

# KILM 12. Time-related underemployment

## Introduction

This indicator relates to the number of employed persons whose hours of work in the reference period are insufficient in relation to a more desirable employment situation in which the person is willing and available to engage. The indicator was previously known as “visible underemployment”. Two time-related underemployment rates are presented: one gives the number of persons in time-related underemployment as a percentage of the labour force, and the other as a percentage of total employment. The information presented in table 12 covers 78 countries. All information is based on results from household surveys and are disaggregated by sex and age group (total, youth and adult), where possible.

## Use of the indicator

Underemployment reflects underutilization of the productive capacity of the labour force. The concept of “underutilization” is a complex one with many facets. In order to draw a more complete picture of underutilization in relation to the decent work deficit, one needs to examine a set of indicators which includes but is not limited to labour force, employment-to-population ratios, inactivity rates, status in employment, working poverty and labour productivity. Utilizing a single indicator to paint a picture of underutilization will often provide an incomplete picture.

Underemployment has been broadly interpreted and has come to be used to imply any sort of employment that is “unsatisfactory” (as perceived by the worker) in terms of insufficient hours, insufficient compensation or insufficient use of one’s

skills. The fact that the judgement about underemployment is based on personal assessment that could change daily at the whim of the respondent, makes it a concept that is difficult to quantify and to interpret. It is better to deal with the more specific (more quantifiable) components of underemployment separately; the “visible” underemployment can be measured in terms of hours of work (time-related underemployment) whereas “invisible” underemployment, which is measured in terms of income earned from the activity, low productivity, or the extent to which education or skills are underutilized or mismatched, are much more difficult to quantify. Time-related underemployment is the only component of underemployment to date that has been agreed on and properly defined within the international community of labour statisticians.

Statistics on time-related underemployment are useful as a supplement to information on employment and unemployment, particularly the latter, as they enrich an analysis of the efficiency of the labour market in terms of the ability of the country to provide full employment to all those who want it.<sup>1</sup> In fact, the resolution concerning statistics of work, employment and labour underutilization, adopted by the 19<sup>th</sup> ICLS in 2013, restated the definition of time-related underemployment and its central role as a measure of labour underutilization. A new indicator meant to account for time-related

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<sup>1</sup> Time-related underemployment is listed as one variable of “labour slack” in the framework for statistically capturing the wider concept of “labour underutilization”. Interested readers can refer to ILO: “Beyond unemployment: Measurement of other forms of labour underutilization”, Room Document 13, 18<sup>th</sup> International Conference of Labour Statisticians, Working group on Labour underutilization, Geneva, 24 November – 5 December 2008; [http://www.ilo.org/wcmsp5/groups/public/---dgreports/--stat/documents/meetingdocument/wcms\\_100652.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/--stat/documents/meetingdocument/wcms_100652.pdf).

underemployment and supplement the unemployment rate was also introduced, the “combined rate of time-related underemployment and unemployment” (calculated as the number of persons in unemployment or time-related underemployment as a percentage of the labour force).<sup>2</sup> Thus, the indicator on time-related underemployment can provide insights for the design, implementation and evaluation of employment, income and social policies and programmes. Particularly in developing economies people only rarely fall under the clear-cut dichotomy of either “employed” or “unemployed”. Rather, the vast majority of the population will be the underemployed who eke out a living from small-scale agriculture and other types of informal activities. As noted in a study on the subject in Namibia,<sup>3</sup> very few persons working only a few hours per week on their small plots or guarding goats considered themselves to be employed, particularly since the earnings, in cash or kind from these activities were minimal. They were, however, classified as employed by the labour force survey according to the international definition of employment. In such situations, where the majority of the population do not consider themselves to be gainfully employed, an attempt should be made to distinguish between the fully employed and the underemployed.

