

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 130 economies for the three sectors as a percentage of total employment. Although data are limited to one or two years in the majority of economies in sub-Saharan Africa and the Middle East and North Africa, every region is covered. Because users may be interested in analysing trends in employment in greater sectoral detail, the KILM also includes two tables showing detailed breakdowns of employment by sector as defined by the International Standard Industrial Classification of all Economic Activities, Revisions 2 (1968) and 3 (1990). Table 4b presents employment by the latest revision, ISIC 3 tabulation category as a percentage of total employment, while table 4c presents employment by ISIC 2 major division as a percentage of total employment. (See box 4a for the list of 1-digit sector levels for each ISIC revision.) Percentage breakdowns are shown by sex for virtually all economies 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, labour flows 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. See Chapter 1 for a more detailed discussion of this process, and how the indicator on employment by sector can be used in conjunction with other indicators, in particular employment by status, to identify vulnerable groups in the labour market.

Classification into broad groupings may obscure fundamental shifts within industrial patterns. An analysis of tables 4b and 4c, however, allows identification of individual industries and services where employment is growing or stagnating. Teamed with information on job vacancies by sector, the more detailed 4b and 4c, 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 3, tabulation category D and ISIC 2, major division 3). One could also investigate, for example, how employment in the hotel and restaurant sector (ISIC 3, tabulation category H) has evolved in countries such as Switzerland or in the Caribbean, where tourism provides a major portion of the national product. Or one may wish to see which sectors in the countries of Central and Eastern Europe (non-EU) and the CIS are experiencing recovery and employment expansion since the changeover to market economies in the early 1990s.

It is also interesting to study sectoral employment flows in connection with productivity trends (see KILM 18) in order to separate within-sector productivity growth (i.e. resulting perhaps from changes in capital or technology) from the productivity growth resulting from shifts of workers from lower- to higher-productivity sectors. Finally, the breakdown of the indicator by sex allows for analysis of gender segregation of employment by specific sector. Are men and women equally distributed in certain sectors, or is there a concentration of females among the services sector where wage rates are generally below those in the industrial sector? Women may be drawn into lower-paying service activities that allow for more flexible work schedules thus making it easier to balance family

Box 4a. 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 categories

- 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, forthcoming

Revision 4 of ISIC was recently adopted by the Statistical Commission and its implementation is expected to be completed 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.

To preserve its relevance, ISIC Revision 4 incorporates new economic production structures and activities. Moreover, the structure differs significantly from ISIC Revision 3.1 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.

(continued)

Box 4a (continued)

The following is a draft of the main tabulation categories of the new classification system:

- 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

The detailed structure and explanatory notes for the proposed ISIC Revision 4 are available at <http://unstats.un.org/unsd/cr/registry/docs/isic4-061120.pdf>.

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 (Revision 2 and Revision 3).¹

1. 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,

(Appendix C contains the structure for both ISIC Revisions.) The agriculture sector comprises activities in agriculture, hunting, forestry and fishing, in accordance with major division 1 of ISIC 2 or categories A and B of ISIC 3. 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 or categories C to F of ISIC 3. 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

Chinese, French, Russian and Spanish. All ISIC versions may be found on website: <http://unstats.un.org/unsd/cr/registry/>.

corresponds to major divisions 6 to 9 of ISIC 2 or categories G to P of ISIC 3. See the table below for a representation of how the aggregate sectors are calculated according to the different ISIC revisions: sectors are shown at the detailed 1-digit level according to ISIC 3 in table 4b and ISIC 2 in table 4c. In May 2002

ISIC Revision 3.1 superseded Revision 3.0; however, data do not yet reflect this latest update. Changes in Revision 3.1 pertain to the more detailed level of the classification hierarchy, that is, the 2- to 4-digit level; the 1-digit level data presented in table 4b would not change under the latest revision.

Aggregate sector	ISIC 2 major divisions	ISIC 3 categories
Agriculture	1	A+B
Industry	2+3+ 4+5	C+D+E+F
Services	6+7+8+9	G+H+I+J+K+L+M+N+O+P
Sector not adequately define	0	Q+X

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 insurance records and establishment surveys. The primary repositories used for the indicator are the ILO's LABORSTA database and the OECD's labour force statistics database (civilian coverage only). These sources are enhanced by various international and regional repositories, such as the ILO's regional database for the Caribbean and the ILO Labour Market Indicators Library (LMIL).

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. If making strict comparisons, such records should not be used.² In table 4a, records from establishment surveys are found only for Belarus, Cambodia, Kenya, Mauritius and Thailand.

