part-time workers • Status in employment • Employees with fixed-term contracts • Other characteristics of the individual (e.g., nationality) and motivational characteristics of the job
Interpretation guidelines	<p>The indicator is used as a measure of the extent to which respondents (employed persons) perceive themselves as having good social relations at work (and in contrast, those having worse social relations at work).</p> <p>Although the indicator is subject to a certain degree of subjectivity, social support at the work place is expected to have a direct (positive or negative) effect on workers' health and well-being.</p> <p>An individual's relationship with co-workers is an important element of most theories related to psycho-social environment. It has a potential impact on health and well-being. It is included in some influential theories, such as the job resources dimension of the Job demands-control model (Karasek) and more explicitly in the further development of the job demands-control model in the Job demands-resources model (Demerouti)</p>

Short name	Relationship with co-workers (7a1)
	as well as in the efforts-rewards imbalance model (Siegrist, ERI). It is also covered in COPSOQ (Kristensen, Copenhagen psychosocial questionnaire regarding the psychosocial work environment).
Relation to other indicators	<p>For a comprehensive analysis of <i>Social support</i>, the indicator might be analysed together with some other EWCS Questions, as mentioned in “Recommended data sources”, and indicator 7a2 (relationship with supervisor).</p> <p><i>Social support</i> is considered a key element in the broader concept of <i>Social Environment</i>; therefore indicator 7a3 (employment related violence) and Sub-dimension 7b (work motivation) is useful to capture the whole topic.</p>
International comparisons	The indicator measures respondents’ self-perception, therefore responses might be influenced by characteristics of the individual, cultural behaviour, interview settings/environment and other aspects of the survey implementation. These aspects should be considered with regard to international comparability of the indicator, even though the EWCS is highly harmonised, aiming to comparably measure working conditions in Europe.
Recommended calculation in the EU-LFS or other international surveys	<p>The 5th European Working Conditions Survey (EWCS) provides data on Social support from/Social relations with colleagues (Q51A). Furthermore, a composite variable might be computed comprising the information on the presence of other supportive people at the workplace (friends; Q77E).</p> <p>EWCS 2010, Q51 For each of the following statements, please select the response which best describes your work situation.</p> <p>A –Your colleagues help and support you</p> <p>The indicator asks for choosing the response that best describes the respondent’s work situation. A show card is used with a Likert scale measuring the frequency from “Always” to “Never” (Always/Most of the time/Sometimes/Rarely/Never as well as N.A.). One answer is possible.</p> <p>The indicator is calculated by combining the confirmative answers (“Always” and “Most of the time”) to the question on whether respondents are helped and supported by colleagues at their work place, divided by the total number of employees.</p> <p>The EWCS contains further related questions that might be used for further analysis: Q77E - I have very good friends at work, captures indirectly the presence of supportive people in the workplace. Q77D - I feel “at home” in this organization is another EWCS item indirectly capturing the presence of supportive people in work place. These three items could be used as a standardised index. The standardised index has a positive impact on mental health and job satisfaction and decreases the risk of work impairing health and absenteeism (OECD 2013 and forthcoming).</p>

Short name	Relationship with co-workers (7a1)
	Other international surveys (e.g., ISSP, ESS) as well as national surveys can be used as well.
Further readings	<p>Karasek, R. & Theorell, T., 1990: <i>Healthy Work: Stress, Productivity, and the Reconstruction of Working Life</i>. New York: Basic Books.</p> <p>E. Demerouti, A.B. Bakker, F. Nachreiner, W.B. Schaufeli, 2001: "The job demands-resources model of burnout", <i>Journal of Applied Psychology</i>, Vol. 86 pp.499 - 512.</p> <p>R. Hackman, G.R. Oldham, 1975: "Development of the job diagnostic survey", <i>Journal of Applied Psychology</i>, Vol. 60 pp.159 - 170.</p> <p>Siegrist, J., 1996: "Adverse health effects of high-effort/low reward conditions", <i>Journal of Occupational Health Psychology</i>, 1, 27-41.</p> <p>Niedhammer, I., Goldberg, M., Leclerc, A., et al., 1998: "Psychological factors at work and subsequent depressive symptoms in the Gazel cohort", <i>Scandinavian Journal of the Work Environment and Health</i>, 24, 197-205.</p> <p>Parkes, K. R., Mendham C. A. & Von Rabenau, C., 1994: "Social support and the demand-discretion model of job stress: Tests of additive and interactive effects in two samples", <i>Journal of Vocational Behaviour</i>, 44, 91-113.</p> <p>Eurofound, 2012: <i>Fifth European Working Conditions Survey: overview report</i>, Publications Office of the European Union, Luxembourg.</p> <p>OECD, 2013: <i>Well-being in the workplace: Measuring Job Quality in How's Life? 2013: Measuring well-being</i>. Paris: OECD Publishing.</p> <p>OECD, 2014: "How good is your job? A Framework for measuring and assessing job quality" in <i>OECD Employment Outlook 2014</i>, Paris: OECD Publishing.</p>

Short name	Relationship with supervisor (7a2)
Name	Percentage of employees who have a good relationship with their supervisor
Dimension and sub-dimension	7. Employment-related relationships and work motivation a. Employment-related relationships b. Work motivation
Measurement objectives	The objective of the indicator is to estimate the share employees who consider they have a good relationship with their supervisor or manager at work (and those who have a bad social relationship with their supervisor in the workplace), on the basis of their own perception. The item is an important element of the concept of <i>good social environment</i> , as social support is expected to (positively) affect workers' well-being.
Formula	$\frac{\text{Number of employees who report their manager helps and supports them (always or most of the time)}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<i>Relationship with the supervisor</i> (in their main job): The variable should ask the respondent for his or her own perception of the relationship with his or her direct superior. The operationalisation of the variable in available international surveys varies. Examples for survey questions measuring the variable include the following (see recommended calculations): <ul style="list-style-type: none"> • EWCS 2010 Q51 B: "Your manager helps and supports you – Always /Most of the time/ Sometimes/ Rarely/ Never"; • The ISSP module on work organization (2005, 2015) includes a question on quality of relationship between the management and employees (from very good to very bad, 5- Likert scale). <i>Employees (age 15+)</i> : Employees are defined according to the ICSE-1993 (see glossary).
Recommended data source(s)	Data on the relationships of employed persons with their colleagues should be collected in household or population surveys, e.g., working conditions surveys or Labour Force Survey modules. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator. An indicator on social support workers receive from their managers at the workplace is included in most national surveys measuring working conditions. Examples of international surveys are the European Working Conditions Survey 2010 (EWCS) and the ISSP 2005 (and 2015). The EWCS provides harmonised data for the 28 current European Member States, as well as Turkey, Montenegro, Macedonia, Albania, Kosovo and Norway.
Recommended metadata	As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided. With regard to the comparability of the item with data from other

Short name	Relationship with supervisor (7a2)
	sources/surveys, the question wording and scale of measurement shall be given specific attention.
Recommended disaggregation	<ul style="list-style-type: none"> • Occupation (ISCO) • Economic activity (ISIC) • Establishment size • Institutional sector (public / private) • Sex, including sex of supervisor • Age group • Full-time vs. part-time workers • Employees with fixed-term contracts • Other characteristics of the individual (e.g., nationality) and motivational characteristics of the job
Interpretation guidelines	<p>The indicator is used as a measure of the extent to which respondents (employees) perceive themselves as having good social relations at work (and in contrast, those having worse social relations at work).</p> <p>A worker's relationship to his or her supervisor is an important element of most theories related to psycho-social environment. It has a potential impact on health and well-being. It is included in some influential theories, such as the job resources dimension of the Job demands-control model (Karasek) and more explicitly in the further development of the job demands-control model in the Job demands-resources model (Demerouti) as well as in the efforts-rewards imbalance model (Siegrist, ERI). It is also covered in COPSQ (Kristensen, Copenhagen psychosocial questionnaire regarding the psychosocial work environment).</p> <p>Although the indicator is subject to a certain degree of subjectivity, social support at the work place is expected to have a direct (positive or negative) effect on workers' health and well-being.</p>
Relation to other indicators	<p>For a comprehensive analysis of Social support, the indicator might be analysed together with some other EWCS Questions as mentioned in "Recommended data sources" and indicator 7a1 (relationship with co-workers).</p> <p>Social support is considered a key element in the broader concept of Social Environment; therefore indicator 7a3 (employment-related violence) and Sub-dimension 7b (work motivation) are useful to capture the whole topic.</p>
International comparisons	The indicator measures respondents self-perception, therefore responses might be influenced by characteristics of the individual, cultural behaviour, interview settings/environment and other aspects of the survey implementation. These aspects shall be considered with regard to international comparability of the indicator; even though the EWCS is highly harmonised, aiming to comparably measure working conditions in Europe.
Recommended	The 5 th European Working Conditions Survey (EWCS) provides data on Social

Short name	Relationship with supervisor (7a2)
<p>calculation in the EU-LFS or other international surveys</p>	<p>support from/Social relations with managers/supervisors (Q51A).</p> <p>The indicator is calculated by combining the confirmative answers (“Always” and “Most of the time”) to the question on whether respondents are helped and supported by their manager at their work place. This question is asked to employees only.</p> <p>[EWCS 2010, Q51 For each of the following statements, please select the response which best describes your work situation.</p> <p>B – Your manager helps and supports you]</p> <p>The indicator asks for choosing the response which best describe respondent work situation. A show card is used with a Likert scale measuring the frequency from “Always” to “Never” (Always/Most of the time/Sometimes/Rarely/Never). One answer is possible.</p> <p>The indicator is calculated by combining the confirmative answers (“Always” and “Most of the time”) to the question on whether respondents are helped and supported by colleagues at their work place, divided by the total number of employees.</p> <p>The EWCS contains further related questions that might be used for further analysis: in particular the items aimed to measure the quality of the management [Q58A to Q58E] provided by worker’s immediate manager or supervisor could be used for further analysis.</p> <p>Other international surveys (e.g., the ISSP) and national surveys can be used as well.</p>
<p>Further readings</p>	<p>Karasek, R. & Theorell, T., 1990: <i>Healthy Work: Stress, Productivity, and the Reconstruction of Working Life. New York: Basic Books.</i></p> <p>E. Demerouti, A.B. Bakker, F. Nachreiner, W.B. Schaufeli, 2001: “The job demands-resources model of burnout”, <i>Journal of Applied Psychology</i>, Vol. 86 pp.499 - 512.</p> <p>R. Hackman, G.R. Oldham, 1975: “Development of the job diagnostic survey”, <i>Journal of Applied Psychology</i>, Vol. 60 pp.159 - 170.</p> <p>Siegrist, J., 1996: “Adverse health effects of high-effort/low reward conditions”, <i>Journal of Occupational Health Psychology</i>, 1, 27-41.</p> <p>Niedhammer, I., Goldberg, M., Leclerc, A., et al, 1998: “Psychological factors at work and subsequent depressive symptoms in the Gazel cohort”, <i>Scandinavian Journal of the Work Environment and Health</i>, 24, 197-</p>

Short name	Relationship with supervisor (7a2)
	205. Parkes, K. R., Mendham C. A. & Von Rabenau, C., 1994: "Social support and the demand-discretion model of job stress: Tests of additive and interactive effects in two samples", <i>Journal of Vocational Behaviour</i> , 44, 91-113.

