

## KILM 2. Employment-to-population ratio

### Introduction

The employment-to-population ratio<sup>1</sup> is defined as the proportion of a country's working-age population that is employed. A high ratio means that a large proportion of a country's population is employed, while a low ratio means that a large share of the population is not involved directly in market-related activities, because they are either unemployed or (more likely) out of the labour force altogether.

Virtually every country in the world that collects information on labour market status should, theoretically, have the requisite information to calculate employment-to-population ratios, specifically, data on the working-age population and total employment. Both components, however, are not always published, nor is it always possible to obtain the age breakdown of a population, in which case data are provided for employment only with no accompanying ratio. Table 2 in the KILM shows employment-to-population ratios for 215 economies, disaggregated by sex and age groups (total, youth and adult), where possible.

KILM 2 also contains ILO estimates of employment-to-population ratios, which can help complement missing observations. The series (table 2a) is harmonized to account for differences in national data and scope of coverage, collection and tabulation methodologies as well as for other country-specific factors

<sup>1</sup> In this text, we sometimes shorten the term to "employment ratio".

such as military service requirements.<sup>2</sup> It includes both nationally reported and imputed data and includes only estimates that are national, meaning there are no geographic limitations in coverage. This series of harmonized estimates serves as the basis of the ILO's global and regional aggregates of the employment-to-population ratio reported in the *Global Employment Trends* series and made available in the KILM 9<sup>th</sup> Edition software as table R2. Table 2b is based on available national estimates of employment-to-population ratios.

### Use of the indicator

The employment-to-population ratio provides information on the ability of an economy to create employment; for many countries the indicator is often more insightful than the unemployment rate. Although a high overall ratio is typically considered as positive, the indicator alone is not sufficient for assessing the level of decent work or decent work deficits.<sup>3</sup> Additional indicators are required to assess such issues as earnings, hours of work,

<sup>2</sup> For further information on the methodology used to harmonize estimates, see Annex 4, "Note on global and regional estimates", in ILO: *Global Employment Trends 2011* (Geneva, 2011);

[http://www.ilo.org/global/publications/books/WCMS\\_150440/lang-en/index.htm](http://www.ilo.org/global/publications/books/WCMS_150440/lang-en/index.htm).

<sup>3</sup> Since the publication of the ILO: *Decent Work*, Report of the Director-General, International Labour Conference, 87th Session, 1999 (Geneva, 1999), the goal of "decent work" has come to represent the central mandate of the ILO, bringing together standards and fundamental principles and rights at work, employment, social protection and social dialogue in the formulation of policies and programmes aimed at "securing decent work for women and men everywhere". For more information, see: <http://www.ilo.org/decentwork>.

informal sector employment, underemployment and working conditions. In fact, the ratio could be high for reasons that are not necessarily positive – for example, where education options are limited, young people tend to take up any work available rather than staying in school to build their human capital. For these reasons, it is strongly advised that indicators should be reviewed collectively in any evaluation of country-specific labour market policies.

The concept that employment – specifically, access to decent work – is central to poverty reduction was firmly acknowledged in the framework of the Millennium Development Goals (MDG) with the adoption of an employment-based target under the goal of halving the share of the world’s population living in extreme poverty. The employment-to-population ratio was adopted as one of four indicators to measure progress towards target 1b on “achieving full and productive employment and decent work for all, including women and young people”.<sup>4</sup> With the MDGs coming to an end in 2015, the crucial role of decent work in poverty reduction was reinforced in the MDGs’ successors, the Sustainable Development Goals (SDGs). In fact, the eighth SDG constitutes the goal of “promoting inclusive and sustainable economic growth, employment and decent work for all”.<sup>5</sup>

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<sup>4</sup> The first Millennium Goal included three targets and nine indicators, see the official list at: <http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm>. The remaining indicators under the target on decent work were the growth rate of GDP per person engaged (i.e. labour productivity growth; KILM 17), working poverty (KILM 18) and the vulnerable employment rate (KILM 3).

<sup>5</sup> The official list of Sustainable Development Goals and their corresponding targets (including for the eighth goal) can be found at: <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

Employment-to-population ratios are becoming increasingly common as a basis for labour market comparisons across countries or groups of countries. Employment numbers alone are inadequate for purposes of comparison unless expressed as a share of the population who could be working. One might assume that a country employing 30 million persons is better off than a country employing 3 million persons, whereas the addition of the working-age population component would show another picture; if there are 3 million persons employed in Country A out of a possible 5 million persons (60 per cent employment-to-population ratio) and 30 million persons employed in Country B out of a possible 70 million (43 per cent employment-to-population ratio), then the employment-generating capacity of Country A is superior to that of Country B. The use of a ratio helps determine how much of the population of a country – or group of countries – is contributing to the production of goods and services.