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. Caution should be used, however, where the information refers only to employees³ or only to urban areas. For some years in certain countries, the sectoral information relates only to urban areas, so that little or no agricultural work is recorded.

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);

2. Establishment surveys can be unselected in the "Parameters" tab on the software.

3. Wage and salaried workers are covered only for some years in the following countries: Belarus, Brunei Darussalam, Cambodia, Ethiopia, Fiji, French Polynesia, Guam, Kazakhstan, Kenya, Mauritius, New Caledonia, Solomon Islands and Thailand.

Box 4b. World and regional estimates of employment by sector

	Employment in agriculture (%)		Employment in industry (%)		Employment in services	
	1996	2006*	1996	2006*	1996	2006*
Both sexes	1996	2006*	1996	2006*	1996	2006*
WORLD	41.9	36.1	21.1	21.9	37.0	42.0
Developed Economies & European Union	6.2	4.2	28.5	24.7	65.3	71.2
Central & South-Eastern Europe (non-EU) & CIS	27.2	20.3	28.7	25.8	44.1	53.8
East Asia	48.5	40.9	24.3	25.6	27.2	33.5
South-East Asia & the Pacific	51.0	45.4	16.5	18.6	32.5	36.0
South Asia	59.7	49.4	15.2	21.0	25.1	29.6
Latin America & the Caribbean	23.1	19.6	20.7	20.8	56.1	59.6
North Africa	36.5	34.4	19.8	20.0	43.7	45.6
Sub-Saharan Africa	74.4	65.9	7.5	10.0	18.1	24.1
Middle East	21.2	18.1	25.2	25.6	53.7	56.3
Males	1996	2006*	1996	2006*	1996	2006*
WORLD	40.5	35.2	23.8	24.9	35.8	39.9
Developed Economies & European Union	6.8	4.8	37.2	34.4	56.0	60.9
Central & South-Eastern Europe (non-EU) & CIS	27.1	20.5	33.7	32.3	39.2	47.1
East Asia	45.2	38.6	25.5	26.7	29.3	34.7
South-East Asia & the Pacific	49.8	45.8	18.5	20.1	31.7	34.1
South Asia	54.0	44.3	16.8	22.3	29.2	33.3
Latin America & the Caribbean	28.3	25.4	23.8	24.8	47.9	49.7
North Africa	37.3	34.4	20.0	21.5	42.6	44.1
Sub-Saharan Africa	72.1	63.5	9.6	12.5	18.2	24.0
Middle East	20.1	13.1	26.4	28.2	53.5	58.7
Females	1996	2006*	1996	2006*	1996	2006*
WORLD	44.2	37.5	16.9	17.2	38.9	45.3
Developed Economies & European Union	5.3	3.4	17.0	12.7	77.7	84.0
Central & South-Eastern Europe (non-EU) & CIS	27.2	20.1	22.5	17.8	50.2	62.1
East Asia	52.5	43.8	22.8	24.2	24.7	32.0
South-East Asia & the Pacific	52.7	44.7	13.5	16.5	33.8	38.8
South Asia	73.7	61.9	11.3	17.8	15.0	20.3
Latin America & the Caribbean	14.0	10.8	15.3	14.6	70.8	74.6
North Africa	33.5	34.2	19.0	15.1	47.4	50.7
Sub-Saharan Africa	77.3	69.2	4.8	6.6	17.9	24.2
Middle East	25.3	32.3	20.4	18.2	54.3	49.5

Source: ILO Global Employment Trends Model (for more information on estimation methodology, see box 3 in "Guide to understanding the KILM").

* 2006 preliminary estimates.

Box 4b (continued)

In recent years agriculture has lost its place as the main sector of employment and has been replaced by the services sector, which in 2006 constituted 42.0 per cent of world employment compared to 36.1 per cent for agriculture. As for the industry sector, it represented 21.9 per cent of total employment, which is almost unchanged from ten years ago. Although textbook theory suggests that economic development entails a structural transformation with a shift away from agriculture to the industry sector, this no longer seems to be reflected in reality. Instead of moving into high-productivity jobs in the industry sector, people are moving directly into the services sector, which consists of both high- and low-productivity jobs. Therefore, it is unclear if the sectoral shift goes hand in hand with productivity increases and thereby a better utilization of the workforce.

Agriculture is still the main sector of employment in the world's poorest regions. Two-thirds of workers in sub-Saharan Africa and almost half of workers in South Asia and South-East Asia & the Pacific are in agriculture.