Whereas unemployment is the most common indicator used to assess the performance of the labour market, in isolation it does not provide sufficient information for an understanding of the shortcomings of the labour market in a country. For example, in the situation above, employment as measured by the standard labour force survey would be

high and unemployment low. Low unemployment rates in these countries, however, do not necessarily mean that the labour market is effective. Rather, the low rates mask the fact that a considerable number of workers work fewer hours, earn lower incomes, use their skills less, and, in general, work less productively than they could do and would like to do. As a result, many are likely to be competing with the unemployed in their search for alternative jobs and a clearer picture of the underutilization of the productive potential of the country’s labour force can be gained by adding the number of underemployed to the number of unemployed as a share of the overall labour force, as suggested by the resolution mentioned in the preceding paragraph. Therefore, adding an indicator of time-related underemployment can assist in building a better understanding of the true employment situation.

### Definitions and sources

The international definition of time-related underemployment was adopted by the 16<sup>th</sup> International Conference of Labour Statisticians in 1998 and several revisions to the text were proposed in the 19<sup>th</sup> International Conference of Labour Statisticians in 2013 in order to clarify ambiguities.<sup>4</sup> The international definition is based on three criteria: it includes all persons in employment who, during a short reference period (a) wanted to work additional hours, (b) had worked less than a specified hours threshold (working time in all jobs), and (c) were available to work additional hours given an opportunity for more work. Each of these criteria is defined in further detail in the resolution itself (see boxes 12a and 12b).

<sup>2</sup> Resolution concerning the statistics of work, employment and labour underutilization, adopted by the 19<sup>th</sup> 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)

<sup>3</sup> Wolf, S.: “Simplified measurement of underemployment: Results of a labour force sample survey in Namibia”, in *Bulletin of Labour Statistics* (Geneva, ILO), 1994-3;  
[http://www.ilo.org/wcmsp5/groups/public/---dgreports/--stat/documents/publication/wcms\\_087909.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/--stat/documents/publication/wcms_087909.pdf).

<sup>4</sup> Resolution concerning the measurement of underemployment and inadequate employment situations, adopted by the 16<sup>th</sup> International Conference of Labour Statisticians, Geneva, 1998;  
[http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS\\_087487/lang--en/index.htm](http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087487/lang--en/index.htm). Report II of the 19<sup>th</sup> International Conference of Labour Statisticians, Geneva, 2013:  
[http://www.ilo.org/wcmsp5/groups/public/---dgreports/--stat/documents/publication/wcms\\_220535.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/--stat/documents/publication/wcms_220535.pdf).

Regarding the first criterion, for example, workers should report that they 1) want another job or jobs in addition to their current employment, 2) that they want to replace any of their current jobs with another job or jobs with increased hours of work, 3) that they want to increase the hours of work of any of their current jobs; or 4) that they want a combination of these three possibilities.

The current international definition of time-related underemployment includes all workers who report a desire to work additional hours. This contrasts with the definition of unemployment, which includes non-employed persons who would like to work only if they report having actively sought work. There is evidence that the number of time-related underemployed persons would decrease significantly if the definition were to include only those who report having actually sought to work additional hours. This change would almost certainly result in a greater decrease for women than for men and would, therefore, illustrate the fact that women tend not to look for additional work even if they actually want it, perhaps because the time required for job seeking would compete with the time needed for activities related to the gender role assigned to them by society; that of caring for their households and family members, for example.

Despite the improvements in the clarity of the definition of underemployment over the last 20 years,<sup>5</sup> few countries apply the definition consistently because the criteria on which it is specified are still not entirely precise. (This is similar to the imprecise full-time/part-time cut-off points, as discussed in KILM 6.) This lack of precision has discouraged the production of regular statistics on the subject and has made it difficult to compare the levels of time-related underemployment between

<sup>5</sup> Underemployment was first addressed in resolution III adopted by the 11<sup>th</sup> International Conference of Labour Statisticians concerning measurement and analysis of underemployment and underutilization of manpower (1966), and in resolution I adopted by the 13<sup>th</sup> International Conference of Labour Statisticians concerning statistics of the economically active population, employment, unemployment and underemployment (1982).

countries. For example, countries differ according to whether actual or usual hours are used to identify persons working less than the normal duration, an issue also touched upon in KILM 6. The resolution adopted by the 19<sup>th</sup> ICLS encourages the separate identification of persons in time-related underemployment according to their usual hours of work and their actual hours of work (and all combinations of these).

