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Evaluation of UIS and ILO databases for the SDG indicator 4.4.3

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1 Introduction

This report analyses the possibility of using the ILO database on educational attainment to obtain estimates for the SDG Indicator 4.4.3. All the information provided in the tables of this report covers the period 2010 to 2022.

The SDG Indicator 4.4.3 measures the Youth/adult educational attainment rates by age group and level of education. This indicator in the UIS database is presented for the population aged 25 years and above. It is disaggregated by sex, urban and rural area, and by wealth quintiles.

According to the UIS metadata¹, SDG Indicator 4.4.3 indicator measures for each level of education the percentage of the population who completed **at least** that level of education. Therefore, as expressed in the definition, it is a **cumulative percentage**. Education levels are defined according to the International Standard Classification of Education (ISCED). Data on educational attainment level excludes persons who did not answer the question 'highest level of education or training successfully completed'.

The geographical coverage of the SDD indicator 4.4.3 is relatively much better than for the other indicators in the UIS database. However, there exists an alternative data source that can improve the data coverage and the completion of time series. The ILO collects and updates periodically its data repository with LFS data from countries. The database that can be a complementary data source for the SDG indicator 443, named "POP_XWAP_SEX_AGE_EDU_NB_A" can be downloaded without any restriction from the links below:

[ILOSTAT Bulk Download](#)

https://www.ilo.org/shinyapps/bulkexplorer2/?id=POP_XWAP_SEX_AGE_EDU_NB_A

However, the database is requested by ILO to have more information on the accuracy of data. The data provided by ILO Department of Statistics contains information for the working age population (15 years and above) disaggregated by age, sex, area (urban and rural) and the highest level of education completed according to ISCED-11, ISCED-97, and aggregated levels of educational attainment. More details on data disaggregation are shown in tables in Annex I of the report. The main data sources of the ILO database are Labour Force Surveys (LFS) and other household surveys (HIES, HS).

In terms of data coverage, compared to the UIS database, for the SDG indicator 4.4.3, in the ILO database, there are 150 countries for which there is at least one year with estimates. The geographical coverage in the UIS database is much better than in the ILO database: 173 countries have data for at least one year. **Given that the geographical coverage of the UIS data is better, what use might the ILO database serve? What is the value added?**

The following analysis refers to the period 2010 to 2022, for the disaggregation of educational attainment by ISCED-11, and population aged 25 years and above.

1. First, the UIS dataset will be expanded to include 18 additional nations sourced from the ILO database. These countries are:

¹ <https://tcg.uis.unesco.org/wp-content/uploads/sites/4/2021/09/Metadata-4.4.3.pdf>

- Botswana (2019-2022)
- Comoros (2014, 2021)
- Cook Islands (2016, 2019)
- Eswatini (2016)
- Guinea-Bissau (2018)
- Kosovo (2018-2021)
- Micronesia (2014)
- Monaco (2016)
- Montserrat (2020)
- Namibia (2012-2014, 2016)
- Nauru (2021)
- New Caledonia (2014)
- Niue (2017)
- Solomon Islands (2013)
- Sudan (2011)
- Tokelau (2016)
- Vanuatu (2010, 2019, 2020)
- Wallis and Futuna Islands (2018, 2019)
- Yemen (2014).

2. The ILO database offers a more detailed disaggregation by ISCED-11. Therefore, a trend analysis of SDG indicator 443 is done for both databases to assess the possibility of combination of them. The aim of the combined databases is to increase not only the geographical coverage of this indicator, but also to have a completeness of time series data where possible and a more detailed disaggregation by education level. Tables 1 to 3 show the number of data points in the UIS database (retrieved from the UIS webpage September 2023), the number of data points obtained from the ILO database, and the number of data points gained from the combination of UIS and ILO databases.

TABLE 1. Data points by source of data and sex, 2010-2022

Source	Total	Female	Male	Grand total	Number of countries
ILO	7,902	7,902	7,902	23,706	150
UIS	5,386	5,370	5,370	16,126	173
Sources combined	9,548	9,532	9,532	28,612	191
New data points	4,162	4,162	4,162	12,486	19

Note: not included data points for the adjusted gender parity index.

Regarding the disaggregation by sex, for the period 2010 to 2022, from the combined datasets there would be added 12 486 new data points and as mentioned above, the list of countries with at least one-year estimates will be expanded by 19 countries.

The ILO database has as well data disaggregated by urban and rural area. Thus, the combination of datasets will generate 8 142 new data points for urban areas and 8 355 new data points for the rural areas.

TABLE 2. Data points by source of data and sex for urban areas, 2010-2022

	Urban total	Urban female	Urban male	Urban grand total	Number of countries
ILO	5,310	5,310	5,310	15,930	112
UIS	5,138	4,224	4,224	13,586	151
Sources combined	7,634	7,047	7,047	21,728	161
New data points	2,496	2,823	2,823	8,142	10

Note: not included data points for the adjusted gender parity index and adjusted location parity index.

