

Employment by economic activity

Introduction

This indicator provides information on the relative importance of different economic activities with regard to employment. Information by sector of economic activity is particularly useful in identifying broad shifts in employment and stages of development.

Having detailed statistics on employment by economic activity allows for the calculation of the share of manufacturing in total employment, which was included as one of the indicators proposed to measure progress towards the achievement of the Sustainable Development Goals (SDG), under Goal 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation).¹

ILOSTAT contains statistics from national sources on employment by branch of economic activity, also disaggregated by sex, available using both aggregate and detailed categories of economic activity. ILOSTAT also includes ILO estimates of employment by economic activity by sex, which contain both nationally reported and imputed data, and where all estimates are national, meaning there are no geographic limitations in coverage. ILO estimates of employment by economic activity are presented only using broad categories of economic activity (agriculture, industry and services)².

Concepts and definitions

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).³

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 (some countries also use an upper age limit).

The classification by economic activity 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.

Data presented by branch of economic activity is based on the International Standard Industrial Classification of All Economic Activities (ISIC). The IISIC is the international reference classification of productive activities. Its main purpose is to provide a set of activity categories that can be utilized for the collection and reporting of statistics according to such activities. The original version of ISIC was adopted in 1948, and it has been revised four times since then: in 1968 (ISIC Rev.2), in 1990 (ISIC Rev.3) and in 2008 (ISIC Rev.4). An updated version of the ISIC Rev.3 was introduced in 2002 to

¹ Proposed SDG indicator 9.2.2 refers to manufacturing employment as a proportion of total employment. For the official list of proposed SDG indicators, see: <http://unstats.un.org/sdgs/indicators/indicators-list/>

² 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>

³ Resolution concerning statistics of work, employment and labour underutilization, adopted by the 19th International Conference of Labour Statisticians, Geneva, October 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

account for substantial changes in many countries' economic structure (ISIC Rev. 3.1).⁴

Statistics on employment by economic activity are presented in ILOSTAT according to both the categories of the latest version of the ISIC available and aggregate categories, based on the following correspondence table:

Aggregate Economic Activity			Sections ISIC- Rev. 4	Sections ISIC- Rev. 3	Sections ISIC- Rev. 2
Agriculture			A	A B	1
Non Agriculture	Industry	Manufacturing	C	D	3
		Construction	F	F	5
		Mining and quarrying; Electricity, gas and water supply	B, D, E	C, E	2, 4
	Services	Market Services (Trade; Transportation; Accommodation and food; and Business and administrative services)	G, H, I, J, K, L, M, N	G, H, I, J, K	6, 7, 8
		Non-market services (Public administration; Community, social and other services and activities)	O, P, Q, R, S, T, U	L, M, N, O, P, Q	9
Not classifiable by economic activity			0		

Recommended sources

Labour force surveys are typically the preferred source of information on employment by economic activity. 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 on employment by economic activity. 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.

In the absence of the abovementioned sources, establishment surveys or administrative records can provide information on employment by economic activity, but they hardly cover all the employed population, typically excluding the informal economy, small establishments and some specific economic activities such as public administration or even in some cases agriculture.

⁴ For further information on the current version of the International Standard Industrial Classification of All Economic Activities (ISIC Rev. 4), please refer to Department of Economic and Social Affairs of the United Nations Secretariat: "International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4", Statistical Papers series M, n°4 (UN, New York, 2008). <http://unstats.un.org/unsd/cr/registry/isic-4.asp>

Interpretation and use of the indicator

In the textbook case of economic development, jobs are reallocated from agriculture and other labour-intensive primary activities to industry and finally to the services sector; in the process, workers migrate from rural to urban areas. In a large majority of countries, services are currently the largest sector in terms of employment. In most of the remaining countries employment is predominantly agricultural.

Classification into broad groupings may obscure fundamental shifts within industrial patterns. An analysis of employment statistics by economic activity following the 1-digit level categories of the ISIC, therefore, allows identification of individual industries and services where employment is growing or stagnating. Teamed with information on job vacancies by sector, the more detailed data, viewed over time, should provide a picture of where demand for labour is focused and, as such, could serve as a guide for policy makers designing skills and training programmes that are aimed to improve the match between labour supply and demand. Of particular interest to many researchers is employment in the manufacturing sector (ISIC 4, tabulation category C, ISIC 3, tabulation category D and ISIC 2, major division 3). One could also investigate, for example, how employment in the accommodations and food services sector (ISIC 4, tabulation category I and ISIC 3 tabulation category H) has evolved in countries where tourism comprises a major portion of gross national product.

It is also interesting to study sectoral employment flows in connection with productivity trends in order to separate within-sector productivity growth (i.e. resulting perhaps from changes in capital or technology) from productivity growth resulting from shifts of workers from lower- to higher-productivity sectors.

The breakdown of the indicator by sex allows for analysis of gender segregation of employment by sector. Are men and women equally distributed across sectors, or is there a concentration of females among the services sector? Women may be drawn into lower- paying service activities that allow for more flexible work schedules thus making it easier to balance family responsibilities with work life. Segregation of women in certain sectors may also result from cultural attitudes that prevent them from entering industrial employment.

Limitations

A number of factors can limit the comparability of statistics on employment by economic activity between countries or over time.

Comparability of employment statistics across countries is affected most significantly by variations in the definitions used for the employment figures. Perhaps the biggest differences result from age coverage, such as the lower and upper bounds for labour force activity. Estimates of employment are also likely to vary according to whether members of the armed forces are included. When the armed forces are included in the measure of employment they are usually allocated to the services sector; the services sector, therefore, in countries that do not include armed forces tends to be understated in comparison with countries where they 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.⁵ 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

⁵ 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.

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 family members before for inclusion in employment.⁶

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 figures 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.

It is also important to note that different versions of the ISIC can be used coincidentally, with countries moving to adopting the most recent version at different paces. On occasion, a country may continue to use the previous version even after starting a new data series according to the most recent version. Although these different classification systems can have an impact on comparability at detailed levels of economic activity, changes from one ISIC to another should not have a significant impact on the information for the three broad sectors presented in ILOSTAT.

⁶ 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.