

5. Educational attainment and illiteracy indicator (KILM 14)

KILM 14. Educational attainment and illiteracy

Introduction

KILM 14 reflects the levels and distribution of the knowledge and skills base of the labour force. The indicator includes two measures pertaining to educational level of the labour force, and a third measure estimating illiteracy in the youth and adult population. The indicator covers the educational attainment of both women and men in the entire labour force, and also focuses on the proportion of young workers (aged 25 to 29 years) having completed tertiary education.

Table 14a shows the distribution of the educational attainment of the labour force aged 15 years and above for 98 countries. Table 14b, showing the labour force aged 25 to 29 years with completed tertiary education, provides an additional perspective on the possibilities for further development of educational capital. Table 14b covers 74 economies. Table 14c presents information on youth and adult illiteracy rates – the percentage of the youth or adult population that is illiterate – for 139 countries, although data are available for one point in time per country only.

Use of the indicator

In all countries, human resources represent, directly or indirectly, the most valuable and productive resource; countries traditionally depend on the health, strength and basic skills of their workers to produce goods and services for consumption and trade. The advance of complex organizations and knowledge requirements, as well as the introduction of sophisticated machinery and technology, means that economic growth and improvements in welfare increasingly depend on the degree of literacy and educational attainment of the total population. The

population's predisposition to acquire such skills can be enhanced by experience, informal and formal education, and training.

Although the natural endowments of the labour force remain relevant, continuing economic and technological change means that the bulk of human capital is now acquired, not only through initial education and training, but increasingly through adult education and enterprise or individual worker training, within the perspective of lifelong learning and career management. Unfortunately, quantitative data on lifelong learning, and indicators that monitor developments in the acquisition of knowledge and skills beyond formal education, are sparse. Statistics on levels of educational attainment, therefore, remain the best available indicators of labour force skill levels to date. These are important determinants of a country's capacity to compete successfully and sustainably in world markets and to make efficient use of rapid technological advances. They also should affect the employability of workers.

The ability to examine educational levels in relation to occupation and income is also useful for policy formulation, as well as for a wide range of economic, social and labour market analyses. Statistics on levels and trends in educational attainment of the labour force can: (a) provide an indication of the capacity of countries to achieve important social and economic goals; (b) give insights into the broad skill structure of the labour force; (c) highlight the need to promote investments in education for different population groups; (d) support analysis of the influence of skill levels on economic outcomes and the success of different policies in raising the educational level of the workforce; (e) give an indication of the degree of inequality in the distribution of education resources between groups of the population, particularly between men and women, and within and between countries; and (f) provide an indication of the skills of the existing labour

force, with a view to discovering untapped potential.

Growing wage disparity between low-skilled and high-skilled workers in many countries provides strong evidence of increasing returns on education. (See Chapter 1, section B, for additional information on wages according to the low-skill/high-skill distinction.) The distribution of educational attainment can thereby play a significant role in determining a country's income distribution. A highly unequal distribution of educational attainment could lead to an increasingly unequal income distribution within a country, while a more equal distribution of educational attainment can work towards a significant reduction in inter-household income disparities. A more balanced distribution of educational attainment across the primary, secondary and tertiary levels also allows for greater flexibility in adopting new technologies, and increases the ability to compete in the world economy across a broader range of industries.

While not a labour market indicator in itself, the illiteracy rate of the population may be a useful proxy for basic educational attainment in the potential labour force. Literacy and numeracy are increasingly considered to be the basic minimal skills necessary for entry into the labour market.

Definitions and sources

Educational attainment

The seven categories of educational attainment used in KILM 14 are conceptually based on the ten levels of the International Standard Classification of Education (ISCED). The ISCED was designed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the early 1970s to serve as an instrument suitable for assembling, compiling and presenting comparable indicators and statistics of education, both within countries and internationally. The original version of ISCED (ISCED-76) classified educational programmes by their

content along two main axes: levels of education and fields of education. The cross-classification variables were maintained in the revised ISCED-97; however, the rules and criteria for allocating programmes to a level of education were clarified and tightened, and the fields of education were further elaborated.¹ Most countries continue to classify education levels according to the levels of ISCED-76, but countries are gradually beginning to progress to the nine levels and ten subcategories of ISCED-97 and a few countries are classified as such in tables 14a and 14b. Both ISCED revisions are shown in Appendix D, but the main education levels are also summarized in the table below.

