

Employment-to-population ratio

Introduction

The employment-to-population ratio 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.

ILOSTAT contains statistics from national sources on employment-to-population ratios by sex and age, and rural/urban areas. ILOSTAT also includes ILO estimates of employment-to-population ratios by sex and age, which contain both nationally reported and imputed data, and where all estimates are national, meaning there are no geographic limitations in coverage¹.

Concepts and definitions

The employment-to-population ratio is the proportion of a country's working-age population that is employed. Employment comprises all persons of working age who during a specified brief period, such as one week or one day, were in the following categories: a) paid employment (whether at work or with a job but not at work); or b) self-employment (whether at work or with an enterprise but not at work).²

The working-age population is the population above the legal working age, but for statistical purposes it comprises all persons above a specified minimum age threshold for which an inquiry on economic activity is made. To favour international comparability, the working-age population is often defined as all persons aged 15 and older, but this may vary from country to country based on national laws and practices. 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 population base for employment-to-population ratios can vary across countries for issues other than differences in age limits. 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-to-population ratios even when they do not include them in the employment figures. In general, information for this indicator is derived from household surveys, mainly labour force surveys. Some countries, however, use "official estimates" or population censuses as the source of their employment figures.

¹ For further information on the methodology used to produce harmonized estimates, see Bourmpoula, V., Kapsos, S. and Pasteels, J.M.: "ILO labour force estimates and projections: 1990-2050 (2015 edition)" (ILO, Geneva, 2015). <http://www.ilo.org/ilostat-files/Documents/LFEP%20Methodology%202015.pdf>

² 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

Method of computation

The employment-to-population ratio is calculated as follows:

$$\text{EPR(\%)} = \frac{\text{Persons employed}}{\text{Working-age population}} \times 100$$

Recommended sources

Labour force surveys are typically the preferred source of information for determining the employment-to-population ratio. Such surveys can be designed to cover virtually the entire non-institutional population of a given country, all branches of economic activity, all sectors of the economy and all categories of workers, including the self-employed, contributing family workers, casual workers and multiple jobholders. In addition, such surveys generally provide an opportunity for the simultaneous measurement of the employed, the unemployed and persons outside the labour force (and thus, the working-age population) in a coherent framework.

Other types of household surveys and population censuses could also be used as sources of data to derive employment-to-population ratios. The information obtained from such sources may however be less reliable since they do not typically allow for detailed probing on the labour market activities of the respondents.

Interpretation and 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.³ Additional indicators are required to assess such issues as earnings, hours of work, 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”.⁴ With the MDGs

³ 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>.

⁴ 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), working poverty and the vulnerable employment rate.

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"⁵. 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.

Limitations

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 of employment calls for inclusion of all persons who worked for at least one hour during the reference period.⁶ Workers 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 adopted by the 19th ICLS, 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. Other possible variations to the "norms" pertaining to measurement of total employment include hours limits (beyond one hour) placed on contributing

⁵ 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/>

⁶ 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.

family members before for inclusion in employment.⁷

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.

⁷ Such exceptions are noted in the footnotes and/or metadata fields in ILOSTAT's data tables. 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.