Short name	Employment-related violence (7a3)
Name	Percentage of persons who have been victim of physical, psychological or sexual violence in relation with their employment in the last 12 months
Dimension and sub-dimension	7. Employment-related relationships and work motivation a. Employment-related relationships b. Work motivation
Measurement objectives	<p>The indicator seeks to measure the magnitude of employment-related violence amongst persons over a long observation period (12 months). The person may or may not be currently employed but was employed during the time of the employment-related violence at some time during the previous 12 months. Employment-related violence yields consequences such as lost days of work, staff turnover and dismissals (ILO, 2013). Thus, to include exclusively persons who are currently employed would mean to exclude others who may have left the job where the violence occurred during the past 12 months and are not currently employed in a new job.</p> <p>The proposed indicator seeks to cover employment-related violence of any type—physical, psychological or sexual—that may be experienced by employed persons. Since some types must by definition be carried out repeatedly in order to be considered employment-related violence (in particular, bullying and mobbing), it is deemed important to use a long observation period of 12 months.</p> <p>Persons who died as a consequence of suicide, homicide or injury directly related to acts of employment-related violence during the past 12 months are not included in the indicator due to the difficulty in capturing such information from family members in a household survey. Nonetheless, to the extent that such information can be captured, it could be provided separately and analysed jointly with the indicator.</p> <p>There are currently no internationally agreed standards on measuring employment-related violence. However, during the 19th ICLS held in October 2013, a room document was shared and a presentation made on the topic of work-related violence and its integration into existing household and establishment surveys.</p>
Formula	$\frac{\text{Number of persons who have been victims of physical, psychological or sexual violence in relation with their employment in the last 12 months}}{\text{Total number of persons in employment during at least one week in the past 12 months}} \times 100$
Concepts and definitions	<p>An <i>act of violence</i> relates to incidents of force or power inflicted by humans upon each other, which can be physical, psychological or sexual in nature. An act of violence may cover incidences of self-inflicted harm, if directly related to the person's work. (ILO, 2013)</p>

Short name	Employment-related violence (7a3)
	<p><i>Physical violence</i> includes any attempt at physical injury or attack on a person and is associated with the concept of assault. <i>Psychological violence</i> includes the intentional use of power, including threat of physical force, against another person that can lead to harm in physical, mental, spiritual, moral or social development; it is often perpetrated through repeated behaviour. The concepts associated with psychological violence are harassment, abuse, threat, bullying (harassment by one individual) and mobbing (a situation of collective harassment). <i>Sexual violence</i> refers to any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances or acts to traffic, or otherwise directed, against a person's sexuality using coercion. It includes acts of rape. The related concept is sexual harassment. (ILO, 2013)</p> <p>The variable in the numerator is the number of persons who experienced employment-related violence during the previous 12 months. In order for actions of violence to be considered <i>employment-related</i>, they must be perpetrated by someone who is in some way associated with the employed victim through the victim's job, e.g., a supervisor, co-worker, customer or stranger (for example, a person unknown to the victim who commits acts of physical violence during a store robbery where the victim works). The perpetrator of the violence may include a spouse or other family related to the victim so long as the employed victim and perpetrator have an employment relationship together.⁵⁹</p> <p>Employment-related violence <i>may take place in any setting</i>, including but not limited to the victim's home and workplace.⁶⁰</p> <p>Not all violent acts occurring at the workplace qualify as employment-related violence: those perpetrated by a spouse or other family and acquaintances who do not have an employment relationship with the victim are not employment-related violence, even if they occur at the place of work.</p> <p>To be included in the numerator, the person must have been employed at the time they experienced the acts of employment-related violence that occurred at some time during the previous 12 months. The numerator excludes persons who died as a result of employment-related violence over the past 12 months, but such information may be collected separately if it is possible to collect it.</p> <p>The target population is persons 15 years and over (who may or may not currently be employed) who have been employed in the past 12 months.</p>

⁵⁹ In this situation, there may be some overlap between employment-related violence and domestic violence.

⁶⁰ In this sense, employment-related violence is different from "adverse social behaviour" used in the European Working Conditions Survey (EWCS) where acts of physical and verbal violence and intimidation are by definition carried out *at work*, and where it is not specified how the victim is related to the perpetrator, e.g., could be a spouse *not* working with the victim.

Short name	Employment-related violence (7a3)
	Employment is defined according to the 19 th ICLS resolution (see glossary).
Recommended data source(s)	<p>Household-based surveys are the best source of data, since the intention is to capture the number of persons who are victims of employment-related violence.</p> <p>Three different household surveys are recommended that can be supplemented to include questions on employment-related violence: the Labour Force Survey (LFS), Crime Victimization Survey (CVS) and Working Conditions Survey (WCS). The LFS and CVS can ask persons if and when they were victims of violence in general and employment-related violence in particular. The WCS can ask persons about their working conditions in general and include specific questions on employment-related violence. It should be noted that whichever source is used, the topic of employment-related violence is best served using a long reference period (12 months). In order to capture persons who died over the past 12 months as a result of employment-related violence, sample household members should be asked in the survey about possible household member deaths due to this type of violence.</p> <p>While it is possible to obtain data on employment-related violence from certain establishment surveys and administrative records, these sources are considered second best for calculating the indicator.</p> <p>It is important to note that questions on employment-related violence are highly sensitive, and responses are therefore particularly subject to measurement error. Special care must therefore be taken in drafting and testing the survey questions, placement of questions in the questionnaire and in interviewer training to minimise such error.</p> <p>It is preferable that the nominator and denominator are derived from the same data source if possible, and the long reference period should be used in both. If it is not possible to use the same data source, then it is recommended to use the best source for both the numerator and denominator, both referring to the same long reference period (12 months).</p>
Recommended metadata	<p>As a minimum, data on the source (periodicity, breaks in series, etc.), reference period, population coverage, job coverage (main job or all jobs) and geographic coverage should be provided.</p> <p>Furthermore, it is recommended that metadata for this indicator include the operational definition of persons in employment-related violence and employment, reference period, population and age coverage, geographic coverage and dissemination frequency.</p>
Recommended disaggregation	<p>Assuming <i>adequate reliability of the estimates</i>, the indicator may be disaggregated by:</p> <ul style="list-style-type: none"> • Sex • Age group (youth 15-24 and adults 25+ and older workers 54-64)

Short name	Employment-related violence (7a3)
	<ul style="list-style-type: none"> • Status in employment (self-employment and paid employment) • Major occupation group (ISCO) • Major economic activity group (ISIC) • Institutional sector • Place of employment-related violence : (1) at the workplace or commuting path to the workplace or (2) at any other location • Job in which the act of violence occurred (present / former job) • Work place accessible to the public or not • Type of violence (psychological, physical or sexual or any combination of the three) • Nature of the relationship of the victim with the perpetrator, that is, whether the perpetrator: (1) is a co-worker or colleague at work, (2) is not directly employed in the same place of work, e.g., a client, customer, vendor, delivery person etc., (3) has no previous relationship with the victim or (4) is a supervisor. • (1) Acts of violence solely related to incidents inflicted by others or (2) acts of violence that include both incidents inflicted by others and self-inflicted harm • Contract type including workers with fixed-term or permanent contracts , workers employed by a temporary agency, seasonal workers and casual workers • Duration/frequency of acts of violence
<p>Interpretation guidelines</p>	<p>While statistics on the indicator are limited, employment-related violence is generally considered to be associated with problems of mental health, poor work performance and motivation, absenteeism and low self-esteem of the employed victims. Other symptoms may develop, such as physical signs of stress and eating and sleeping disorders. It may also have consequences related to job turnover or dismissals. In extreme cases, the employment related violence may result in death of the victim through suicide, physical injury or homicide. The indicator is thus of key interest as a measure of quality of employment, since the employed person's physical and mental health and well-being are directly affected by the incidence of employment-related violence.</p> <p>Analysing the indicator by type of violence (if reliability of the estimates will allow) is useful for understanding which type is most prevalent. Sexual violence is most commonly experienced by women, and it includes sexual harassment, unwanted sexual attention and, in the extreme case, rape. However, sometimes employment-related violence is a combination of different types, for example, bullying in combination with sexual harassment and physical force.</p> <p>Young employed persons who lack experience and stature may be more susceptible to becoming victims of employment-related violence than older workers. Similarly, certain categories of migrant workers may also be subject</p>

Short name	Employment-related violence (7a3)
	<p>to higher rates of employment-related violence than other employed persons.</p> <p>It's important to analyse other breakdowns such as occupation and industry groups most affected in order to inform policy and take action through violence control measures. It is known, for example, that certain occupations suffer higher rates of physical employment-related violence than others, such as police officers, bank tellers, shop vendors, personnel working late at night, teachers and staff working in health care or social services (Chappell & Di Martino, 2006; Di Martino et al., 2003, Di Martino, 2002; Warshaw 2006).</p> <p>Due to differences between statutory rights, some groups of workers that do not have permanent contracts, such as temporary workers, seasonal workers or casual workers, may be more vulnerable to employment-related violence or may not be able to seek justice or compensation if they are victimised. Similarly, perpetrators (especially if they are co-workers or regular clients) may be more likely to target such workers.</p> <p>The indicator is best analysed over long intervals, perhaps every 1 to 5 years. While indicator estimates should be as close to zero as possible in an ideal situation, analysts should be aware of possible measurement errors given the sensitive nature of questions on employment-related violence in a questionnaire; underreporting and underestimating true values of the numerator may well occur, giving a false impression of a low incidence of employment-related violence. Checking the levels and trends against other data sources such as crime statistics may be useful in this regard.</p> <p>Any increasing trend in the indicator over time should be cause for concern among researchers and policymakers. National policy and labour legislation should be aligned to combat the problem in accordance with international standards such as the Declaration on the Elimination of Violence against Women (1993).</p>
Relation to other indicators	<p>It may be useful in some countries to collect and analyse data on the labour market consequences of employment-related violence, such as lost workdays, job turnover or layoffs (in all cases as a direct result of the employment-related violence experienced by the victims).</p> <p>Situations where there are marked differences between men and women in terms of occupational segregation (especially women's share of employment in management positions), highly differentiated status in employment categories by sex (i.e., employer vs. employee) and large gender pay gaps where women and men work together may lend themselves to a higher prevalence of employment-related violence. Thus the analysis of such indicators jointly with the indicator is recommended. A similar situation may occur in the case of youth employment compared to adult employment and certain migrant workers compared to non-migrant workers and other vulnerable population groups.</p>

Short name	Employment-related violence (7a3)
	<p>Employment-related violence could in principle be found in any type of job but may be especially prevalent in situations of forced labour and child labour. It may therefore be of interest for countries that are calculating indicators on these topics to analyse them jointly with employment-related violence.</p>
International comparisons	<p>National legislation related to employment-related violence will likely differ across countries, and this may influence the operational statistical definition of employment-related violence used in different countries. It will therefore be essential to consider the legal framework regarding employment-related violence in order to understand the context in each country and for cross-country comparisons. For example, some countries have exemptions on marital rape. To the extent that spouses are employed together and incidents of marital rape occur in the work context, this may influence comparability of the indicator across countries.</p> <p>There is no international statistical standard adopted to define employment-related violence, which limits the possibilities for comparability across countries and even coherence within national statistical systems. Countries may thus apply different concepts, definitions, coverage and data sources. It is therefore of utmost importance that countries provide adequate metadata to allow users to understand to what extent data are comparable across countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p>The European Working Conditions Survey (EWCS) includes questions Q70 and Q71 related to this topic (and a question on dealing with angry clients), but as indicated in a footnote above, the EWCS focuses on violence at the workplace only and does not differentiate between (1) perpetrators that are associated with the victim through the victim's employment and (2) other types of perpetrators (e.g., a spouse who commits a violent act at the victim's workplace but does not work with the victim). In the EWCS, Q70 uses the reference period of the last month when asking about verbal abuse, unwanted sexual attention and threats and humiliating behaviour, while Q71 refers to the past 12 months when asking about physical violence, bullying/harassment and sexual harassment.</p>
Further readings	<p>ILO, 2013: Work-related violence and its integration into existing surveys. Room Document 7 presented at the 19th International Conference of Labour Statisticians. Geneva, October 2013. (Note: Includes an extensive list of references.) Available at: http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_222231/lang--en/index.htm</p> <p>ILO, 1998: Resolution concerning statistics of occupational injuries: resulting from occupational accidents, resolution III, Sixteenth International Conference of Labour Statisticians, Geneva, 1998.</p> <p>Chappell, Duncan and Di Martino, Vittorio, 2006: Violence at work, third edition. Geneva, International Labour Office.</p>

Short name	Employment-related violence (7a3)
	<p>Di Martino, Vittorio, 2002: Violence at the workplace: The global response, in Asian-Pacific Newsletter on Occupational Health and Safety, Vol. 9, pp. 4-7.</p> <p>Di Martino, Vittorio, Hoel, Helge and Cooper, Cary L., 2003: Preventing violence and harassment in the workplace. Luxembourg, European Foundation for the Improvement of Living and Working Conditions.</p> <p>Eurofound, 2012: Fifth European Working Conditions Survey, Luxembourg, Publications Office of the European Union. Available at: http://www.eurofound.europa.eu/publications/htmlfiles/ef1182.htm</p> <p>Japan Institute for Labour Policy and Training, 2013: JILPT International Seminar on Workplace Bullying and Harassment. JILPT REPORT No. 12, February 2013. Available at: http://www.jil.go.jp/english/events/13_0227report.htm</p> <p>United Nations, 1993: Declaration on the Elimination of Violence against Women. A/RES/48/104, 85th plenary meeting of the General Assembly, 20 December 1993. Available at: http://www.un.org/documents/ga/res/48/a48r104.htm</p> <p>Warshaw, Leon J., 2006: Violence in the Workplace. Geneva, in the 4th edition of the International Labour Organization's Encyclopedia of Occupational Health and Safety.</p>

Sub-dimension 7b: Work motivation

Short name	Job autonomy (7b1)
Name	Percentage of employed persons who are able to choose their methods of work or to influence their pace of work
Dimension and sub-dimension	7. Employment-related relationships and work motivation <ul style="list-style-type: none"> a. Employment-related relationships b. Work motivation
Measurement objectives	<p>Empirical research indicates that high job autonomy is closely associated with job satisfaction. It has a positive impact on physical and psychological well-being on its own and also helps buffer deteriorating effects of work intensity.</p> <p>In addition to its positive impact on individuals' well-being, it is shown that job autonomy or discretion is conducive to learning at work and skills acquisition. It increases creativity at workplace. It is also associated with workers' discretionary effort, i.e., the work effort individuals put beyond what is required of them, thereby increasing organizational performance.</p>
Formula	$\frac{\text{Total number of employed persons who can choose work method or who can influence their pace of work}}{\text{Total number of employed persons}} \times 100$ <p>The indicator should also be analysed separately for choice of methods of work and influence on pace of work.</p>
Concepts and definitions	<p>Total number of employed persons who can choose their work method (in their main job).</p> <p>Total number of employed persons who can influence their pace of work (in their main job).</p> <p>Operationalisation of these variables can be found in various international surveys (see recommended data source(s) for details).</p> <p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data on the discretion of work should be captured in household or population surveys, e.g., working conditions surveys or Labour Force Survey modules. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable for collecting the information required for the indicator.</p> <p>There are three cross-national data sources recommended for this indicator:</p> <ol style="list-style-type: none"> 1. European Working Conditions Survey (EWCS) provides information on