In most regions of the world, industry accounted for about one-fourth to one-fifth of all people employed in 2006, with the exception of sub-Saharan Africa and South-East Asia & the Pacific, which had the lowest proportions at 10.0 and 18.6 per cent, respectively.

In 2006, the share of employment in the services sector ranged widely from 71.2 per cent in the Developed Economies & European Union down to 24.1 per cent in sub-Saharan Africa. While all three Asian regions contained about one-third of employment in the services sector, the remaining regions had shares from 45.6 to 59.6 per cent.

Although the gender gap for sector employment is quite noticeable at the global level, it is even more prominent at the regional level for some sectors.¹ For example, in 2006 women had a much higher share of agricultural employment than men in East Asia and the Middle East and men had a higher share than women in Latin America & the Caribbean, whereas in all other regions the shares were relatively equal.

In all regions, women's share of employment in industry was lower than that of men in 2006. The difference was particularly striking in the Developed Economies & European Union, where only 12.7 per cent of women worked in this sector compared to 34.4 per cent of men. As for developing regions, the differences were considerable in Central & South-Eastern Europe (non-EU) & CIS, the Middle East and Latin America & the Caribbean.

Within services, women had a much higher share than men in Latin America & the Caribbean, the Developed Economies & European Union and Central & South-Eastern Europe (non-EU) & CIS while the shares were considerably lower for women than men in South Asia and the Middle East.

Segregation of occupations by sex is only slowly changing while stereotypes of women as caretakers and home-based workers still exist and are often being reinforced. Meanwhile within each sector women tend to occupy jobs with lower productivity. This may be perpetuated into the next generation if restricted and inferior labour market opportunities for women continue to lead to underinvestment in women's education, training and experience.

¹ For more details see: ILO: *Global Employment Trends for Women, Brief* (Geneva, 2007); website: <http://www.ilo.org/trends>.

This is often the case for Latin American countries. Although this more partial information should not be used for cross-country comparisons, it is presented here as a useful indicator of recent trends in particular countries.⁴

4. When performing queries on the employment by sector tables (4a-4c) 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

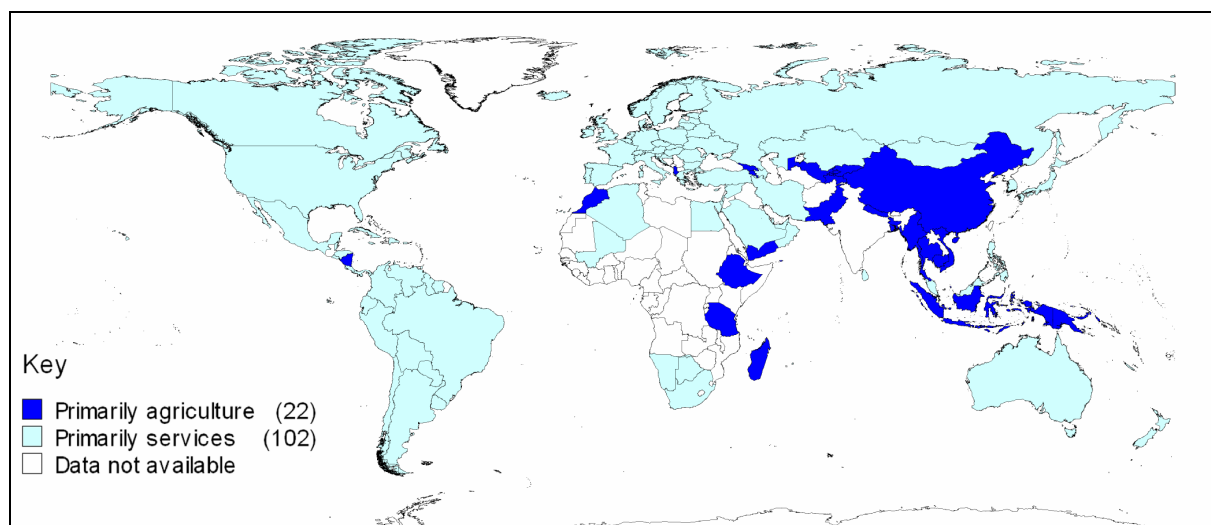
Over the period since 1980, two different ISIC systems are in use coincidentally – identified as ISIC 2 and ISIC 3 (see Appendix C). A slight majority of countries continue to use Revision 2 as opposed to Revision 3. The notes to table 4a show the version of the ISIC used for each country and year. On occasion, a

can be done by performing the query for all data and then refining the parameters to select the “national only” button under “Geographic coverage”.