The major attainment levels in KILM 14 are primary, secondary and tertiary education. Primary education aims to provide the basic elements of education (for example, at elementary or primary school and lower secondary school) and corresponds to ISCED levels 1 and 2. Curricula are designed to give students a sound basic education in reading, writing and arithmetic, along with an elementary understanding of other subjects such as history, geography, natural science, social science, art, music and, in some cases, religious instruction. Some vocational programmes, often associated with relatively unskilled jobs, as well as apprenticeship programmes that require further education, are also included. Students generally begin primary education between the ages of 5 and 7 years and end at 13 to 15 years. Literacy programmes for adults, similar in content to programmes in primary education, are also classified under primary education.

Secondary education is provided at high schools, teacher-training schools at this level, and schools of a vocational or technical nature. General education continues to be an important constituent of the curricula, but

¹ For further details about the ISCED see UNESCO: *International Standard Classification of Education/ISCED 1997* (Paris, 1998); website: <http://uis.unesco.org>. The document can be downloaded at: http://portal.unesco.org/uis/TEMPLATE/pdf/isced/ISCED_A.pdf.

KILM Level	ISCED-97 Level	ISCED-76 Level	Description
Less than one year	X: No schooling	X: No schooling	Less than one year of schooling
Pre-primary	0: Pre-primary education	0: Education preceding the first level	Education delivered in kindergartens, nursery schools or infant classes
Primary	1: Primary education or first stage of basic education	1: First level	Programmes are designed to give students a sound basic education in reading, writing and arithmetic. Students are generally 5-7 years old. Might also include adult literacy programmes.
	2: Lower secondary or second stage of basic education	2: Second level, first stage	Continuation of basic education, but with the introduction of more specialized subject matter. The end of this level often coincides with the end of compulsory education where it exists. Also includes vocational programmes designed to train for specific occupations as well as apprenticeship programmes for skilled trades.
Secondary	3: Upper secondary education	3: Second level, second stage	Completion of basic level education, often with classes specializing in one subject. Admission usually restricted to students who have completed the 8-9 years of basic education or whose basic education and vocational experience indicate an ability to handle the subject matter of that level.
	4: Post-secondary non-tertiary education		Captures programmes that straddle the boundary between upper-secondary and post-secondary education. Programmes of between six-months and two years typically serve to broaden the knowledge of participants who have successfully completed level 3 programmes.
Tertiary	5: First stage of tertiary education (not leading directly to an advanced research qualification); subdivided into:		
	5A	6: Third level, first stage leading to a first university degree	Programmes are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes. Duration is generally 3-5 years.
	5B	5: Third level, first stage, leading to an award not equivalent to a first university degree	Programmes are of a typically "practical" orientation designed to prepare students for particular vocational fields (high-level technicians, teachers, nurses, etc.).
	6: Second stage of tertiary education (leading to an advanced research qualification)	7: Third level, second stage	Programmes are devoted to advanced study and original research and typically require the submission of a thesis or dissertation.
Not definable		9: Education not definable by level	Programmes for which there are no entrance requirements.
Not stated	?: Level not stated	?: Level not stated	

separate subject presentation and more specialization are also found. Secondary education consists of ISCED levels 3 (designated “upper secondary education”) and 4 (designated “post-secondary non-tertiary education”), and students generally begin between 13 and 15 years of age and finish between 17 and 18 years of age. It should be noted that the KILM classifications of primary and secondary education differ from the classifications used in UNESCO publications, in which level 2 is termed “lower secondary education”.

Tertiary education is provided at universities, teacher-training colleges, higher professional schools and sometimes distance-learning institutions. It requires, as a minimum condition of admission, the successful completion of education at the secondary level or evidence of the attainment of an equivalent level of knowledge. It corresponds to ISCED levels 5 6 and 7 (levels 5A, 5B and 6 in ISCED-97 and levels 5, 6 and 7 in ISCED-76).

In addition to primary, secondary and tertiary education, KILM 14 also covers three other categories of educational attainment that correspond to ISCED levels: less than one year of schooling (level X); less than primary (level 0); and education not defined by level (ISCED-76 level 9).