Short name	Job autonomy (7b1)
	<p>whether individuals are able to choose or change their order of work tasks and whether they are able to choose or change their methods of work. The items have a Yes/No answer scale and are available in 2010, 2005, 2000 and 1996.</p> <p>2. European Social Survey (ESS) provides comparable measures in Work, Family and Well-being modules (2004 and 2010). The items ask if the management allows respondents to decide how daily work is organized and to choose or change pace of work. They are presented with an answer scale from 0 to 10, where 0 signifies “no influence” and 10 signifies “complete influence”.</p> <p>3. International Social Survey Programme (ISSP), which covers a range of European and non-European countries, provides an item on daily work arrangements in the <i>Work Orientations</i> module, which was collected in 2005, 1997 and 1989. The respondents were asked to choose which statement best described how their daily work was organized: 1. “I am free to decide how my daily work is organised” 2. “I can decide how my daily work is organised within certain limits”, 3. “I am not free to decide how my daily work is organised”.</p>
<p>Recommended metadata</p>	<p>It is recommended to make metadata available – as a minimum – on the source (periodicity, breaks in series, etc.), geographic coverage, reference period and job coverage (main job or all jobs) and employment relationship (self-employed vs. employed).</p> <p>With regard to the comparability of the item with data from other sources/surveys, the question wording and scale of measurement should be given specific attention.</p>
<p>Recommended disaggregation</p>	<p>Level of discretion is most closely associated with employment relation and skill level of employees. The indicator is recommended to be analysed by:</p> <ul style="list-style-type: none"> • Status in employment (employee vs. self-employed). • Educational level (ISCED) • Occupational class (ISCO) <p>Additionally, it is recommended to analyse by:</p> <ul style="list-style-type: none"> • Contract type (fixed-term vs. permanent) • Part-time vs. full-time work • Sex • Institutional sector (private vs. public sector employees) • Economic activity (ISIC) • Supervisory responsibilities • Job content (computerised work, interactive work etc.)

Short name	Job autonomy (7b1)
Interpretation guidelines	<p>The indicator of job autonomy regarding work methods or pace of work has a positive relationship with employment quality, hence the larger the percentage of employed persons who can influence work methods and pace of work, the higher the employment quality.</p> <p>The indicator provides information on the share of employed persons who have influence over the way they carry out their immediate work activities.</p> <p>When the indicator is measured with a gradient answer scale, it is also possible to measure <i>which</i> population groups have discretion and <i>to what extent</i> as well as the <i>trends</i> in discretion.</p> <p>This indicator allows long term comparisons, covering approximately five year periods.</p>
Relation to other indicators	<p>Job autonomy can mitigate the negative effect of work pressure on well-being. High pressure jobs where employees do not have much autonomy can impair one's well-being, while job autonomy can trigger motivation and engagement even in high pressure work settings. Therefore this indicator should be analysed in relation to Dimension 3 – Working hours and work-life balance.</p> <p>It may play a particularly crucial role in employment quality in adverse business cycles. Declining GDP growth and increasing unemployment are likely to increase work pressure and intensify work. A decline in – or no change to – discretion in these circumstances could increase health risks remarkably because of its buffering impact.</p> <p>Job autonomy to some extent correlates with the type of occupation but will not be fully determined by it. Measures on job autonomy should be analysed together with information on the occupation. Occupational databases, in particular when based on data collections among workers, may provide further valuable data for the analysis of job autonomy.</p>
International comparisons	<p>Job autonomy is a multidimensional concept that is, in principle, difficult to capture. However, empirical research dating back to late 1970s has investigated various ways to measure job autonomy. Among many dimensions of job autonomy studied and many different ways of operationalising the concept, two dimensions stand out as the most central aspects: control over methods and control over pace of work. EWCS and ESS have introduced questions to measure job autonomy across a wide range of European countries and collected information on several years, which gave considerable validity to the measurement of discretion items. ISSP's measurement is somewhat limited, as it does not properly capture job autonomy on pace of work.</p> <p>Nevertheless, the indicator measures the respondent's self-perception; therefore responses might be influenced by characteristics of the individual, cultural behaviour, interview settings/environment and other aspects of the</p>

Short name	Job autonomy (7b1)
	survey implementation. These aspects should be considered with regard to international comparability of the indicator.
Recommended calculation in the EU-LFS or other international surveys	<p><u>EWCS 2010:</u> <i>Numerator:</i> Total number of employed persons who answer Yes to items Q50A and Q50C. <i>Denominator:</i> Total number of persons in the sample.</p> <p><u>ESS:</u> <i>Numerator:</i> Total number of employed persons who score six and above on items WKDCORGA and WKDCPCE. <i>Denominator:</i> Total number of those whose main activity is paid work. Choose MAINACT = 1 (In paid work (or away temporarily) (employee, self-employed, working for your family business)) as precondition in the specification.</p> <p><u>ISSP:</u> <i>Numerator:</i> Total number of employed persons who chose answer options one or two on item V42. <i>Denominator:</i> Total number of those whose main activity is paid work. Choose WRKST < 3 (1 Employed full time; 2 Employed part time; 3 Employed less than part time) as precondition in the specification.</p> <p>Remark: EU-LFS ad-hoc module “Work organisation and working time arrangements” (scheduled for 2019) will capture control over contents and order of tasks with a single item.</p> <p>Percentage of employed persons with job autonomy can be calculated as 100 multiplied by the share of employed persons who are able to influence the order and the contents of their tasks divided by all employed persons.</p>
Further readings	<p>Gallie D, Zhou Y., 2013: “Job control, work intensity and work stress” in (ed.) Duncan Gallie. Economic Crisis and the Quality of Work, Oxford: Oxford University Press.</p> <p>Gallie D, Zhou Y., 2013: Work Organisation and Employee Involvement in Europe. Dublin. Available at: http://www.eurofound.europa.eu/publications/htmlfiles/ef1330.htm</p> <p>Gallie, D, Felstead, A and Green, F, 2004: “Changing patterns of task discretion in Britain”, Work, Employment and Society, 18 (2): 243-266.</p> <p>Green, F, 2004: “Work intensification, discretion and the decline in well-being at work”, Eastern Economic Journal, 30(4) Fall.</p>

Short name	Job autonomy (7b1)
	<p data-bbox="422 293 1310 398">Gallie, D, Felstead, A and Green, F, 2003: "Skill, task discretion and new technology: research on skill trends in Britain 1986-2001", <i>L'Année Sociologique</i>, 53(2): 401-430.</p> <p data-bbox="422 459 1353 600">Felstead, A, Gallie, D and Green, F, 2004: "Job complexity and task discretion: tracking the direction of skills at work in Britain", in Warhurst, C, Grugulis, I and Keep, E (eds): <i>The Skills That Matter</i>, Basingstoke: Palgrave Macmillan.</p> <p data-bbox="422 660 1321 831">Inanc, H., Felstead, A., Gallie, D. and Green, F., 2013: <i>Job Control in Britain: First Findings from the Skills and Employment Survey 2012</i>, London: Centre for Learning and Life Chances in Knowledge Economies and Societies, Institute of Education. Available at: http://www.cardiff.ac.uk/socsi/ses2012</p>

Short name	Feedback from supervisor (7b2)
Name	Percentage of employees who receive regular feedback from their supervisor
Dimension and sub-dimension	7. Employment-related relationships and work motivation a. Employment-related relationships b. Work motivation
Measurement objectives	<p>This indicator measures the proportion of employees who receive feedback from their supervisors or line managers regarding their work.</p> <p>Feedback is considered a form of social support mechanism for employees at the workplace. While lack of feedback may cause “role ambiguity” and consequently stress, regular feedback from manager fosters learning, increases job competence and the likelihood of being successful in achieving work goals and improves communication between supervisors and supervisees. Adequate feedback may also reduce the tendency to worry about work at home, thereby reducing home-work interference. Regular feedback from managers also buffers the negative consequences of work overload and exhaustion.</p>
Formula	$\frac{\text{Total number of employees who receive supervisor feedback}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p>Total number of employees who receive regular feedback from their supervisors (in their main job).</p> <p>Operationalisations of this variable can be found in various working conditions and work stress surveys (see recommended data source(s) for details).</p> <p><i>Employees (age 15+)</i>: Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>Data on the feedback given by supervisors to their employees should be captured in household or population surveys, e.g., working conditions surveys or Labour Force Survey modules. Since the respondent’s own perception should be captured, establishment surveys or administrative data are not suitable to collect the information required for the indicator.</p> <p>The fifth wave of the EWCS (2010) introduced the following question: “In general, your immediate manager/supervisor provides you with feedback on your work?” (Q58A). This is a Yes/No item and is available for 34 European countries.</p> <p>The EWCS indicator has two minor deviations from the concept of 7b2. While this data source has the most extensive coverage for cross-country comparisons, the question wording does not address how regular the employed person gets feedback. Additionally, the item does not allow for a “Not applicable” option in order to exclude those whose job position does not require supervision, i.e., employees who are at the top of the</p>

Short name	Feedback from supervisor (7b2)
	<p>management structure.</p> <p>Supervisor feedback has a long history of measurement in work stress studies, and it was formulated in various job characteristics questionnaires, mostly at the national level and often covering certain occupations. Other question wordings that were tested include “Do you get sufficient information from line manager (your superiors)”, “Does your supervisor inform you about how well you are doing your job?” (for example Hackman and Oldham 1976, Kuper and Marmot 2003).</p>
Recommended metadata	<p>It is recommended to make metadata available – as a minimum – on the source (periodicity, breaks in series, etc.), geographic coverage, reference period, job coverage (main job or all jobs) and employee status (self-employed vs. employed).</p> <p>With regard to the comparability of the item with data from other sources/surveys, the question wording and scale of measurement should be given specific attention.</p>
Recommended disaggregation	<p>As supervisor feedback can vary by human resource management practices of firms, it is recommended to analyse this indicator by:</p> <ul style="list-style-type: none"> • Institutional sector (public vs. private) • Economic activity (ISIC) • Occupation (ISCO) • Firm size <p>Additional disaggregation can be made by:</p> <ul style="list-style-type: none"> • Sex • Age group • Contract type (fixed-term vs. permanent) • Part-time vs. full-time work
Interpretation guidelines	<p>The indicator has a positive relationship with employment quality, hence the larger the percentage of employees who receive regular feedback from their supervisors, the higher the employment quality.</p> <p>However, some argue that there is no linear relationship between social support at work and the well-being of employed persons. The same way the lack of feedback may cause role ambiguity and work stress, too much feedback can also be detrimental for employee well-being. Receipt of frequent and <i>unconstructive</i> feedback may cause frustration and loss of feeling of achievement; it may also minimise job autonomy.</p> <p>Therefore, users should refrain from a linear interpretation of this indicator. While lack of supervisor feedback could certainly be an indicator of low employment quality, the cases with very high shares of supervisor feedback should be evaluated in relation to other indicators of employment quality and</p>

Short name	Feedback from supervisor (7b2)
	context indicators (see below).
Relation to other indicators	<p>Since feedback from supervisors can buffer the negative impact of unfavourable working conditions, it should be examined in relation to other job stressors, namely indicators of work intensity (indicator 7b5).</p> <p>Supervisor feedback can be examined in relation to each indicator in Dimension 3 on “Working hours and work-life balance”. Concurrent work pressure and lack of feedback is expected to impair physical (e.g., cardiovascular) and mental health as a result of stress and burnout.</p> <p>Similarly, a good relationship with a supervisor increases regular feedback, therefore this indicator should be considered also in relation to item 7a2 “percentage of employed persons who indicate they have a good relationship with their supervisor.”</p>
International comparisons	<p>There are cultural and institutional differences in management practices across nations, which can influence the receipt and frequency of feedback that employees receive from their supervisors.</p> <p>Such international differences could be accounted for by taking into consideration some contextual indicators, such as the size of the public sector, the share of SMEs, the share of the informal sector and the share of unionised labour.</p> <p>In terms of methodological comparability, it is useful to consider that the indicator measures the respondent’s self-perception; therefore responses might be influenced by characteristics of the individual, cultural behaviour, interview settings/environment and other aspects of the survey implementation.</p>
Recommended calculation in the EU-LFS or other international surveys	<p><u>EWCS 2010:</u></p> <p><i>Numerator:</i> Total number of employees whose immediate manager/supervisor provides them with feedback on their work. Choose Q58A = Yes.</p> <p><i>Denominator:</i> Total number of employees. Choose Q6 = 3 (employed).</p> <p>Indicator not available in LFSs.</p>
Further readings	<p>Hackman, J. and Oldham, G., 1976: “Motivation through the design of work: test of a theory.” <i>Organizational Behavior and Human Performance</i>. 16(2): 250-279.</p> <p>Kuper H., Marmot M., 2003: “Job strain, job demands, decision latitude, and risk of coronary heart disease within the Whitehall II study” <i>Journal of Epidemiology and Communal Health</i> 57:147–153.</p>