The indicator, as shown in table 12, reflects the variety of interpretations of the standard definition of time-related underemployment. The national definitions are grouped according to the following three common concepts (or definition codes).<sup>6</sup>

- (1) Persons in employment who reported that they were working part-time or whose hours of work (actual or usual) were below a certain cut-off point, and who also reported involuntary reasons for working fewer than full-time hours – these are also known as “involuntary part-time workers”.
- (2) Persons in employment whose hours of work (actual or usual) were below a certain cut-off point and who *wanted* to work additional hours.
- (3) Persons in employment whose hours of work (actual or usual) were below a certain cut-off point and who *sought* to work additional hours.

It is possible to compare countries that apply the strictest definition (code 3) with countries that apply a wider definition (codes 1 or 2) to see to what extent the definition applied affects the count of underemployed workers. The hours cut-off information shown in the notes table is the number of hours of work (actual or usual) at which a person is no longer counted in the underemployment estimate.

As mentioned above, statistics for this indicator are based exclusively on household surveys. They were obtained mainly from international data repositories such as the

<sup>6</sup> KILM users should consult the notes to table 12 to clarify which definition applies to each country.

OECD's labour statistics database, the Statistical Office of the European Communities (EUROSTAT), and the ILO's online database (ILOSTAT). National publications were also used in some specific cases.

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### Limitations to comparability

National definitions of time-related underemployment vary significantly between countries. Based on a review of country practices, most national definitions include workers who want to work additional hours (definition code 2). Many other definitions include only workers who report involuntary reasons either for not working more hours or for working the current number of hours (definition code 1). The specific reasons considered as "involuntary", however, vary significantly across countries. A certain number of countries obtain this information in two stages. The first stage identifies workers who usually work less than a threshold for involuntary reasons, while the second stage identifies workers whose actual hours are below their usual hours for economic or technical reasons. The reasons considered as "involuntary" are not equivalent for the two groups of workers identified, however. Some economies apply the definition requiring workers to seek to work additional hours (definition code 3).

Most definitions include persons whose "hours actually worked" during the reference

week were below a certain threshold. Some definitions include persons whose "hours usually worked" were below a certain threshold and other definitions include both groups of workers. Perhaps because no international definition of "part time" exists, national determinations of hourly thresholds are not always consistent. In a few countries the threshold is defined in terms of the legal hours or the usual hours worked by full-time workers. Some countries enquire directly as to whether workers work part time, or define the threshold in terms of the worker's own usual hours of work. As a consequence, the threshold used varies significantly from country to country. The hours cut-off for Costa Rica, for example, used to be (until 2012) the full-time equivalent of 47 hours, whereas most OECD countries report involuntary part-time only, meaning persons working at or below 30 hours a week.

It should be clear from the foregoing discussion concerning the wide variety of possibilities for measuring time-related underemployment that failure to isolate the definitional components will greatly limit comparability between countries. Despite the fact that all the information for this measurement comes from household surveys, a variety of other potential limitations to comparability result from differences in the timing of surveys, sampling procedures, collection questionnaires, and so on. A succinct description of such limitations is provided in the section in the manuscript for KILM 9 on "Limitations to comparability".

**Box 12a. Resolution concerning the measurement of underemployment and inadequate employment situations, adopted by the 16<sup>th</sup> International Conference of Labour Statisticians, October 1998 [relevant paragraphs]****Objectives**

1. The primary objective of measuring underemployment and inadequate employment situations is to improve the analysis of employment problems and contribute towards formulating and evaluating short-term and long-term policies and measures designed to promote full, productive and freely chosen employment as specified in the Employment Policy Convention (No. 122) and Recommendations (Nos. 122 and 169) adopted by the International Labour Conference in 1964 and 1984. In this context, statistics on underemployment and indicators of inadequate employment situations should be used to complement statistics on employment, unemployment and inactivity and the circumstances of the economically active population in a country.