The statistics on educational attainment were obtained from the ILO’s *Yearbook of Labour Statistics*, *Bulletin of Labour Statistics* and the Caribbean Labour Statistics Dataset.² Information on educational attainment is typically collected through household surveys, official estimates and population censuses conducted by national statistical services.

Illiteracy rates

Literacy is defined as the skills to read and write a simple sentence about everyday life;

2. For more information on these ILO publications and databases, see websites: <http://www.ilo.org/stat> and <http://www.ilocarib.org.tt/>.

hence, the semi-literate – those who can read but not write – is sometimes included in the definition as well. Persons for whom the level of literacy is not known are excluded from the calculation of illiteracy rates. The source of information for illiteracy rates of youth and adults is UNESCO’s Institute for Statistics (UIS).³ The estimates are either national, based on data collected during national population censuses and household surveys, or, if no more recent national estimates were available, based on the UIS assessment of July 2002. The UIS model estimates are based on national literacy data that refer to censuses and surveys conducted prior to 1995. Information about the model estimation methodology is available on the UIS website (see footnote 3). The UIS does not provide annual estimates on illiteracy because “adult literacy rates do not fluctuate significantly over the short term and therefore year-to-year estimates of short-term change can be unreliable in the absence of observed data”.

The illiteracy rate of youth or adults, shown in table 14c, is the number of illiterates of the selected age group divided by the total population in the corresponding age group. The population estimates are from the UN Population Division population estimates (2002 Revision).

Limitations to comparability

A number of factors can limit the appropriateness of using the indicator for comparisons of statistics on education between countries or over time. First, it should be noted that the same limitations relating to comparability of other indicators based on labour force apply here as well. The discussion in the corresponding section of the KILM 1 manuscript (labour force participation rates) should be read for additional details on the caveats relating to comparability.

3. The UNESCO literacy and illiteracy estimates are available at website: <http://www.uis.unesco.org/>. The data used in table 14e are based on the August 2005 edition of UIS estimates.

In addition to the differences associated with varying information sources, how individuals in the labour force are assigned to educational levels can also severely limit the feasibility of cross-country comparisons. Many countries have difficulty establishing links between their national classification and ISCED, especially with respect to technical or professional training programmes, short-term programmes and adult-oriented programmes (ranging around levels 3 and 5 of ISCED-76 and levels 3, 4 and 5 of ISCED-97). In numerous situations, ISCED classifications are not strictly adhered to; a country may choose to include level 3 (secondary) with levels 5, 6 and 7 (tertiary), e.g. Botswana; or levels 1 or 2 (primary) may include levels 0 (less than one year) and 1 (less than primary), e.g. Canada. It should also be noted that in a few countries ISCED levels are combined in different way; for instance, levels 1 and 2 may refer to level 1 only (as in many countries in Latin America and the Caribbean) or to level 2 only (as in Australia and Austria). It is necessary to pay close attention to the notes – specifically, the notes given in the column “Level note” – in order to ascertain the actual distribution of education levels before making comparisons.

An issue that affects several countries in the European Union subgroup of the Developed Economies originates from the way in which those who have received their highest level of education in apprenticeship systems are classified. The classification of apprenticeship in the “secondary” level – despite the fact that this involves one or more years of study and training beyond the conventional length of secondary schooling in other countries – can lower the reported proportion of the labour force or population with tertiary education, compared with countries where the vocational training is organized differently. This classification issue substantially holds down the levels of tertiary education reported by Austria and Germany, for instance, where the participation of young people in the apprenticeship system is widespread.

Limitations to comparability of information on illiteracy rates, as given in table 14c, exist because of variations in the definition

of illiteracy. The most common definition is the inability to read and write a simple statement about everyday life. However, different countries have different social and cultural contexts, different definitions and standards of literacy, and different methodologies for collecting and compiling the literacy data, as well as variations in the quality of data collected, and caution is needed in comparing the literacy situations among countries and regions. Some countries define illiteracy, not by reading and writing aptitude, but by the years of schooling attained. For example, a person is categorized as illiterate in Saint Lucia who has less than seven years of schooling, or in Israel who has less than primary level education. These countries, therefore, should not be compared against, say, Togo, where illiterate persons are defined as those who cannot easily read a letter or a newspaper.