Short name	Feedback from supervisor (7b2)
	<p data-bbox="430 250 1362 385">Van Velhoven M., De Jonge J., Broersen S., Kompier M. and Meigman T., 2002: "Specific relations between psychological job conditions and job related stress: A three level analytical approach". <i>Work & Stress</i>. 16: 207-228.</p> <p data-bbox="430 443 1324 546">Bakker A., Demerouti E., and Euwema M., 2005: "Job resources buffer the impact of job demands on burnout" <i>Journal of Occupational Health Psychology</i> 10(2):170-180.</p> <p data-bbox="430 604 1302 734">Schaufeli W., Bakker A., Demerouti E., and Van Rhenen W., 2009: "How changes in job demands and resources predict burnout, work engagement and sickness absenteeism" <i>Journal of Organizational Behavior</i> 30:893-917.</p>

Short name	Intrinsic rewards (7b3)
Name	Percentage of employed persons who do “useful” work
Dimension and sub-dimension	7. Employment-related relationships and work motivation a. Employment-related relationships b. Work motivation
Measurement objectives	This indicator is an intrinsic aspect of work motivation, which is strongly linked to job satisfaction and subjective well-being. Individuals who believe their work is useful for their clients or for society in general receive an intrinsic reward from their job, even in the absence of extrinsic monetary rewards. These individuals are more likely to increase their work effort, as well as discretionary effort, which has a direct impact on productivity. It is also argued this promotes firm loyalty.
Formula	$\frac{\text{Total number of employed persons who do useful work}}{\text{Total number of employed persons}} \times 100$
Concepts and definitions	<p>Total number of employed persons who do useful work (in their main job), according to their own perception.</p> <p>Operationalisations of this variable can be found in various international surveys (see recommended data source(s) for details).</p> <p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data on intrinsic rewards should be captured in household or population surveys, e.g., working conditions surveys or Labour Force Survey modules. Since the respondent’s own perception should be captured, establishment surveys or administrative data are not suitable for collecting the information required for the indicator.</p> <p>The EWCS asked respondents whether the following statement applied to them: “You have the feeling of doing useful work” with an answer scale “1 Always” to “5 Never”. This item was included both in 2005 and 2010.</p> <p>ISSP similarly asked respondents to mention if they agree with the following statement: “My job is useful to society”, with a 1 to 5 “Strongly agree – Strongly disagree” answer scale. The item is available in 2005, 1997 and 1989 for a number of European and non-European countries.</p> <p>ESS in 2004 and 2010 also provides information on usefulness of work, but only in an indirect manner. It asks respondents “People put effort into their work for many different reasons. Which of the reasons shown on this card is the main reason why you put effort into your work?” The response options are: “to be satisfied with what I accomplish”, “to keep my job”, “because my work is useful for other people”, “to get a higher wage or a promotion”, “because my work tasks are interesting”, “because it is everyone’s duty to always do their best” and “other”.</p>

Short name	Intrinsic rewards (7b3)
	<p>Note that, even though this question measures work motivation, it asks the usefulness aspect indirectly. This item could be used only if the other data sources are not available to the users.</p>
Recommended metadata	<p>It is recommended to make metadata available – as a minimum – on the source (periodicity, breaks in series, etc.), geographic coverage, reference period, job coverage (main job or all jobs) and employee status (self-employed vs. employed).</p> <p>With regard to the comparability of the item with data from other sources/surveys, the question wording and scale of measurement should be given specific attention.</p>
Recommended disaggregation	<p>Work motivation is most closely associated with institutional sector, status in employment, occupation and economic activity. The feeling of doing useful work is particularly high among social workers. The indicator is recommended to be analysed by:</p> <ul style="list-style-type: none"> • Institutional sector (private, public or non-profit) • Status in employment (employee vs. self-employed). • Occupation (ISCO) • Economic activity (ISIC) <p>Additionally, it is recommended to analyse by:</p> <ul style="list-style-type: none"> • Educational level (ISCED) • Contract type (fixed-term vs. permanent) • Part-time vs. full-time work • Sex • Supervisory responsibilities • Job content (computerised work, interactive work etc.)
Interpretation guidelines	<p>The indicator has a positive relationship with employment quality, hence the larger the percentage of employed persons who think they do useful work, the higher the employment quality.</p> <p>Work motivation is expected to decrease with economic downturn as individuals may prioritise monetary benefits of work over its intrinsic value. As such, employed persons may report a decline in usefulness of their work. Additionally, usefulness of work may no longer bring about work effort and loyalty to a work organization. Therefore it is recommended to examine this indicator taking into account business cycles and provide statistics in corresponding periodicity.</p>
Relation to other indicators	<p>This indicator captures a rather unique aspect of employment quality: the intrinsic quality of employment. It is expected to correlate with work hours, since individuals put in more hours as motivation level increases. In this regard, it is recommended to examine this indicator in relation to Sub-dimension 3a: Working hours.</p>

Short name	Intrinsic rewards (7b3)
	<p>Furthermore it should be seen as part of Sub-dimension 7b and should, together with the other indicators, give a full picture and evaluation of work motivation.</p>
<p>International comparisons</p>	<p>There are potentially a number of data sources that can be used for the measurement of this indicator. International comparisons should take into account the share of the public and non-profit sectors as well as the service industry.</p> <p>In terms of methodological comparability, it is useful to consider that the indicator measures the respondent's self-perception; therefore responses might be influenced by characteristics of the individual, cultural behaviour, interview settings/environment and other aspects of the survey implementation.</p>
<p>Recommended calculation in the EU-LFS or other international surveys</p>	<p><u>EWCS 2010:</u> <i>Numerator:</i> Total number of employed persons who feel they do useful work. Choose 1 and 2 on question Q51J ("Always" and "Most of the time").</p> <p><i>Denominator:</i> Total number of persons in the sample.</p> <p><u>ISSP 2005:</u> <i>Numerator:</i> Total number of employed persons who believes their job is useful to society. Choose 1 and 2 on question V35 ("Strongly agree" and "Agree").</p> <p><i>Denominator:</i> Total number of those whose main activity is paid work. Choose WRKST < 3 (1 Employed full time; 2 Employed part time; 3 Employed less than part time).</p> <p>**An approximate calculation could be done using the ESS as well, however it is recommended to use this calculation only if other data sources are unavailable to the user:</p> <p><u>ESS:</u> <i>Numerator:</i> Total number of employed persons who chose "because my work is useful for other people" as the most important or the second most important reason to put effort into their work.</p> <p>Choose answer 3 in questions MNRSEFW or SCRSEFW.</p> <p><i>Denominator:</i> Total number of those whose main activity is paid work. Choose MAINACT = 1 (In paid work (or away temporarily) (employee, self-employed, working for your family business)).</p> <p>Indicator not available in EU-LFS.</p>

Short name	Intrinsic rewards (7b3)
Further readings	Steiber, N., 2013: "Economic downturn and work motivation" in (ed.) Duncan Gallie. <i>Economic Crisis and the Quality of Work</i> , Oxford: Oxford University Press.
	Jahoda, M., 1982: <i>Employment and Unemployment: A Social-psychological analysis</i> . Cambridge: Cambridge University Press.
	Warr, P., 1982: "A National Study of Non-financial Employment Commitment" <i>Journal of Occupational Psychology</i> , 55(4): 297-312.
	Borzaga, C. and Tortia Ermanno, 2006: "Worker Motivations, Job Satisfaction, and Loyalty in Public and Nonprofit Social Services", <i>Non-profit and voluntary sector quarterly</i> , 35(2): 225-248.
	Borzaga, C. and Depedri, S., 2005: "Interpersonal relations and job satisfaction: some empirical results in social and community services" in eds Benedetto Gui and Robert Sugden, <i>Economics and Social Interactions: Accounting for Interpersonal Relations</i> , Cambridge: Cambridge University Press.
	Bénabou, R., Tirole, J., 2003: "Intrinsic and extrinsic motivation". <i>Review of Economic Studies</i> , 70:489–520.

Short name	Work intensity (7b4)
Name	Percentage of employed persons who have to work at very high speed or to tight deadlines
Dimension and sub-dimension	7. Employment-related relationships and work motivation <ol style="list-style-type: none"> a. Employment-related relationships b. Work motivation
Measurement objectives	<p>High speed work and tight deadlines measure work intensity. Highly intensive work is associated with both benefits and costs, which concerns employed persons, employers and governments.</p> <p>Highly intensive work can bring higher pay, enhanced promotion opportunities and higher economic output. However, it can also lead to more work accidents, high absenteeism and sickness leave, increased home/work interference and even to work related deaths. These costs tend to be more accentuated in settings where health and safety measures are not taken properly and when work arrangements do not allow much autonomy for the employed persons.</p>
Formula	$\frac{\text{Total number of employed persons who work at very high speed or who have to work to tight deadlines}}{\text{Total number of employed persons}} \times 100$ <p>The indicator should also be analysed separately for the criteria working at high speed and working to tight deadlines.</p>
Concepts and definitions	<p>Total number of employed persons who have to work at very high speed (in their main job).</p> <p>Total number of employed persons who have to work to tight deadlines (in their main job).</p> <p>An operationalisation of these variables is available in the European Working Conditions Survey (EWCS) as well as many national working conditions survey (see recommended data source(s) for details)</p> <p><i>Employed persons (age 15+)</i>: Employment is defined according to the resolution of the 19th ICLS in 2013 (see glossary).</p>
Recommended data source(s)	<p>Data on work intensity should be captured in household or population surveys, e.g., working conditions surveys or Labour Force Survey modules. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable for collecting the information required for the indicator.</p> <p>Work intensity can be experienced through high speed work and/or tight deadlines. Apart from national working conditions surveys, there is also an international survey covering the variables. The EWCS introduced two questions in 2000 on high speed work and tight deadlines, which were</p>

Short name	Work intensity (7b4)
	<p>repeated in 2005 and 2010: “Does your job involve working at very high speed?” and “Does your job involve working to tight deadlines?” The respondents indicate how much of the time their job involves working at a very high speed or to tight deadlines: “All of the time”, “Almost all the time”, “Around ¾ of the time”, “Around half of the time”, “Around ¼ of the time”, “Almost never” and “Never”.</p>
<p>Recommended metadata</p>	<p>It is recommended to make metadata available – as a minimum – on the source (periodicity, breaks in series, etc.), geographic coverage, reference period, job coverage (main job or all jobs) and status in employment (self-employed vs. employee).</p> <p>With regard to the comparability of the item with data from other sources/surveys, the question wording and scale of measurement should be given specific attention.</p>
<p>Recommended disaggregation</p>	<p>Work intensity is most closely associated with occupation, economic activity and status in employment. The indicator is recommended to be analysed by:</p> <ul style="list-style-type: none"> • Occupation (ISCO) • Economic activity (ISIC) • Status in employment (employee vs. self-employed). <p>Additionally, it is recommended to analyse by:</p> <ul style="list-style-type: none"> • Educational level (ISCED) • Contract type (fixed-term vs. permanent) • Part-time vs. full-time work • Sex • Institutional sector (private vs. public sector) • Supervisory responsibilities • Job content (computerised work, interactive work etc.)
<p>Interpretation guidelines</p>	<p>This indicator measures work intensity, which manifests itself as working at very high speed or working to tight deadlines. Even though the two dimensions are highly correlated (for example, in the EWCS 2010, the correlation coefficient is 0.64, $p < 0.001$), they measure two distinct aspects of intensity that may be experienced differently by different subgroups of employed persons. While non-manual workers (such as legislators, senior officers, managers and professionals) are more likely to work to tight deadlines than at very high speed, manual workers (such as service workers, craft workers, plant and machine operators and those in elementary occupations) are more likely to work at very high speed than working to tight deadlines. Therefore, information on <i>both</i> dimensions of work intensity should be used as an indicator of work motivation.</p> <p>If preferred, a summary measure may be used by combining the two aspects. The percentage of employed persons who experience work intensity may then be calculated as 100 multiplied by the share of employed persons who work at a very high speed <i>and/or</i> who work to tight deadlines divided by total</p>