2. The measurement of underemployment is an integral part of the framework for measuring the labour force established in current international guidelines regarding statistics of the economically active population; and the indicators of inadequate employment situations should as far as possible be consistent with this framework.

**Scope and concepts**

3. In line with the framework for measuring the labour force, the measurement of underemployment and indicators of inadequate employment should be based primarily on the current capacities and work situations as described by those employed. Outside the scope of this resolution is the concept of underemployment based upon theoretical models about the potential capacities and desires for work of the working-age population.

4. Underemployment reflects underutilization of the productive capacity of the employed population, including those which arise from a deficient national or local economic system. It relates to an alternative employment situation in which persons are willing and available to engage. In this resolution, recommendations concerning the measurement of underemployment are limited to time-related underemployment, as defined in subparagraph 8(1) below.

5. Indicators of inadequate employment situations that affect the capacities and well-being of workers, and which may differ according to national conditions, relate to aspects of the work situation such as use of occupational skills, degree and type of economic risks, schedule of and travel to work, occupational safety and health and general working conditions. To a large extent, the statistical concepts to describe such situations have not been sufficiently developed.

6. Employed persons may be simultaneously in underemployment and inadequate employment situations.

**Measures of time-related underemployment**

7. Time-related underemployment exists when the hours of work of an employed person are insufficient in relation to an alternative employment situation in which the person is willing and available to engage.

8(1) Persons in time-related underemployment comprise all persons in employment, as defined in current international guidelines regarding employment statistics, who satisfy the following three criteria during the reference period used to define employment:

(a) "willing to work additional hours", i.e. wanted another job (or jobs) in addition to their current job (or jobs) to increase their total hours of work; to replace any of their current jobs with another job (or jobs) with increased hours of work; to increase the hours of work in any of their current jobs; or a combination of the above. In order to show how "willingness to work additional hours" is expressed in terms of action which is meaningful under national circumstances, those who have actively sought to work additional hours should be distinguished from those who have not. Actively seeking to work additional hours is to be defined according to the criteria used in the definition of job search used for the measurement of the economically active population, also taking into account activities needed to increase the hours of work in the current job;

(b) "available to work additional hours", i.e. are ready, within a specified subsequent period, to work additional hours, given opportunities for additional work. The subsequent period to be specified when determining workers' availability to work additional hours should be chosen in light of national circumstances and comprise the period generally required for workers to leave one job in order to start another;

(c) "worked less than a threshold relating to working time", i.e. persons whose "hours actually worked" in all jobs during the reference period, as defined in current international guidelines regarding working-time statistics, were below a threshold, to be chosen according to national circumstances. This threshold may be determined by e.g. the boundary between full-time and part-time employment, median values, averages, or norms for hours of work as specified in relevant legislation, collective agreements, agreements on working-time arrangements or labour practices in countries.



**Box 12b. Resolution concerning the statistics of work, employment and labour underutilization, adopted by the 19<sup>th</sup> International Conference of Labour Statisticians, October 2013 [relevant paragraphs]*****Relevant paragraphs of Report II of the 19<sup>th</sup> ICLS***

155. The resolution incorporates guidelines for the measurement of time-related underemployment based on the recommendations of the 16<sup>th</sup> ICLS resolution on this topic. The operational definition of time-related underemployment has not been changed. However, several revisions to the text are proposed in order to clarify ambiguities identified by countries in applying the international standards. These relate particularly to the defining criteria of time-related underemployment, the relevant working-time concepts used, and the different subgroups that may be identified to shed light on structural and cyclical situations of time-related underemployment.

156. As set forth in the 16<sup>th</sup> ICLS resolution, the definition of time-related underemployment comprised three criteria. It referred to persons in employment who, in the short reference period, wanted to work additional hours, had worked less than an hours threshold set at national level, and who were available to work additional hours in a subsequent reference period. A main source of ambiguity relates to the requirement to establish an hour's threshold as part of the definition. This criterion was introduced in order to focus the measure on situations related to insufficient quantity of employment, as evidenced by the number of hours actually worked at all jobs in the reference week. Exclusion of the threshold from the definition would result in the inclusion of persons who wanted to work additional hours because of issues not related to insufficient quantity of work, particularly due to low income, thus no longer being a measure of time-related underemployment.