Employment-to-population ratios are of particular interest when broken down by sex, as the ratios for men and women can provide information on gender differences in labour market activity in a given country. However, it should also be emphasized that this indicator has a gender bias in so far as there is a tendency to undercount women who do not consider their work as “employment” or are not perceived by others as “working”. Women are often the primary child caretakers and responsible for various tasks at home, which can prohibit them from seeking paid employment, particularly if they are not supported by socio-cultural attitudes and/or family-friendly policies and programmes that allow them to balance work and family responsibilities.

## Definitions and sources

The employment-to-population ratio is the proportion of a country's working-age population that is employed. The youth and adult employment-to-population ratios are the proportion of the youth and adult populations – typically persons aged 15 to 24 years and 25 years and over, respectively – that are employed.

Employment is defined in the resolution adopted by the 19<sup>th</sup> International Conference of Labour Statisticians (ICLS) as persons of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit, whether at work during the reference period (i.e. who worked in a job for at least one hour) or not at work due to temporary absence from a job, or to working-time arrangements.<sup>6</sup> (See box 2)

For most countries, the working-age population is defined as persons aged 15 years and older, although this may vary from country to country. For many countries, this age corresponds directly to societal standards for education and work eligibility. However, in some countries, particularly developing ones, it is often appropriate to include younger workers because “working age” can, and often does, begin earlier. Some countries in these circumstances use a lower official bound and include younger workers in their measurements. Similarly, some countries have an upper limit for

eligibility, such as 65 or 70 years, although this requirement is imposed rather infrequently. The variations on age limits also affect the youth and adult cohorts.

Apart from issues related to age, the population base for employment ratios can vary across countries. In most cases, the resident non-institutional population of working age living in private households is used, excluding members of the armed forces and individuals residing in mental, penal or other types of institution. Many countries, however, include the armed forces in the population base for their employment ratios even when they do not include them in the employment figures. In general, information for this indicator is derived from household surveys, including labour force surveys. Some countries, however, use “official estimates” or population censuses as the source of their employment figures.

## Limitations to comparability

Comparability of employment ratios across countries is affected most significantly by variations in the definitions used for the employment and population figures. Perhaps the biggest differences result from age coverage, such as the lower and upper bounds for labour force activity. Estimates of both employment and population are also likely to vary according to whether members of the armed forces are included.

Another area with scope for measurement differences has to do with the national treatment of particular groups of workers. The international definition calls for inclusion of all persons who worked for at least one hour during the

<sup>6</sup> Resolution concerning statistics of work, employment and labour underutilization, adopted by the 19th International Conference of Labour Statisticians, Geneva, 2013; [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](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)

reference period.<sup>7</sup> The worker could be in paid employment or in self-employment, including in less obvious forms of work, some of which are dealt with in detail in the resolution, such as unpaid family work, apprenticeship or non-market production. The majority of exceptions to coverage of all persons employed in a labour force survey have to do with slight national variations to the international recommendation applicable to the alternate employment statuses. For example, some countries measure persons employed in paid employment only and some countries measure only “all persons engaged”, meaning paid employees plus working proprietors who receive some remuneration based on corporate shares. Additional variations that apply to the “norms” pertaining to measurement of total employment include hours limits (beyond one hour) placed on contributing family members before inclusion.<sup>8</sup>

For most cases, household labour force surveys are used, and they provide estimates that are consistent with ILO

definitional and collection standards. A small number of countries use other sources, such as population censuses, official estimates or specialized living standards surveys, which can cause problems of comparability at the international level.

Comparisons can also be problematic when the frequency of data collection varies widely. The range of information collection can run from one month to 12 months in a year. Given the fact that seasonality of various kinds is undoubtedly present in all countries, employment ratios can vary for this reason alone. Also, changes in the level of employment can occur throughout the year, but this can be obscured when fewer observations are available. Countries with employment-to-population ratios based on less than full-year survey periods can be expected to have ratios that are not directly comparable with those from full-year, month-by-month collections. For example, an annual average based on 12 months of observations, all other things being equal, is likely to be different from an annual average based on four (quarterly) observations.

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<sup>7</sup> The application of the one-hour limit for classification of employment in the international labour force framework is not without its detractors. The main argument is that classifying persons who engaged in economic activity for only one hour a week as employed, alongside persons working 50 hours per week, leads to a gross overestimation of labour utility. Readers who are interested to find out more on the topic of measuring labour underutilization may refer to ILO: “Beyond unemployment: Measurement of other forms of labour underutilization”, Room Document 13, 18th International Conference of Labour Statisticians, Working group on Labour underutilization, Geneva, 24 November – 5 December 2008; [http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS\\_100652/lang--en/index.htm](http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_100652/lang--en/index.htm).