Short name	Work intensity (7b4)
	<p>number of all employed persons.</p> <p>The collection and use of this indicator with frequent periodicity is crucial, because work intensity varies over time, providing a strong reflection of the impact of macro-economic circumstances (such as the most recent economic recession) on employment quality.</p> <p>The indicator has a negative relationship with employment quality, hence the larger the percentage of employed persons who have to work at very high speed or to tight deadlines, the lower employment quality.</p>
Relation to other indicators	<p>As part of Sub-dimension 7b on work motivation, this indicator should be seen in this context. It is the only indicator that delivers information on a negative aspect on quality of employment in this sub-dimension. Therefore it is important for the overall assessment of this dimension and the quality of employment regarding work motivation, well-being and health.</p> <p>The importance of this indicator varies depending on health and safety practices, therefore it is recommended to examine it in relation to Sub-dimension 1a “Safety at work”. Similarly, non-wage pecuniary benefits (Sub-dimension 2b), such as paid and unpaid annual leave, entitlement of sick leave and access to a supplemental medical insurance plan, also play an important role with respect to moderating the negative consequences of work intensity.</p> <p>Advanced technologies enable work to be done more intensely. Levels of computerised and automated technologies at the workplace are closely related to work intensification. Similarly, staff reduction results in intensified work. It is recommended to examine this indicator in relation to two questions from the EWCS: “(Q15A) During the last 3 years ... new processes or technologies were introduced”, and “(Q15B) During the last 3 years ... substantial restructuring and reorganisation was carried out”.</p> <p>It is recommended to also examine this indicator in relation to macroeconomic indicators, namely the unemployment rate, as well as the share of construction and service sectors.</p>
International comparisons	<p>The comparison of this indicator is somewhat limited outside European countries, as the EWCS seems to be the only available internationally harmonised source. Still, similar questions are available in many national working conditions surveys around the world.</p> <p>Although the EWCS is internationally harmonised, it should be considered that the indicator measures the respondent’s self-perception; therefore responses might be influenced by characteristics of the individual, cultural behaviour, interview settings/environment and other aspects of the survey implementation. Fortunately, the EWCS has a detailed information on this available already.</p>

Short name	Work intensity (7b4)
	International comparisons of this indicator should take into account main characteristics of the economy and labour force under consideration. Specifically, comparisons should be made across service industries, construction industries, public and private sectors.
Recommended calculation in the EU-LFS or other international surveys	<p><u>EWCS 2010:</u></p> <p><i>Numerator:</i> Total number of employed persons who work at very high speed. Choose answers 1, 2 and 3 for item Q45A (“All of the time”, “Around all of the time” or “Around ¾ of the time”).</p> <p>and/or</p> <p><i>Numerator:</i> Total number of employed persons who work to tight deadlines. Choose answers 1, 2 and 3 for item Q45B (“All of the time”, “Around all of the time” or “Around ¾ of the time”).</p> <p><i>Denominator:</i> Total number of persons in the sample.</p> <p>Indicator not available in LFSs.</p>
Further readings	<p>Green, F., 2006: Demanding work. The paradox of job quality in the affluent economy. Woodstock: Princeton University Press.</p> <p>Felstead, A., Gallie, D., Green, F. and Inanc, H., 2013: Work Intensification in Britain: First Findings from the Skills and Employment Survey 2012, London: Centre for Learning and Life Chances in Knowledge Economies and Societies, Institute of Education. Available at: http://www.cardiff.ac.uk/socsi/ses2012</p> <p>Karasek, R., 1979: “Job demands, job decision latitude and mental strain: Implications for job redesign” <i>Administrative Science Quarterly</i>, 24, 285-308.</p> <p>Green, F., 2004: “Work intensification, discretion and the decline in well-being at work”, <i>Eastern Economic Journal</i>, 30(4) Fall.</p>

Short name	Organizational participation (7b5)
Name	Percentage of employees who can influence decisions that affect their work
Dimension and sub-dimension	7. Employment-related relationships and work motivation a. Employment-related relationships b. Work motivation
Measurement objectives	<p>Influence on work decisions measures the level of organizational participation. Employed persons' ability to influence organizational decisions affecting their work has various potential benefits for both themselves and their employers. The indicator focuses on involvement in organization-level decision-making while workers' influence on decisions directly concerning the tasks of the job are covered by indicators 7b1 and 7b3. Influence on organization-level decisions provides workers with a channel of influence to communicate matters affecting their own work and well-being. It also increases communication within the organization. It enhances employers' awareness of worker needs and therefore facilitates planning and promotion of training activities. Employers thus make a more efficient use of their resources in investment in skills. It is also argued that workers' engagement in workplace decisions facilitates organizational change. Engaged workers have a better understanding of decisions regarding organizational changes and are less likely to oppose these changes. Employee involvement also helps risk anticipation. Such workplaces are argued to perform more efficiently.</p> <p>This indicator relates to the European Commission directive (2002/14/EC) establishing a general framework for informing and consulting employees in the European Community.</p>
Formula	$\frac{\text{Total number of employees who can influence decisions that affect their work}}{\text{Total number of employees}} \times 100$
Concepts and definitions	<p>Total number of employed persons who have influence over work decisions. Operationalisations of this variable can be found in at least two international surveys (see recommended data source(s) for details).</p> <p><i>Employees (age 15+):</i> Employees are defined according to the ICSE-1993 (see glossary).</p>
Recommended data source(s)	<p>Data on organizational participation should be captured in household or population surveys, e.g., working conditions surveys or Labour Force Survey modules. Since the respondent's own perception should be captured, establishment surveys or administrative data are not suitable for collecting the information required for the indicator.</p> <p>There are two international data sources that provide information on this indicator.</p> <p>1. The most recent EWCS (2010) has a statement "(Q510) You can influence decisions that are important for your work", with a 1-5 response scale, where</p>

Short name	Organizational participation (7b5)
	<p>1 denotes “always” and 5 denotes “never”.</p> <p>Similarly, EWCS (2010) question Q51D asks whether “You are involved in improving the work organisation or work processes of your department or organisation”, again with a 1-5 response scale, where 1 denotes “always” and 5 denotes “never”.</p> <p>2. European Social Survey in Work, Family and Well-being modules (2004 and 2010) covers organizational participation with the following indicator: “(IORGACT) ... how much the management at your work allows you to influence policy decisions about the activities of the organisation?” A 0-10 answer scale is provided, where 0 represents “I have no influence” and 10 represents “I have complete control”.</p>
Recommended metadata	<p>It is recommended to make metadata available – as a minimum – on the source (periodicity, breaks in series, etc.), geographic coverage, reference period, job coverage (main job or all jobs) and status in employment (self-employed vs. employee).</p> <p>With regard to the comparability of the item with data from other sources/surveys, the question wording and scale of measurement should be given specific attention.</p>
Recommended disaggregation	<p>It is recommended to analyse the indicator disaggregated by firm specific indicators.</p> <ul style="list-style-type: none"> • Firm size • Institutional sector (public vs. private) • Economic activity (ISIC) • Presence of employee representative at workplace (EWCS Q63) <p>Additionally, it is recommended to analyse by:</p> <ul style="list-style-type: none"> • Occupation (ISCO) • Educational level (ISCED) • Contract type (fixed-term vs. permanent) • Part-time vs. full-time work • Sex • Informal sector (public vs. private sector employees) • Supervisory responsibilities • Job content (computerised work, interactive work etc.)
Interpretation guidelines	<p>The indicator has a positive relationship with employment quality, hence the larger the percentage of employed persons who can influence decisions affecting their work, the higher the employment quality.</p> <p>The collection of this indicator with frequent periodicity is important to take into account the implications of business cycles. During economic crises, not</p>

Short name	Organizational participation (7b5)
	<p>only do working conditions deteriorate, but also the power balance between employers and their employees tips in favour of the employers. Employee participation in work related decisions might be expected to decline during financial crises.</p>
Relation to other indicators	<p>Both influence on work decisions and discretion over work methods and pace (7b1) can be classified as distinct forms of employee involvement. It is recommended to examine these two aspects of involvement in relation to one another.</p> <p>Furthermore, to get a broad picture of work motivation, this indicator should be seen in relation to the other indicators of Sub-dimension 7b.</p> <p>It is argued that the presence of trade unions at the workplace helps employees' voices be heard within organizations. This item should be examined in relation to Dimension 5 "social dialogue", specifically with indicator 5.2 "Percentage of employees belonging to a trade union" and indicator 5.4 "Percentage of employees belonging to an employer organisation".</p> <p>Organizational participation to some extent may correlate with the type of occupation but will not be fully determined by it. Measures on organizational participation should be analysed together with information on the occupation. Occupational databases, in particular when based on data collections among workers, may provide further valuable data for the analysis of organizational participation.</p>
International comparisons	<p>The comparison of this indicator is possible across European countries. Although the EWCS and the ESS are harmonised surveys, it should be considered that the indicator measures the respondent's self-perception; therefore responses might be influenced by characteristics of the individual, cultural behaviour, interview settings/environment and other aspects of the survey implementation. Note that ESS additionally covers Israel, Russia and Ukraine.</p> <p>This indicator is expected to vary by the strength of unions and the characteristics of collective bargaining within countries. Differences in the level of influence on work decisions is expected to vary between bargaining corporatism systems (such as in Scandinavia and Germany), systems of contestation (such as Spain, Italy and Portugal) and pluralistic bargaining systems (Italy). International comparisons should take into consideration systems of industrial relations across countries.</p>
Recommended calculation in the EU-LFS or other international surveys	<p><u>EWCS 2010:</u></p> <p><i>Numerator:</i> Total number of employed persons who can influence work decisions or are involved in improving the work organization or work processes of their department or organization.</p> <p>Choose answers 1 and 2 for items Q510 and Q51D ("Always", and "Most of the time").</p>

Short name	Organizational participation (7b5)
	<p><i>Denominator:</i> Total number of employed persons.</p> <p><u>ESS 2004 and 2010:</u></p> <p><i>Numerator:</i> Total number of employed persons who can influence policy decisions about the activities of organizations. Choose answers between 6 to 10 and above for item IORGACT (F28; 10 stands for “I have complete control” in the Likert scale).</p> <p><i>Denominator:</i> Total number of employed persons. Choose MAINACT = 1 (In paid work (or away temporarily) (employee, self-employed, working for your family business)).</p> <p>Indicator not available in EU-LFS.</p>
Further readings	<p>Gallie D., Zhou Y., 2013: “Job control, work intensity and work stress” in (ed.) Duncan Gallie. Economic Crisis and the Quality of Work, Oxford: Oxford University Press.</p> <p>Gallie D., Zhou Y., 2013: Work Organisation and Employee Involvement in Europe. Dublin. Available at: http://www.eurofound.europa.eu/publications/htmlfiles/ef1330.htm</p> <p>Inanc, H., Felstead, A., Gallie, D. and Green, F., 2013: Job Control in Britain: First Findings from the Skills and Employment Survey 2012, London: Centre for Learning and Life Chances in Knowledge Economies and Societies, Institute of Education. Available at: http://www.cardiff.ac.uk/socsi/ses2012</p> <p>Wilkinson, A., Gollan, P. J., Marchington, M., and Lewin, D., 2010: The Oxford Handbook of Participating in Organizations. Oxford: Oxford University Press.</p> <p>Inanc H, Zhou Y., Gallie D., Felstead A. and Green, F., 2014: “Direct participation and employee learning at work” Manuscript.</p>

GLOSSARY

Term	Definition
Accident at work	See Occupational accident.
Active contributors	Active contributors are insured individuals who have made at least one contribution or on whose behalf at least one contribution has been made during the reporting period (i.e., the 12 month period). [ILO Social Security Inquiry 2005 Manual; link: http://www.social-protection.org/gimi/gess/ResShowRessource.do?ressourceId=6622]
Actual beneficiaries	Individual or household receiving social security benefits at a specific point in time/during a period of time. In most cases, beneficiaries are individuals, yet in others, benefits are paid to households. Old age pension and unemployment benefits are individual benefits. [ILO Social Security Inquiry 2005 Manual; link: http://www.social-protection.org/gimi/gess/ResShowRessource.do?ressourceId=6622]
Actual old-age pension beneficiaries	Actual beneficiaries of old age pensions are persons in old age receiving an old age pension benefit. <i>Old age pension benefit</i> refers to cash periodic benefits which can be provided by contributory or non-contributory schemes. Old age pension benefits can be either means-tested or not. [ILO Social Security Inquiry 2005 Manual; link: http://www.social-protection.org/gimi/gess/ResShowRessource.do?ressourceId=6622]
Actual unemployment benefits beneficiaries	Actual beneficiaries in case of unemployment are defined as unemployed persons receiving unemployment benefits (considering only cash periodic benefits) which can be either from contributory or non-contributory unemployment schemes.
Basic schemes	These are social protection schemes that guarantee a basic level of protection. This term does not relate to the level of benefits. In particular, this should not to be understood as a minimum level of benefits. [ILO Social Security Inquiry 2005 Manual; link: http://www.social-protection.org/gimi/gess/ResShowRessource.do?ressourceId=6622]
Case of occupational injury	The case of one worker incurring an occupational injury as a result of one occupational accident. If a person is injured in more than one occupational accident during the reference period, each case of injury to that person should be counted separately.
Child labour	<p>See: 18th International Conference of Labour Statistician (2008): Resolution concerning statistics of child labour, adopted by the 18th International Conference of Labour Statisticians (2008); link: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112458/lang-en/index.htm</p> <p>As the measurement framework could be used:</p> <ul style="list-style-type: none"> • The general production boundary as defined in the System of National Accounts (SNA) - the broadest concept, or: • The SNA production boundary - children engaged in any activities falling within the production boundary in the SNA.