Trends

The data seem to show that the economically active population is no longer biased towards the highly educated male. On the contrary, in most countries (44 of the 50 with comparable data shown in figure 14a) a higher proportion of the female labour force than the male labour force has attained tertiary education. It is important to add that the large share of highly educated females in the labour force should not necessarily be viewed as a sign of progress in the fight for equality in the world of work, since it is liable to mean only that more educated women are more likely to be economically active than less educated women. In fact, economic empowerment and education often go hand in hand; women who are restricted in their education opportunities are likely to be those who are restricted in their choice to work. Men in the labour force were also slightly more likely than women to have attained only primary education, whereas the distribution of persons with secondary education was fairly equal between the sexes.

For both sexes, the highest shares of the labour force by educational attainment were those with either primary- or secondary-level

education, which indicates that in most of the countries the bulk of labour supply is still workers with low- or medium-level skills. The supply element is a likely explanatory variable in the growing wage gap between low-skilled and high-skilled occupations identified; the demand for workers with tertiary-level education and higher skills, which are in short supply, would push up their wages, and vice versa for workers with lower-level education. Only five countries had the highest shares of the labour force with tertiary education in 2005 – Ireland, Israel, the Russian Federation, Ukraine and the United States.

Figure 14b shows countries – with similar definitions of illiteracy – that reported an illiteracy rate for either youth or adults, or both, in excess of 30 per cent. In almost all countries shown, the illiteracy rates of adults are higher than those of youth, which suggests a positive trend as young people make advances in literacy and thus gain a higher skills base than their parents. The only exception where the illiteracy rate of youth

exceeded that of adults was for males in the Democratic Republic of the Congo. Another interesting trend highlighted in the table is how much higher female illiteracy is compared to that of males. The adult female illiteracy rate was more than 25 percentage points higher than that of males in 14 countries – Afghanistan, Angola, the Central African Republic, Chad, the Democratic Republic of the Congo, Ethiopia, India, Morocco, Mozambique, Nepal, Niger, Pakistan, Togo and Yemen. The trend continues, although to a lesser extent in the younger generation: five countries had a gap in the female-male youth illiteracy rates in excess of 25 percentage points – Afghanistan, Benin, Chad, Niger and Yemen. Female adult illiteracy remains very high in many African countries. At least three-quarters of the female adult population can neither read nor write in Benin, Burkina Faso, Chad, Ethiopia, Guinea, Mali, Mozambique, Niger and Sierra Leone. The highest proportion of illiterate adult females, however, was in a South Asian country – Afghanistan – with 87.4 per cent of women unable to read or write.

Figure 14a. Distribution of male and female labour force by level of educational attainment, 2005