157. To establish the hours threshold, countries may use a variety of approaches, including a distinction based on notions of part-time/full-time employment, or on median or modal values of hours usually worked. At the time when the standards were adopted by the 16<sup>th</sup> ICLS, an international definition of hours usually worked did not exist. As a result, the resolution used the notion of normal hours. Even then, however, the intention was to recommend the concept of hours usually worked in order to have a measure in reference to the typical working time associated with specific groups of persons in employment. As different industries may have different typical working-time patterns, for example in agriculture, the draft resolution allows the setting of different hours thresholds for different worker groups, depending on national circumstances.

158. A second source of ambiguity concerns the reference period against which to assess the availability criterion. The 16<sup>th</sup> ICLS resolution provides detailed guidelines for establishing the reference period for availability as comprising the "period generally required for workers to leave one job in order to start another". In practice however, most countries have used a similar period as that used for establishing availability as part of the definition of unemployment. Such practice is likely to result in an underestimation of time-related underemployment by referring to a situation in the past when the person would not have made arrangement to become available for additional work. This would be, in particular, the case for persons with responsibilities outside of employment, including those providing care for dependent members of the household, and those engaged also in other forms of work.

159. A final source of ambiguity is the distinction between the two categories of persons in time-related underemployment, namely, those who work usually less than the hours threshold and those who usually work more than the hours but who, during the short reference period, were not at work or actually worked reduced hours for economic reasons. These two groups are mutually exclusive:

- (a) The first group is in a prolonged situation of time-related underemployment (with both hours actually worked and hours usually worked below the threshold for time-related underemployment). As such, when separately identified, this group may be useful for examining structural situations of insufficient quantity of employment among the employed.
- (b) The second group is in a temporary situation of time-related underemployment. As such it reflects situations of insufficient quantity of employment due to cyclical or seasonal factors.

***Relevant paragraphs of the resolution adopted by the 19<sup>th</sup> ICLS***

43. Persons in time-related underemployment are defined as all persons in employment who, during a short reference period, wanted to work additional hours, whose working time in all jobs was less than a specified hours threshold, and who were available to work additional hours given an opportunity for more work, where:

- (a) the "working time" concept is hours actually worked or hours usually worked, dependent on the measurement objective (short or long-term situations) and in accordance with the international statistical standards on the topic;

- (b) “additional hours” may be hours in the same job, in an additional job(s) or in a replacement job(s);
- (c) the “hours threshold” is based on the boundary between full-time and part-time employment on the median or modal values of the hours usually worked of all persons in employment, or on working time norms as specified in relevant legislation or national practice, and set for specific worker groups;
- (d) “available” for additional hours should be established in reference to a set short reference period that reflects the typical length of time required in the national context between leaving one job and starting another.

44. Depending on the working time concept applied, among persons in time-related underemployment (i.e. who wanted and were “available” to work “additional hours”), it is possible to identify the following groups:

- (a) persons whose hours usually and actually worked were below the “hours threshold”;
- (b) persons whose hours usually worked were below the “hours threshold” but whose hours actually worked were above the threshold;
- (c) persons “not at work” or whose hours actually worked were below the “hours threshold” due to economic reasons (e.g. a reduction in economic activity including temporary lay-off and slack work or the effect of the low or off season).

45. In order to separately identify the three groups of persons in time-related underemployment, information is needed on both hours usually worked and hours actually worked. Countries using only one working time concept will cover, for hours usually worked, the sum of groups (a) and (b); for hours actually worked, the group (c), so long as the reasons for being “not at work” or for working below the “hours threshold” are also collected.

46. To assess further the pressure on the labour market exerted by persons in time-related underemployment, it may be useful to identify separately persons who carried out activities to seek “additional hours” in a recent period that may comprise the last four weeks or calendar month.