	<p>For the purpose of statistical measurement, children engaged in child labour include all persons aged 5 to 17 years who, during a specified time period, were engaged in one or more of the following categories of activities (the broadest definition under the general production boundary):</p> <ol style="list-style-type: none"> a) Worst forms of child labour b) Employment below the minimum age c) Hazardous unpaid household services <p>A schematic presentation of the statistical identification procedure for child labour is provided below:</p> <p style="text-align: center;">Child labour [a)+ b) + c)]</p> <ol style="list-style-type: none"> a) Work not designated as hazardous: <ol style="list-style-type: none"> 1. Children aged 5-11 years in economic activity (in permissible “light work”); 2. Children aged 12-14 years in economic activity (who work for 14 or more hours per week, but less than specified threshold), excluding those in “light work”. b) Worst forms of child labour (5-17 years): <ol style="list-style-type: none"> 3. Children employed in designated hazardous industries; 4. Children employed in designated hazardous occupations; 5. Children employed for long hours; 6. Children working under other hazardous conditions. 7. Children involved in worst forms of child labour other than hazardous work. c) Hazardous unpaid household services. (This concept is applicable if the “general production boundary” is used as framework for measuring child labour.)
<p>Child labour – Worst forms of child labour (WFCL)</p>	<p>See: ILO Convention No. 182 on the worst forms of child labour (WFCL); link: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312327:NO</p> <p>WFCL = Hazardous work + WFCL other than hazardous work</p> <ul style="list-style-type: none"> • Hazardous work • WFCL other than hazardous work
<p>Child labour – WFCL other than hazardous work</p>	<p>WFCL other than hazardous work include:</p> <ul style="list-style-type: none"> • All forms of slavery or similar practices, trafficking, debt bondage, serfdom, forced or compulsory labour, forced or compulsory recruitment in armed conflict • Child prostitution, pornography • Illicit activities, including the production and trafficking of drugs <p>Note: Standardised statistical concepts and definitions for these forms of child labour are not fully developed.</p>

Child labour – Hazardous work by children (as an element of WFCL)	<p>Work which, by its nature or the circumstances is likely to harm the health, safety or morals of children including:</p> <ul style="list-style-type: none"> • Children employed in designated hazardous industries • Children employed in designated hazardous occupations • Children working for long hours • Children working under other hazardous work conditions
Child labour – Children employed in designated hazardous industries (as an element of hazardous work)	<p>Hazardous work for children measured in terms of designated hazardous industries for children in countries that have prohibited the engagement of children in specific designated industries, for example, construction and mining and quarrying.</p> <p>Designated hazardous industries for children should be defined in a manner consistent with the national standard classification of industries (activities), and to the extent possible with the latest version of the International Standard Industrial Classification of All Economic Activities (ISIC, rev 4).</p>
Child labour – Children employed in designated hazardous occupations (as an element of hazardous work)	<p>Hazardous work for children measured in terms of designated hazardous occupations which are prohibited by national laws or regulations, where they exist. In addition to the list of occupations prohibited by legislation, designated hazardous occupations for children may be identified on the basis of recommendations from competent consultative bodies, or detailed analysis of the hazard content of occupations.</p> <p>Designated hazardous occupations for children should be defined in a manner consistent with the national standard classification of occupations, and to extent possible with the latest version of the International Standard Classification of Occupations (ISCO 08).</p> <p>Examples of hazardous occupations in some countries: extraction and building trades; metal machinery and related trades; precision handicraft; printing and related trades; machine operators and assemblers; drivers and mobile-plant operators; etc.</p>
Child labour – Children working for long hours (as an element of hazardous work)	<p>According to the Resolution concerning statistics of child labour (Paragraphs 28 and 29) a child is considered to be working long hours of work if the number of hours actually worked at all jobs (including night work) during the reference period is above a specified threshold.</p> <p>The thresholds may be determined in terms of maximum number of hours of work that the national law or regulation sets for children who have reached the minimum working age. Hours actually worked should be defined in accordance with the latest international standards on the topic.</p> <p>Paragraph 30 of Child Labour Resolution stipulates: A child is considered to be working at night if the work schedule includes hours of work defined as night work prohibited for children under national legislation, where it exists. Alternative statistical definition of night work for children may be formulated on the ILO Night Work Convention No.171 (1990), particularly</p>

	Article 1(a) and (b).
Child labour – Children engaged in other hazardous work conditions (as an element of hazardous work)	<p>Children not engaged in hazardous industries or occupations, or in long hours of work, but who are exposed nevertheless to some hazardous working conditions not captured by the designated hazardous industries or occupations, or by long hours of work: work performed in an unhealthy environment, involving unsafe equipment or heavy loads; in a dangerous work location which exposes children to abuse etc.</p> <p>Examples: carrying heavy loads; operating heavy equipment or machinery, dangerous tools; temperatures, loud noise or vibrations; exposure to physical, psychological or sexual abuse; other difficult conditions.</p>
Child labour – Employment below the minimum age	<p>Employment below the minimum age includes any work that is carried out by a child who is below the minimum age specified for the kind of work performed.</p> <p>According to the ILO Minimum Age Convention, 1973 No. 138 “the minimum age for admission to employment or work should not be less than the age of completion of compulsory schooling and, in any case, not less than 15 years” (Article 2).</p> <p>According to the Article 7 of Convention No. 138, national laws or regulations may permit the work of persons as from 13 years of age (or 12 years in countries that have specified the general minimum working age of 14 years) in light work which is: (a) not likely to be harmful to their health or development; and (b) not such as to prejudice their attendance at school, their participation in vocational orientation or training programmes approved by the competence authority, or their capacity to benefit from the instruction received.</p> <p>In determining the hours threshold for permissible light work, national statistical offices should take into consideration the stipulation set forth in national legislation, or, in their absence, use a cut-off point of 14 hours during the reference week, below which work can be considered permissible light work.</p>
Child labour – Hazardous unpaid household services	<p>The concept of unpaid household services, as an element of child labour, is applicable where the general production boundary is used as the measurement framework.</p> <p>Unpaid household services by children are those performed in the child’s own household that involve the production of domestic and personal services by a household member for consumption within their own household, commonly called “household chores”.</p> <p>See: United Nations, System of National Accounts 2008 (SNA 2008), link: http://unstats.un.org/unsd/nationalaccount/sna2008.asp</p> <p>Unpaid household services include: (a) housekeeping activities such as</p>

	<p>cleaning, decorating, preparing and serving meals; (b) caring for children, invalids or old people in the home; and (c) making small repairs in one's house.</p> <p>Hazardous unpaid household services which are performed: (a) for long hours; (b) in an unhealthy environment, involving unsafe equipment or heavy loads; (c) in dangerous locations, and so on.</p> <p>According to the Resolution concerning statistics of child labour (18th ICLS, 2008) a child may be considered to be in child labour when the total number of hours worked in employment and unpaid household services exceeds the thresholds that may be set for national statistical purpose.</p> <p>In the Report III - Child Labour Statistics - 18th ICLS, paragraph 81 (section 7.2.) the following is mentioned: "...UNICEF has applied a work-time threshold of 28 hours per week spent in performing household chores, in excess of which the work is considered to be child labour under its Multiple Indicator Cluster Survey (MIS) programme (see: www.childinfo.org)".</p>
Collective bargaining	<p>Collective bargaining is defined according the ILO Convention concerning the Promotion of Collective Bargaining (C154) from 1981. It refers to all negotiations which take place between an employer, a group of employers or one or more employers' organizations, on the one hand, and one or more workers' organizations, on the other, for (a) determining working conditions and terms of employment; and/or (b) regulating relations between employers and workers; and/or(c) regulating relations between employers or their organizations and a workers' organization or workers' organizations.</p> <p>According to the Convention, collective bargaining encompasses negotiations which take place between an employer, a group of employers or one or more employers' organizations, and one or more workers' organizations, for determining working conditions and terms of employment.</p> <p>http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C154</p>
Collective bargaining agreement	<p>According to the Resolution concerning statistics of collective agreements, adopted by the Third International Conference of Labour Statisticians (October 1926), a collective agreement should be defined, for the purposes of statistics, as a written agreement concluded between one or more employers or an employers' organization on the one hand, and one or more workers' organizations of any kind on the other, with a view to determining the conditions of individual employment and, in certain cases, to the regulation of other questions relative to employment.</p> <p>http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087547/lang--en/index.htm</p>

Commuting accident	An accident occurring on the habitual route, in either direction, between the place of work or work-related training and: (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration; which results in death or personal injury.
Contributory schemes	<p>Contributory schemes are social protection schemes that require the payment of contributions, by the protected persons or by other parties on their behalf, in order to secure individual entitlement to benefits. In contributory schemes, entitlement to a benefit is based on contributions from insured persons and/or their employer.</p> <p>By convention, all non-autonomous schemes that employers run in favour of their employees, former employees and their dependants are classified as contributory schemes.</p> <p>[ESSPROS Manual; link: http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-RA-12-014]</p>
Coverage by social security benefits	<p>When measuring coverage a distinction is made between <i>legal coverage</i> (or <i>statutory coverage</i>) and <i>effective coverage</i>. Measurements of effective coverage should reflect how in reality the legal provisions are implemented.</p> <p>When measuring effective extent of coverage a distinction also has to be made between coverage measured in terms of <i>protected persons</i> (those who have benefits guaranteed but are not necessarily currently recipients of such benefits); and coverage measured in terms of <i>actual beneficiaries</i>. [World social security report, ILO 2010, p.23; link: http://www.social-protection.org/gimi/gess/RessFileDownload.do?ressourceId=15263]</p>
Earnings	<p>The concept of earnings, as applied in wages statistics, relates to remuneration in cash and in kind paid to employees, as a rule at regular intervals, for time worked or work done together with remuneration for time not worked, such as for annual vacation, other paid leave or holidays.</p> <p>Earnings exclude employers' contributions in respect of their employees paid to social security and pension schemes and also the benefits received by employees under these schemes. Earnings also exclude severance and termination pay.</p> <p>For more information, see the <i>Resolution concerning an integrated system of wages statistics</i>, adopted by the Twelfth International Conference of Labour Statisticians; web link: http://www.ilo.org/wcmsp5/groups/public/-dgreports/---stat/documents/normativeinstrument/wcms_087496.pdf</p>
Economic activity	The economic activity group refers to the main activity of the establishment in which a person worked during the reference period. The branch of economic activity of a person does not depend on the specific duties or functions of the person's job, but on the characteristics of the economic unit in which this person works. It is recommended that

	<p>indicators disaggregated by economic activity be tabulated according to the latest version of the International Standard Industrial Classification of All Economic Activities (ISIC-Rev. 4) as well as by the national industrial classification system if such a national classification exists in order to facilitate international comparability of the data. For more information on ISIC-Rev. 4, please see: http://unstats.un.org/unsd/cr/registry/isic-4.asp (Note that the System of National Accounts and the Resolutions of the International Conference of Labour Statisticians (ICLS) are consistent as regards the definition of economic activity.)</p>
Educational attainment	<p>It is recommended that data by level of educational attainment be calculated according to the highest level of education completed, classified according to the International Standard Classification of Education (ISCED). The latest revision of ISCED was in 2011. For more information, please see: http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx</p>
Employed persons	<p>According to the 19th ICLS Resolution on work statistics, <i>persons in employment</i> are defined as all those of working age who, during a short reference period, either worked in a job for pay or profit for at least one hour or were temporarily absent from such a job in which they had already worked.</p> <p><i>Pay or profit</i> refers to work done as part of a transaction in exchange for remuneration, which may be payable either as wages or salaries for time worked or work done, or as profit (or loss) derived through market transactions from the goods and/or services produced. Remuneration may be in cash or in kind, whether actually received or not.</p> <p>Employed persons on <i>temporary absence</i> during the short reference period refers to those who, having already worked in their present job, were not at work for a short duration but maintained a job attachment during their absence. A <i>job attachment</i> is established on the basis of the reason for the absence and in the case of certain reasons, the continued receipt of remuneration, and/or the total duration of the absence as self-declared or reported, depending on the statistical source.</p> <p>The 19th ICLS Resolution on work statistics defines a <i>job</i> as a set of tasks and duties performed, or meant to be performed, by one person for a single economic unit. Persons may have one or several jobs. Notably, for many quality of employment indicators, including those related to employment-related income and working time, indicators should ideally cover all jobs of multiple jobholders since the employment quality perspective of the employed person is taken into account. This is a feature distinguishing the quality of employment framework from a job quality framework. In cases where the main job is used as the reference among multiple job-holders, the main job should refer to the one with the longest hours usually worked, as defined in the international statistical standards on working time.</p> <p>For more information see the <i>Resolution concerning statistics of work</i>,</p>