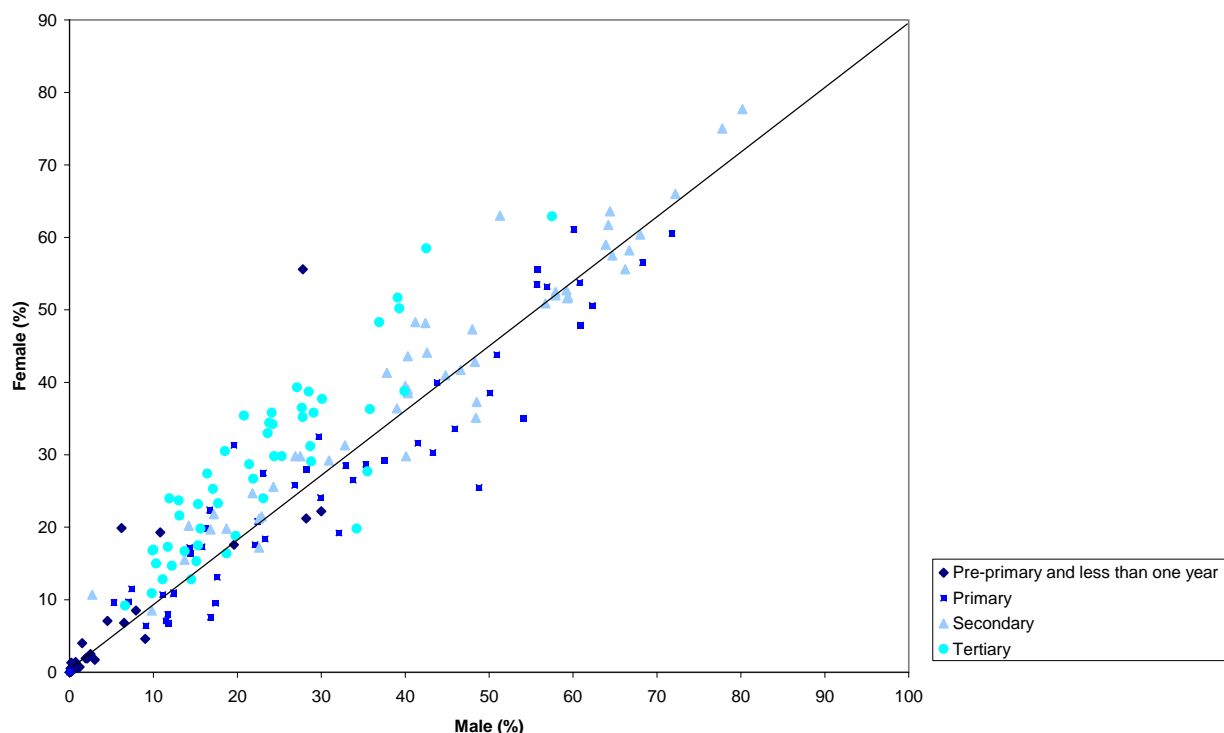


Figure 14b. Countries with youth or adult illiteracy rates* in excess of 30 per cent, by sex

	Youth illiteracy rate (%)		Adult illiteracy rate (%)	
	Male	Female	Male	Female
Asia & the Pacific				
Afghanistan	49.2	81.6	56.9	87.4
Bangladesh	32.8	39.7	46.1	59.2
Cambodia	12.1	21.1	15.3	35.9
India	15.8	32.3	26.6	52.2
Lao People's Democratic Republic	17.4	25.3	23.0	39.1
Nepal	19.4	39.9	37.3	65.1
Pakistan	23.3	46.9	35.9	64.6
Papua New Guinea	30.9	35.9	36.6	49.1
Central America				
Belize	23.9	23.3	29.7	29.7
Guatemala	13.6	21.6	24.6	36.7
North Africa				
Algeria	5.9	13.9	20.4	39.9
Egypt	9.9	21.1	17.0	40.6
Morocco	19.2	39.5	34.3	60.4
Sudan	15.4	28.6	28.9	48.2
Tunisia	3.6	7.8	16.6	34.7
Sub-Saharan Africa				
Angola	16.3	36.8	17.1	45.8
Benin	40.8	66.8	52.1	76.7
Burkina Faso	59.6	73.5	68.6	83.4
Burundi	23.2	29.6	32.7	47.8
Cameroon			23.0	40.2
Central African Republic	29.7	53.1	35.2	66.5
Chad	44.3	76.8	59.2	87.2
Congo, Democratic Republic of	22.0	36.9	19.1	45.9
Côte d'Ivoire	29.2	47.9	39.2	61.4
Ethiopia	37.8	61.5	50.0	77.2
Ghana	24.1	34.5	33.6	50.2
Guinea	41.3	66.3	57.4	81.9
Kenya	20.2	19.3	22.3	29.8
Liberia	34.7	30.5	41.7	54.3
Madagascar	41.1	43.5	36.7	45.2
Malawi	17.9	29.3	25.1	46.0
Mali			67.3	84.1
Mozambique	40.5	63.4	45.2	75.0
Niger	47.6	76.8	57.1	84.9
Nigeria	13.0	18.7	21.8	39.9
Rwanda	21.5	23.1	28.6	40.2
Senegal	41.5	59.0	48.9	70.8
Sierra Leone	40.4	62.6	53.3	75.8
Tanzania, United Republic of	19.1	23.8	22.5	37.8
Togo	16.3	36.4	31.3	61.5
Uganda	17.3	28.8	23.2	42.3
Zambia	27.4	33.8	23.7	40.2
Middle East				
Iraq	11.1	19.5	15.9	35.8
Yemen	9.3	41.1	26.9	65.3

* Illiteracy rate is defined as the number of illiterate persons as a percentage of the total population.