

KILM 4. Employment by sector

Introduction

The indicator for employment by sector divides employment into three broad groupings of economic activity: agriculture, industry and services. Table 4a presents data for 193 countries for the three sectors as a percentage of total employment. Although data are limited to very few years in the majority of countries in some particular regions (such as sub-Saharan Africa, for instance), every region is covered. Because users may be interested in analysing trends in employment in greater sectoral detail, the KILM also includes three tables showing detailed breakdowns of employment by sector as defined by the International Standard Industrial Classification of all Economic Activities (ISIC). Table 4b presents employment by the latest revision, ISIC Revision 4 (2008) tabulation category as a percentage of total employment, table 4c presents the same according to ISIC Revision 3 (1990) and table 4d presents the disaggregation according to ISIC Revision 2 (1968) major divisions (See box 4 for the list of 1-digit sector levels for each ISIC revision). Sectoral breakdowns are shown by sex for virtually all countries covered.

Use of the indicator

Sectoral information is particularly useful in identifying broad shifts in employment and stages of development. 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 tables 4b to 4d, 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 (see KILM 16) 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.

Box 4. International Standard Industrial Classification of all Economic Activities

Revision 2, 1968 – Major divisions

- 0 Activities not adequately defined
- 1 Agriculture, hunting, forestry and fishing
- 2 Mining and quarrying
- 3 Manufacturing
- 4 Electricity, gas and water
- 5 Construction
- 6 Wholesale and retail trade and restaurants and hotels
- 7 Transport, storage and communication
- 8 Financing, insurance, real estate and business services
- 9 Community, social and personal services

Revision 3, 1990 – Tabulation categories¹

- A Agriculture, hunting and forestry
- B Fishing
- C Mining and quarrying
- D Manufacturing
- E Electricity, gas and water supply
- F Construction
- G Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
- H Hotels and restaurants
- I Transport, storage and communications
- J Financial intermediation
- K Real estate, renting and business activities
- L Public administration and defence; compulsory social security
- M Education
- N Health and social work
- O Other community, social and personal services activities
- P Private households with employed persons
- Q Extra-territorial organizations and bodies
- X Not classifiable by economic activity

Revision 4, 2008

Revision 4 of ISIC was adopted in August 2008 by the United Nations Statistical Commission and countries were expected to begin reporting data accordingly in 2009. The revision's objectives are to enhance its relevance and comparability with other standard classifications used around the world, while ensuring its continuity. ISIC Revision 4 incorporates new economic production structures and activities. Moreover, the structure differs significantly from ISIC Revision 3 in order to better reflect current economic organization throughout the world. Meanwhile, the proposed classification structure allows for improved comparison with other standards, such as the Classification of Economic Activities in the European Community (NACE), North American Industry Classification System (NAICS) and Australian and New Zealand Standard Industrial Classification (ANZSIC). Specifically, a comprehensive alignment has been retained with NACE at all levels of the classification, while clear links with NAICS and ANZSIC have been developed at the two-digit level.

¹ In May 2002, ISIC Revision 3.1 superseded Revision 3.0. Because the changes pertain to the more detailed level of the classification hierarchy only, that is, the 2- to 4-digit level, the 1-digit level data presented in table 4c remain unaltered under Revision 3.1.

Tabulation categories:

A	Agriculture, forestry and fishing
B	Mining and quarrying
C	Manufacturing
D	Electricity, gas, steam and air conditioning supply
E	Water supply; sewerage, waste management and remediation activities
F	Construction
G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Transportation and storage
I	Accommodation and food service activities
J	Information and communication
K	Financial and insurance activities
L	Real estate activities
M	Professional, scientific and technical activities
N	Administrative and support service activities
O	Public administration and defence; compulsory social security
P	Education
Q	Human health and social work activities
R	Arts, entertainment and recreation
S	Other service activities
T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
U	Activities of extraterritorial organizations and bodies

Full details on the latest revision and links to crosswalks between previous revisions are available at <http://unstats.un.org/unsd/cr/registry/isic-4.asp>.