	<p><i>employment and labour underutilisation</i>, adopted by the Nineteenth International Conference of Labour Statisticians (October 2013), available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_230304/lang--en/index.htm</p> <p><i>Note:</i> Until the adoption of the <i>Resolution concerning statistics of work, employment and labour underutilisation</i> adopted by the Nineteenth International Conference of Labour Statisticians (ICLS) in 2013, the international statistical recommendations regarding the concept definition of employment were based on the <i>Resolution concerning statistics of the economically active population, employment, unemployment and underemployment</i>, adopted by the Thirteenth ICLS in 1982. According to the 13th ICLS Resolution, employment referred to all persons above a specified age who during a brief period (either one week or one day) were either (1) in paid employment (for wage or salary, in cash or in kind) or (2) in self-employment (for profit or family gain). In either case, to be considered employed, the person had to have been (during the brief period) either at work or temporarily not at work in a job to which they had some attachment.</p> <p>A work activity was previously considered employment if the activity in which the person was engaged was included within the production boundary of the System of National Accounts, thus making the previous definition broader than the current one. The previous definition of employment allowed the inclusion of persons that were in a work activity that was not for pay or profit, such as (1) unpaid apprentices and trainees, (2) persons who produced goods for own final use (such as subsistence foodstuff producers) if such production comprised an important contribution to the total household consumption, (3) persons who volunteered through/for organizations and (4) persons who volunteered to produce goods for other households, if the production comprised an important contribution to the total household consumption. All four of these types of workers are now excluded from the definition of persons in employment according to the 19th ICLS Resolution on work statistics. In countries where persons engaged in the production of goods for own final use has been a sizable share of employment and employment data have been collected following the 13th ICLS recommendations, it may be expected that there will be an important break in series once the new 19th ICLS Resolution on work statistics standards are adopted in the national data collection system.</p>
Employees	<p>Employees are all those workers who hold the type of job defined as “paid employment jobs”. (Please see definition below on paid employment jobs.)</p> <p>For more information, see the <i>Resolution concerning the International Classification of Status in Employment (ICSE)</i>, adopted by the Fifteenth International Conference of Labour Statisticians (January 1993); link: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087562.pdf</p>

Employees with fixed-term contracts	<p>According to the Resolution concerning the International Classification of Status in Employment (ICSE), adopted by the Fifteenth International Conference of Labour Statisticians (January 1993) Employees are all those workers who hold the type of job defined as “paid employment jobs” (see below).</p> <p>Employees with a fixed-term contract are employees whose employment contract specifies a particular date of termination.</p>
Employer organization	<p>According to the International Labour Organization, employers’ organizations are institutions that are set up to organize and advance the collective interests of employers. Given that the range and content of such collective interests vary from one country to another, the structure, membership basis and functions of employers’ organizations differ widely between countries. Employers’ organizations fulfil a variety of functions. The issues of membership growth, income generation and improvement of relations with members are important for all employers’ organizations. The historic <i>raison d’être</i> for many employers’ organizations is their direct role in the collective bargaining process. However, employers’ organizations are also involved in influencing labour market and industrial relations environments in other ways, for example through participation in statutory bodies, consultations on labour market issues, as well as lobbying activities on behalf of their members</p>
Evening work	<p>There are currently no international standards defining evening work. In the EU-LSF “usually” work in the evening is defined as working in the evening at least half of the days worked in a reference period of four weeks preceding the end of the reference week. The definitions of evening vary considerably among countries so that it is not easy to establish a strictly common basis for all Member States. Generally, evening work must be considered to be work done after the usual hours of working time in this Member State, but before the usual sleeping hours. It should include hours between 6 p.m. and midnight. As foreseen by directive 2003/88/EC, the definition of usual sleeping hours can vary by country but, in any case, it should include hours between midnight and 5 a.m.</p>
Fatal occupational injury	<p>An injury caused by an accident at work which leads to the death of a victim within one year of the accident.</p>
Fixed-term contracts	<p>See Employees with fixed-term contracts.</p>
Forced labour (the legal definition)	<p>The ILO Forced Labour Convention, 1930 (No. 29) (http://www.ilo.org/dyn/normlex/fr/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312174:NO) defines forced or compulsory labour as “all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily” (Article 2(1)).</p> <p>The ILO supervisory bodies have identified three key elements of this definition:</p> <p>All work or service includes all types of work, service and</p>

	<p>employment, in any industry, sector or occupation. The Convention therefore applies to all workers in the public and private sectors, including migrant workers, domestic workers and workers in the informal economy.</p> <p>Menace of any penalty covers a wide range of penalties, including both penal sanctions and various forms of direct or indirect coercion, such as physical violence, psychological threats, retention of identity documents or the non-payment of wages. The penalty may also take the form of a loss of rights or privileges.</p> <p>Voluntary offer refers to the free and informed consent of workers to enter into an employment relationship and to their freedom to leave the employment at any time, with reasonable notice in accordance with national law or collective agreements.</p> <p>The Convention applies to “any person”, including adults and children, and to all possible forms of forced labour, including slavery and slavery-like practices, debt bondage and trafficking in persons.</p>
Forced labour (operational definition)	<p>The ILO Survey guidelines to estimate forced labour of adults and children, “Hard to see, harder to count”, establish operational definitions which break down the legal definitions into elements that can subsequently be measured:</p> <p>Forced labour of adults is defined as “work for which a person has not offered him or herself voluntarily (concept of ‘involuntariness’) and which is performed under the menace of any penalty (concept of ‘coercion’) applied by an employer or a third party to the worker. The forced labour may take place during the worker’s recruitment process to force him or her to accept the job or, once the person is working, to force him/her to do tasks which were not part of what was agreed at the time of recruitment or to prevent him/her from leaving the job”. Link: http://www.ilo.org/sapfl/Informationresources/ILOPublications/WCMS_182096/lang--en/index.htm</p> <p>In terms of measuring forced labour, two criteria are applied:</p> <ol style="list-style-type: none"> a) Involuntariness/deception, and b) Penalty and coercion. <p>Thus, the main mechanisms of forced labour are:</p> <ol style="list-style-type: none"> i. Forms of involuntariness and ii. Forms of coercion employed. <p>The assessment of a forced labour situation requires the presence of the criteria of both involuntariness and coercion/penalty.</p> <p>The operational definition of forced labour can be split into three principal dimensions:</p> <ul style="list-style-type: none"> • Unfree recruitment

	<ul style="list-style-type: none"> • Work and life under duress • Impossibility to leaving an employer <p>Each of these three dimensions includes the presence of a Penalty or menace of penalty.</p>
Forced labour among migrants	Forced labour of migrant workers involves the same three elements described above (Unfree recruitment; Work and life under duress; Impossibility to leaving an employer) applied to migrant workers.
Formal education	Formal education is education that is institutionalised, intentional and planned through public organizations and recognised private bodies, and – in their totality – constitute the formal education system of a country. Formal education programmes are thus recognised as such by the relevant national education or equivalent authorities, e.g., any other institution in cooperation with the national or sub-national education authorities. Formal education consists mostly of initial education. Vocational education, special needs education and some parts of adult education are often recognised as being part of the formal education system. Qualifications from formal education are by definition recognised and, therefore, are within the scope of ISCED. Institutionalised education occurs when an organization provides structured educational arrangements, such as student-teacher relationships and/or interactions, that are specially designed for education and learning. (ISCED 2011, para. 36)
Full-time work arrangements	<p>Full-time work arrangements should be defined according to national circumstances. As working-time patterns differ by economic activity and occupation, the self-reported responses given for example in a labour force survey are considered the most appropriate.</p> <p>This approach also takes into account ILO Convention No. 175, that defines the term “part-time worker” as an employed person whose normal hours of work are fewer than those of comparable full-time workers.</p> <p>For more information, please see C175 - Part-Time Work Convention, 1994 (No. 175), Convention concerning Part-Time Work (Entry into force: 28 Feb 1998): http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_ILO_CODE:C175</p>
Full-time employment	Full-time employment encompasses those employed persons in full-time work arrangements.
Hours usually worked	<p>Hours usually worked is the typical value of hours actually worked in a job per short reference period such as one week, over a long observation period of a month, quarter, season or year that comprises the short reference measurement period used. Hours usually worked applies to all types of jobs (within and beyond the SNA production boundary).</p> <p>For more information see the <i>Resolution concerning the measurement of working time</i>, adopted by the 18th International Conference of Labour Statisticians, (2008); link: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-</p>

	conferences-of-labour-statisticians/WCMS_112455/lang--en/index.htm
Informal education	<p>Informal learning may include learning activities that occur in the family, workplace, local community and daily life, on a self-directed, family-directed or socially-directed basis. Like formal and non-formal education, informal learning can be distinguished from incidental or random learning. (ISCED 2011, para. 43)</p>
Informal employment	<p>Two separate but related concepts of informality are relevant for defining informal employment: employment in the informal sector and informal employment. These concepts refer to different aspects of the informalisation of employment, as employment in the informal sector is an enterprise-based concept and informal employment is a job-based concept.</p> <p>The <i>informal sector</i> consists of unregistered and/or small unincorporated private enterprises engaged in the production of goods or services for sale or barter. The enterprises typically operate at a low level of organization, with little or no division between labour and capital as factors of production and on a small scale. Labour relations are based mostly on casual employment, kinship or personal and social relations. The fixed and other assets used do not belong to the production units as such but to their owners, and the units cannot engage in transactions or enter into contracts with other units, nor incur liabilities, on their own behalf. An unincorporated enterprise is a production unit that is not constituted as a separate legal entity independently of the individual (or group of individuals) who owns it, and for which no complete set of accounts is kept. An enterprise is unregistered when it is not registered under specific forms of national legislation (e.g., factories' or commercial acts, tax or social security laws, professional groups' regulatory acts). Issuing of a trade license or business permit under local regulations does not qualify as registration. An enterprise is considered small when its size in terms of employment is below a specific threshold (e.g., five employees) to be determined according to national circumstances.</p> <p><i>Employment in the informal sector</i> refers to the total number of jobs in informal sector enterprises.</p> <p>The key elements of <i>informal employment</i> are that it is a job-based concept (focus on characteristics of the job) that includes: (1) all jobs (main and secondary jobs), (2) jobs in all types of production units, (3) workers in all status in employment, and (3) all branches of economic activity (agriculture and non-agriculture). This final element is particularly important in economies where subsistence agriculture exists.</p> <p>Informal employment, which encompasses all of the jobs included in the concept of employment in the informal sector except those which are classified as formal jobs in informal sector enterprises, refers to those jobs that generally lack basic social or legal protections or employment benefits and may be found in formal sector enterprises, informal sector enterprises or households. Formal sector enterprises include corporations (including</p>

	<p>quasi corporations, as defined by the System of National Accounts), non-profit organizations, government-owned unincorporated enterprises and those unincorporated household enterprises that produce goods and services for sale or barter that do not form part of the informal sector. Informal sector enterprises are those defined by the 15th ICLS, but for measurement of informal employment they exclude households that employ paid domestic workers.</p> <p>Informal employment includes the following types of jobs: (i) own-account workers employed in their own informal sector enterprises; (ii) employers employed in their own informal sector enterprises; (iii) contributing family workers, irrespective of whether they work in formal or informal sector enterprises; (iv) members of informal producers' cooperatives; (v) employees holding informal jobs in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households. Countries may consider to report supplementarily own-account workers engaged in the production of goods mainly for own final use by their household (albeit not covered under employment work in the 19th ICLS resolution on work statistics).</p>
Informal Sector	Unincorporated economic units of the household sector engaged in market oriented production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factor of production and on small scale. Labour relations – where they exist – are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees. Comprises i) enterprises of own account workers and ii) enterprises of micro-employers.
Insurance scheme	Insurance schemes, in the context of social security, refer to schemes that guarantee protection through an insurance mechanism. Insurance is based on: (1) the prior payment of premiums or contributions, i.e., before the occurrence of the insured contingency; (2) risk sharing or “pooling”; and (3) the notion of a guarantee. The premiums paid by (or for) insured persons are pooled together and the resulting fund is used to cover the expenses exclusively incurred by those persons affected by the occurrence of the relevant and clearly defined contingency or contingencies. It is common that contributory schemes make use of an insurance vehicle (usually social insurance), but the reverse is not necessarily true (national provident funds, for example, do not generally feature risk-pooling). [World social security report, ILO 2010, p.15; link: http://www.social-protection.org/gimi/gess/RessFileDownload.do?ressourceId=15263]
ICSE	See Status in employment.
ISCED	See Educational attainment.
ISCO	See Occupation.
ISIC	See Economic activity.
Job tenure	Job tenure typically measures the length of time employed persons have been in their current job (self-employed workers) or with their current employer (employees), on a continuous basis (excluding vacations).