<sup>8</sup> Such exceptions are noted in the “Coverage limitation” field of all KILM tables relating to employment. The higher minimum hours used for contributing family workers is in keeping with an older international standard adopted by the International Conference of Labour Statisticians in 1954. According to the 1954 ICLS, contributing family workers were required to have worked at least one-third of normal working hours to be classified as employed. The special treatment was abandoned at the 1982 ICLS.

**Box 2 Resolution concerning statistics of work, employment and labour underutilization, adopted by the 19<sup>th</sup> International Conference of Labour Statisticians, October 2013 [relevant paragraphs]**

**Concepts and definitions**

*Employment (para. 27 to 31)*

1. Persons in employment are defined as all those of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit. They comprise:
  - a. employed persons “at work”, i.e. who worked in a job for at least one hour;
  - b. employed persons “not at work” due to temporary absence from a job, or to working-time arrangements (such as shift work, flexitime and compensatory leave for overtime).
  
2. “For pay or profit” refers to work done as part of a transaction in exchange for remuneration payable in the form of wages or salaries for time worked or work done, or in the form of profits derived from the goods and services produced through market transactions, specified in the most recent international statistical standards concerning employment-related income.
  - a. It includes remuneration in cash or in kind, whether actually received or not, and may also comprise additional components of cash or in-kind income.
  - b. The remuneration may be payable directly to the person performing the work or indirectly to a household or family member.
  
3. Employed persons on “temporary absence” 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. In such cases:
  - a. “job attachment” 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;
  - b. the reasons for absence that are by their nature usually of short duration, and where “job attachment” is maintained, include those such as sick leave due to own illness or injury (including occupational); public holidays, vacation or annual leave; and periods of maternity or paternity leave as specified by legislation;
  - c. reasons for absence where the “job attachment” requires further testing, include among others: parental leave, educational leave, care for others, other personal absences, strikes or lockouts, reduction in economic activity (e.g. temporary lay-off, slack work), disorganization or suspension of work (e.g. due to bad weather, mechanical, electrical or communication breakdown, problems with information and communication technology, shortage of raw materials or fuels):
    - i. for these reasons, a further test of receipt of remuneration and/or a duration threshold should be used. The threshold should be, in general, not greater than three months taking into account periods of statutory leave entitlement specified by legislation or commonly practiced, and/or the length of the employment season so as to permit the monitoring of seasonal patterns. Where the return to employment in the same economic unit is guaranteed this threshold may be greater than three months;
    - ii. for operational purposes, where the total duration of the absence is not known, the elapsed duration may be used.
  
4. Included in employment are:
  - a. persons who work for pay or profit while on training or skills-enhancement activities required by the job or for another job in the same economic unit, such persons are considered as employed “at work” in accordance with the international statistical standards on working time;
  - b. apprentices, interns or trainees who work for pay in cash or in kind;
  - c. persons who work for pay or profit through employment promotion programmes;
  - d. persons who work in their own economic units to produce goods intended mainly for sale or barter, even if part of the output is consumed by the household or family;
  - e. persons with seasonal jobs during the off season, if they continue to perform some tasks and duties of the job, excluding, however, fulfilment of legal or administrative obligations (e.g. pay taxes), irrespective of receipt of remuneration;
  - f. persons who work for pay or profit payable to the household or family,
    - i. in market units operated by a family member living in the same or in another household; or
    - ii. performing tasks or duties of an employee job held by a family member living in the

- g. same or in another household;
  - h. regular members of the armed forces and persons on military or alternative civilian service who perform this work for pay in cash or in kind.
5. Excluded from employment are:
- a. apprentices, interns and trainees who work without pay in cash or in kind;
  - b. participants in skills training or retraining schemes within employment promotion programmes, when not engaged in the production process of an economic unit;
  - c. persons who are required to perform work as a condition of continued receipt of a government social benefit such as unemployment insurance;
  - d. persons receiving transfers, in cash or in kind, not related to employment;
  - e. persons with seasonal jobs during the off season, if they cease to perform the tasks and duties of the job;
  - f. persons who retain a right to return to the same economic unit but who were absent for reasons specified in paragraph 29(c), when the total duration of the absence exceeds the specified threshold and/or if the test of receipt of remuneration is not fulfilled. For analytical purposes, it may be useful to collect information on total duration of absence, reason for absence, benefits received, etc.;
  - g. persons on indefinite lay-off who do not have an assurance of return to employment with the same economic unit.

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