Finally, 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.

Definitions and sources

For the purposes of the aggregate sectors shown in table 4a, the agriculture, industry and services sectors are defined by the International Standard Industrial Classification

(ISIC) System.² The agriculture sector comprises activities in agriculture, hunting, forestry and fishing, in accordance with major division 1 of ISIC 2, categories A and B of ISIC 3 and category A of ISIC 4. The industry sector comprises mining and quarrying, manufacturing, construction and public utilities (electricity, gas and water), in accordance with major divisions 2 to 5 of ISIC 2, categories C to F of ISIC 3 or categories B to F of ISIC 4. The services sector consists of wholesale and retail trade, restaurants and hotels, transport, storage and communications, finance, insurance, real estate and business services, and community, social and personal services. This sector corresponds to major divisions 6 to 9 of ISIC 2 or categories G to Q of ISIC 3 or categories G to U of ISIC 4. See the table below for a representation of how the

² United Nations: *International Standard Industrial Classification of all Economic Activities*, Series M, No. 4, Rev. 3 (New York, 1989; Sales No. E.90.XVII.11). Also available in Arabic, Chinese, French, Russian and Spanish. All ISIC versions may be found on website <http://unstats.un.org/unsd/cr/registry/>.

aggregate sectors are calculated according to the different ISIC revisions:

Aggregate sector	ISIC 2 major divisions	ISIC 3 categories	ISIC4 categories
Agriculture	1	A+B	A
Industry	2-5	C-F	B-F
Services	6-9	G-Q	G-U
Sector not adequately defined	0	X	n/a

Information for this indicator has been assembled from a number of international repositories and is derived from a variety of sources, including household or labour force surveys, official estimates and censuses. In a very few cases and only where other types of sources are not available, information is derived from administrative records and establishment surveys. The primary repositories used for the indicator are the ILO's ILOSTAT database, and EUROSTAT data, which are based on the European Labour Force Survey. These sources are augmented by various regional repositories, such as QUIPUSTAT, the ILO's Latin American and the Caribbean Labour Information System, and by data gathered directly from publications or websites of national statistical offices.

Limitations to comparability

Information on a country provided by the employment-by-sector indicator can differ according to whether the armed forces, the self-employed and contributing family members are included in the estimate. These differences introduce elements of non-comparability across countries. 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. Information obtained from establishment surveys covers only employees (wage and salary earners);

thus, the self-employed and contributing family members are excluded. In such cases, the employment share of the agriculture sector in particular is severely underrepresented in comparison with countries that report total employment without exclusion of status groups. In table 4a, the only records from an establishment survey or an establishment census are found for Ethiopia (1994) and Belarus (1987-94).

Where information is reported for total employment or civilian employment for the entire country, comparability across countries is reasonable for the employment-by-sector indicator, because of the similarity in coverage. For some years in certain countries, the sectoral information relates only to urban areas, so that little or no agricultural work is recorded. This is the case for some Latin American countries. Caution should be used in the analysis of such data.³

Since 1980, different ISIC systems have sometimes been used coincidentally. A slight majority of countries use Revision 3 as opposed to Revision 2 or the new Revision 4. The notes to table 4a show the version of the ISIC used for each country and year. On occasion, a country may have continued to use ISIC 2 even after starting a new data series according to ISIC 3. In such cases, where two series based on different classification systems exist for the same year, the most recent classification is shown in table 4a. Although these different classification systems can have large effects at detailed levels of industrial classification, changes from one ISIC to another should not have a significant impact on the information for the three broad sectors presented in table 4a.

³ When performing queries on the employment by sector tables (4a-4d) and table 3 on status in employment, we strongly recommend removing countries that are not of national coverage from the selection when making comparisons across countries. On the software, this can be done by performing the query for all data and then refining the parameters to select "national only" under "Geographic coverage".