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 ISIC 3 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.

Figure 4a. Employment by dominant sector, latest years



Trends

Global employment has been shifting from the sectors that produce goods (agriculture and industry) to the services-producing sectors. Figure 4a shows that for most economies in the world the services sector dominates total employment. Of the 130 economies with data available, the services sector is the largest in 108 economies and the agriculture sector is dominant in the remaining 22 economies. Where the services sector dominates, industry usually comes in second position, followed by a small agricultural sector (less than 10 per cent). The services-producing sectors can provide many opportunities for decent and productive employment, however, not all work in these sectors is necessarily decent or productive. Employment in services ranges from well-paid salaried jobs of highly-skilled workers enjoying adequate working conditions to

subsistence trade activities that are widespread on the streets in the developing world. Many workers in the latter situation may be underutilized even if they are working excessive hours battling for a meagre income.

More data on developing economies, especially in sub-Saharan Africa, would allow for a richer analysis of the employment by sector indicator, but would not alter the fact that the services sector is responsible for at least half of total employment in the majority of economies worldwide. An interesting question is therefore which sectors are taking the lead in employment growth, especially in economies that already have a large services sector. Such information is important to policy-makers as they design employment policies, including policies to meet skills needs in growing sectors. Figure 4b ranks the services sector according to growth rates from 1995 to 2005 in 20 developed economies. The fastest growing sector in almost all economies

is real estate, renting and business activities (K), while in the majority of economies the sector hotels and restaurants (H) is in either second or third position. The bottom of the ranking is not as clear-cut. The sector with the

slowest growth rate in seven economies is transport, storage and communications (I), and in seven other economies is public administration, defence and compulsory social security (L).

Figure 4b. Ranking of services sector by growth rate in selected developed economies, ISIC Rev. 3, 1995-2005

	Wholesale and retail trade, etc.	Hotels and restaurants	Transport, storage and communications	Financial intermediation	Real estate, renting and business activities	Public administration and defence; compulsory social security	Education	Health and social work	Other community, social and personal services activities
Australia	9	4	7	8	1	5	6	2	3
Austria	7	3	8	5	1	9	6	2	4
Canada	4	7	8	6	1	9	5	3	2
Czech Republic	7	1	9	6	2	5	8	3	4
Denmark	7	6	9	4	1	8	3	5	2
Estonia	6	2	9	7	1	3	5	8	4
Finland	4	3	7	8	1	9	6	5	2
Germany	6	3	8	7	1	9	5	2	4
Greece	6	3	9	7	1	5	2	4	8
Hungary	3	2	9	5	1	7	6	4	8
Iceland	7	5	3	2	1	6	3	8	9
Ireland	6	5	2	4	1	9	8	3	7
Italy	7	2	5	8	1	9	6	4	3
Netherlands	8	3	4	6	1	9	5	2	7
Poland	4	3	6	7	1	2	5	9	8
Portugal	4	3	5	9	2	7	6	1	8
Slovakia	4	2	9	1	3	5	8	6	7
Slovenia	8	3	9	6	1	2	5	7	4
Spain	9	4	7	8	1	6	5	2	3
United Kingdom	7	8	5	9	1	3	2	4	6

Note: The tabulation category with highest growth rate between 1995 and 2005 in each country is ranked "1", the category with the second highest growth rate is ranked "2", etc

Figure 4c shows average growth rates from 1995 to 2005 for the same group of developed economies for all sectors in ISIC 3, and for both sexes as well as for males and females separately.⁵ Not surprisingly, real estate, renting and business activities (K) shows the fastest growth rate across all economies in the sample, with an average growth of 72 per cent. In contrast, agriculture, hunting, forestry and fishing (A and B combined) shrank by 23 per cent. Employment growth rates for both men and women are

substantial in real estate, renting and business activities (K), as well as hotels and restaurants (H). In other service sectors there are considerable gaps between growth rates for men and women, with the latter exceeding the former in all service sectors. These different growth rates in female and male employment reflect the reduction in the gender gap in employment-to-population ratios in developed economies during 1995-2005. Construction (F) is the only industrial sector with positive growth and, together with manufacturing (D), constitutes the industrial sectors in which employment growth for males exceeds growth for females.

⁵ Growth rates are unweighted to reflect individual country experiences. Weighting, however, would not significantly change the results.

Figure 4c. Sectoral growth rates in selected developed economies, 1995-2005