Job-related training	Learning activities outside formal education in order to obtain knowledge and/or learn new skills needed for a current or a future job, increase earnings, improve job and/or carrier opportunities in a current or another field and generally improve his or her opportunities for advancement and promotion (Eurostat 2013).
Labour Force	<p>According to the resolution adopted by the 19th ICLS, the concept <i>labour force</i> refers to the current supply of labour for the production of goods and services in exchange for pay or profit.</p> <p>Persons may be classified according to their labour force status as being (a) in employment, (b) in unemployment, or (c) outside the labour force as defined. Priority is given to employment over the other two categories and to unemployment over outside the labour force.</p> <p>The three categories of labour force status are, thus, mutually exclusive and exhaustive. The sum of persons in employment and in unemployment equals the labour force. Persons outside the labour force are those of working age who were neither in employment nor in unemployment in the short reference period.</p> <p>For more information, see the <i>Resolution concerning statistics of work, employment and labour underutilisation</i>, adopted by the Nineteenth International Conference of Labour Statisticians (October 2013), available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_230304/lang--en/index.htm</p>
Legal (or statutory) coverage by social security benefit	Estimates of the extent of legal coverage use both information on the groups covered by statutory schemes for a given branch in national legislation, and available statistical information quantifying the number of persons concerned at the national level. The legal extent of coverage rate for a given branch of social security is the ratio between the estimated number of people legally covered and – as appropriate – the total number of employees (that is, wage and salary workers), the total number of employed persons (including employees and the self-employed), the total number of persons in the labour force (including or not including their dependants), or the total population. [World social security report, ILO 2010, pp.22-23; link: http://www.social-protection.org/gimi/gess/RessFileDownload.do?ressourceId=15263]
Maternity/paternity leave benefits	Maternity benefits are paid to a working woman who goes on maternity leave. The maternity benefits are designed to compensate the new mother for the loss of her salary or income during the time she is not working, due to the pregnancy and birth. A father is entitled to replace his spouse during part of the maternity leave and to receive a paternity benefits as prescribed by law.
Means-tested benefits	Benefits that are granted only upon proof of need. Different types of income or assets, such as capital, earnings, benefits and other payments may be taken into account in the aggregate for the purpose of determining whether the applicants are eligible for benefit at all and the amount of

	benefit which will be granted. [ILO Social Security Inquiry 2005 Manual; link: http://www.social-protection.org/gimi/gess/RessShowRessource.do?ressourceId=6622]
Migrant workers	The ILO Migrant Workers (Supplementary Provisions) Convention, 1975 (No. 143), defines a migrant worker as “a person who has migrated from one country to another with a view to being employed otherwise than on his own account and includes any person regularly admitted as a migrant worker”.
Night work	<p>According to the Night Work Convention, 1990 (No. 171), night work means all work which is performed during a period of not less than seven consecutive hours, including the interval from midnight to 5 a.m., to be determined by the competent authority after consulting the most representative organizations of employers and workers or by collective agreements. The term night worker means an employed person whose work requires performance of a substantial number of hours of night work which exceeds a specified limit. This limit shall be fixed by the competent authority after consulting the most representative organizations of employers and workers or by collective agreements.</p> <p>In the EU-LSF “usually” work at night is defined as working at night at least half of the days worked in a reference period of four weeks preceding the end of the reference week.</p> <p>The definitions of night vary considerably among countries so that it is not easy to establish a strictly common basis for all Member States. Generally, night work must be generally considered to be work done during the usual sleeping hours. As foreseen by directive 2003/88/EC, the definition of usual sleeping hours can vary by country but, in any case, it should include hours between midnight and 5 a.m.</p>
Non-contributory schemes	<p>Non-contributory schemes are social protection schemes in which eligibility to benefits is not conditional on the payment of contributions by the protected persons or by other parties on their behalf.</p> <p>Many non-contributory schemes give benefits only after a means-test. Non-contributory schemes which do not require a means-test include national health services and family allowance schemes instituted in several countries [ESSPROS Manual; link: http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-RA-12-014]</p>
Nonfatal occupational injury with lost workdays	A nonfatal injury caused by an accident at work resulting in absence from work.
Non-formal education	Like formal education (but unlike informal, incidental or random learning), non-formal education is education that is institutionalised, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or complement to formal education within the process of lifelong learning of individuals. It is often provided in order to guarantee the right of access to education for

	<p>all. It caters to people of all ages but does not necessarily apply a continuous pathway structure; it may be short in duration and/or low-intensity; and it is typically provided in the form of short courses, workshops or seminars. Non-formal education mostly leads to qualifications that are not recognised as formal or equivalent to formal qualifications by the relevant national or sub-national education authorities or to no qualifications at all. Nevertheless, formal, recognised qualifications may be obtained through exclusive participation in specific non-formal education programmes; this often happens when the non-formal programme completes the competencies obtained in another context. (ISCED 2011, para. 39)</p>
Occupation	<p>According to the Resolution Concerning Updating the International Standard Classification of Occupations, endorsed by the 17th International Conference of Labour Statisticians in 2003, an occupation is defined as a set of jobs whose main tasks and duties are characterised by a high degree of similarity. A person may be associated with an occupation through the main job currently held, a second job or a job previously held. A job is a set of tasks and duties performed, or meant to be performed, by one person, including for an employer or in self-employment. Jobs are classified by occupation with respect to the type of work performed, or to be performed. The basic criteria used to define the system of major, sub-major, minor and unit groups are the “skill level” and “skill specialisation” required to competently perform the tasks and duties of the occupations.</p> <p>The International Standard Classification of Occupations 2008 (ISCO-08) is a tool for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job. The ISCO-08 divides jobs into 10 major groups. Each major group is further organized into sub-major, minor and unit groups. The basic criteria used to define the system are the skill level and specialisation required to competently perform the tasks and duties of the occupations.</p> <p>See http://www.ilo.org/public/english/bureau/stat/isco/isco08/</p>
Occupational accident	<p>An unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work which results in one or more workers incurring a personal injury, disease or death; as occupational accidents are to be considered travel, transport or road traffic accidents in which workers are injured and which arise out of or in the course of work, i.e., while engaged in an economic activity, or at work, or carrying on the business of the employer.</p>
Occupational injury	<p>Any personal injury, disease or death resulting from an occupational accident; an occupational injury is therefore distinct from an occupational disease, which is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity.</p>
Own account worker	<p>Own-account workers are those workers who, working on their own account or with one or more partners, hold the type of job defined as a self-employment job, and have not engaged on a continuous basis any employees to work for them during the reference period. It should be noted that during the reference period the members of this group may</p>

	<p>have engaged “employees”, provided that this is on a non-continuous basis. (The partners may or may not be members of the same family or household.)</p> <p>For more information, see the <i>Resolution concerning the International Classification of Status in Employment (ICSE)</i>, adopted by the Fifteenth International Conference of Labour Statisticians (January 1993); web link: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087562.pdf</p>
Paid employment jobs	<p>These are jobs where the incumbents hold explicit (written or oral) or implicit employment contracts which give them a basic remuneration which is not directly dependent upon the revenue of the unit for which they work (this unit can be a corporation, a non-profit institution, a government unit or a household). Some or all of the tools, capital equipment, information systems and/or premises used by the incumbents may be owned by others, and the incumbents may work under direct supervision of, or according to strict guidelines set by the owner(s) or persons in the owners’ employment. (Persons in “paid employment jobs” are typically remunerated by wages and salaries, but may be paid by commission from sales, by piece-rates, bonuses or in-kind payments such as food, housing or training.)</p> <p>For more information, see the <i>Resolution concerning the International Classification of Status in Employment (ICSE)</i>, adopted by the Fifteenth International Conference of Labour Statisticians (January 1993); link: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087562.pdf</p>
Partially contributory schemes	<p>Partially contributory schemes refer to social security schemes of mixed character, that is, they are characterised as both contributory and non-contributory types.</p> <p>Many social security schemes described as being of a contributory type are in actual fact of mixed character, with some non-contributory elements in entitlements to benefits; this allows for a more equitable distribution of benefits, particularly for those with low incomes and short or broken work careers, among others. These non-contributory elements take various forms, being financed either by other contributors (redistribution within the scheme) or by the State. [World social security report, ILO 2010, p.15; link: http://www.social-protection.org/gimi/gess/RessFileDownload.do?resourcelId=15263]</p>
Part-time work arrangements	<p>A voluntary or involuntary reduction of hours or a job that reduces contractual hours or hours usually worked, which are less than those of comparable full-time work (in the same industry or occupation) (recognised in the Part-Time Work Convention, 1994 (No. 175)).</p> <p>For more information, see the Annex of the <i>Resolution concerning the measurement of working time</i>, adopted by the 18th International Conference of Labour Statisticians (2008); link: http://www.ilo.org/global/s</p>

	<p>tistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang--en/index.htm</p>
Part-time employment	<p><i>Part-time employment</i>: those employed persons in part-time work arrangements.</p>
Protected or affiliated persons	<p>Persons who are insured with a social security scheme. This includes persons who are active contributors and persons who have not made any contributions or on whose behalf no contributions have been made during the reporting period but who are still protected by the scheme and would give rise to a benefit should a contingency arise. [ILO Social Security Inquiry 2005 Manual; link: http://www.social-protection.org/gimi/gess/RessShowResource.do?ressourceId=6622]</p>
Social insurance scheme	<p>Social insurance schemes are a sub-category of contributory schemes. It should be noted that social insurance is distinguished in strict technical terms in that the risk-pooling is based on the principle of solidarity, as against insurance arrangements of a more familiar, commercial type, based on individually calculated risk premiums.</p>
Status in employment	<p>Jobs can be classified with respect to the type of explicit or implicit contract of employment the person has with other persons or organizations. The basic criteria used to define the groups of the classification are the type of economic risk and the type of authority over establishments and other workers which the job incumbents have or will have. Topics disaggregated by status in employment should be provided according to the latest version of the International Standard Classification of Status in Employment (ICSE-93).</p> <p>The ICSE-93 defines groups in the classification with reference to the distinction between “paid employment” jobs on the one hand and self-employment jobs on the other. Groups are defined according to one or more aspects of the economic risk and/or the type of authority which the explicit or implicit employment contract gives the incumbents or to which it subjects them. The ICSE-93 consists of the following groups: (1) Employees, (2) Employers, (3) Own-account workers (4) Members of producers’ cooperatives, (5) Contributing family workers and (6) Workers not classifiable by status.</p> <p>For more information, see the <i>Resolution concerning the International Classification of Status in Employment (ICSE)</i>, adopted by the Fifteenth International Conference of Labour Statisticians (January 1993); web link: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087562.pdf</p>
Supplementary schemes	<p>Social protection schemes that top up cash benefits granted by the basic scheme, or extend the coverage of the basic scheme, or replace the basic scheme where conditions for entitlement to the basic scheme are not fulfilled. [ILO Social Security Inquiry 2005 Manual; link: http://www.social-protection.org/gimi/gess/RessShowResource.do?ressourceId=6622]</p>
Trade union	<p>The definition follows the ILO Convention concerning Freedom of Association and Protection of the Right to Organise (C87) from 1948 and</p>

	<p>the ILO resolution concerning the independence of the Trade Union Movement from 1952.</p> <p>A trade union is defined as an independent workers' organization, constituted for the purpose of furthering and defending the interests of workers. A workers' organization is independent if "it has the right to draw up its constitution and rules, to elect its representatives in full freedom, to organise its administration and activities and to formulate its programmes." In other words, it is an independent organisation which is free from government or other third-party interference in its internal affairs, and is able to carry out its economic and social mission irrespective of political changes in the country.</p> <p>http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312232:NO</p>
Total duration of temporary job or fixed-term contract	<p>This refers to the total of the time already elapsed plus the time remaining until the end of the contract.</p> <p>http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_ifs/methodology/definitions</p>
Unemployment benefits	<p><i>Full unemployment benefits:</i> benefits compensating for loss of earnings where a person is capable of working and available for work but is unable to find suitable employment or provide a minimally adequate (or better) income to persons entering or re-entering the labour market as unemployed persons.</p> <p><i>Partial unemployment benefits:</i> benefits compensating for the loss of wage or salary due to formal short-time working arrangements, and/or intermittent work schedules, irrespective of their cause (business recession or slow-down, breakdown of equipment, climatic conditions, accidents and so on), and where the employer/employee relationship continues.</p> <p><i>Early retirement for labour market reasons:</i> periodic payments to older workers who retire before reaching the legal/standard retirement age due to unemployment or to job reduction caused by economic measures such as the restructuring of an industrial sector or of a business. These payments normally cease when the beneficiary becomes entitled to an old age pension.</p> <p><i>Unemployment benefits for unemployed not entitled to unemployment insurance benefits:</i> In a number of countries, if the beneficiary is still unemployed after entitlements to contributory unemployment insurance benefits expire, there exist additional unemployment assistance schemes which continue to pay certain benefits (sometimes means-tested) to those in long-term unemployment. Income support to the long-term unemployed and their families is often taken over by general means-tested social assistance schemes.</p>

Unemployed persons	<p>Persons in <i>unemployment</i> are defined as all those of working age who were not in employment, carried out activities to seek employment during a specified recent period and were currently available to take up employment given a job opportunity.</p> <p>For more information, see the <i>Resolution concerning statistics of work, employment and labour underutilisation</i>, adopted by the Nineteenth International Conference of Labour Statisticians (October 2013), available at: http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_230304/lang--en/index.htm</p>
Weekend work	<p>Weekend work is any work occurring during normal days of rest. While in Western countries the weekend commonly refers to rest days on Saturday and/or Sunday, this is not the case in all countries because of different religions, traditions and customs. For example, in most Arab countries, the traditional weekly rest day is on Friday. As far as weekend work is allowed, it is generally compensated with extra or “premium” payments in addition to the normal wage.</p> <p>“Usually” is defined as working at least two days on the weekend in a reference period of four weeks preceding the end of the reference week.</p> <p>The minimum number of hours worked on the weekend – if it is required in the questionnaire – should be mentioned in the metadata.</p>