TABLE 3. Data points by source of data and sex for rural areas, 2010-2022

	Rural total	Rural female	Rural male	Rural grand total	Number of countries
ILO	5,310	5,310	5,310	15,930	112
UIS	5,093	4,177	4,179	13,449	149
Sources combined	7,660	7,071	7,073	21,804	161
New data points	2,567	2,894	2,894	8,355	12

Note: not included data points for the adjusted gender parity index and adjusted location parity index.

The ILO database does not contain information on the disaggregation by wealth quintiles since it only collects Labour Force Survey data. To preserve the data in the UIS database, for countries that, for a given year, have SDG indicator 443 disaggregated by wealth quintiles, the source of data in the combined dataset is the same as in the UIS data.

- Another advantage of using the ILO database is related to the time series data. For countries that conduct LFS regularly, the time series is more complete.
- Currently, 43.3 % of data sources for the SDG Indicator 4.4.3 in the UIS database are Labour Force Surveys, 20 % are General/Continuous Household Surveys, 11,8 % are censuses, and the remaining either HIES, or DHS and MICS (see Table 4).

TABLE 4. Distribution of data sources

Data source	ILO	UIS	Combined UIS and ILO
ADM	0.7%	6.7%	3.2%
DHS	0.0%	4.8%	3.1%
HIES	6.7%	6.9%	6.7%
HS	3.0%	19.6%	13.2%
LFS	86.7%	43.4%	61.4%
MICS	0.0%	6.8%	4.3%
OE	1.3%	0.0%	0.5%
PC	1.7%	11.8%	7.7%
Total no. of surveys & other sources	878	825	1,242

Note: not included data points for the adjusted gender parity index and adjusted location parity index

In the ILO database, LFS data account for around 87 % of data sources. In the combined database, LFS composes 61.4 % of sources of data. This percentage could be higher than 61.4% if the combination of databases would not consider the preservation of datapoint for the disaggregation by wealth quintiles and that of urban and rural areas.

2 The combination of ILO and UIS databases

2.1 CASE 1

LFS data in both UIS and ILO datasets, but if we use **ILO data**, we will have **more detailed data by ISCED-11** for years 2014 to 2016, **and new data points** for years 2017-2020.

TABLE 5. New Zealand - Educational attainment by ISCED-11, population 25 +, both sexes.

	Year	Source	at least ISCED1	at least ISCED2	at least ISCED3	at least ISCED4	at least ISCED5	at least ISCED6	at least ISCED7	at least ISCED8	at least ISCED9	Survey
New Zealand	2011	UIS			67.99	48.11	36.88					LFS
	2012	UIS			68.76	47.02	35.79					LFS
	2014	ILO	93.25	79.61	72.52	45.42	30.70	25.73	3.94	0.37	93.25	LFS
	2014	UIS			69.49	45.80	31.10	26.15	4.37	0.83		LFS
	2015	ILO	91.81	78.41	68.65	44.58	30.67	26.23	4.28	0.81	91.81	LFS
	2015	UIS			69.66	44.10	30.25	25.86	3.94	0.54		LFS
	2016	ILO	91.64	79.21	70.26	46.28	32.41	28.21	4.83	0.95	91.64	LFS
	2016	UIS			70.03	46.10	32.31	28.10	4.88	0.94		LFS
	2017	ILO	91.66	80.81	72.58	47.83	33.85	29.74	5.27	1.05	91.66	LFS
	2018	ILO	92.05	82.09	74.12	49.38	35.27	31.24	5.58	1.14	92.05	LFS
	2019	ILO	81.54	81.54	73.99	49.66	35.76	31.67	5.87	1.13	99.99	LFS
	2020	ILO	81.90	81.90	75.09	51.03	36.62	32.27	6.23	1.16	100.00	LFS
	2020	UIS		81.92	75.11	51.05	36.64	32.28	6.23	1.12		LFS

2.2 CASE 2

Added data points. **Different data sources with cross-domain coherence.** The estimates obtained by HIES are reconcilable with the values obtained through census data. For example, Albania (see Table 5) has reported to UIS the estimates for 2011 based on population census data, for 2012 based on the Living Condition Measurement Survey data, and in 2017 based on Demographic and Health Survey data. Comparing the reported values with estimates obtained from Labour Force Surveys for the same years, it is evident that these values are compatible.

TABLE 6. Albania - Educational attainment by ISCED-11, population 25 +, both sexes.

	Year	Source	at least ISCED1	at least ISCED2	at least ISCED3	at least ISCED4	at least ISCED5	at least ISCED6	at least ISCED7	at least ISCED8	at least ISCED0	Survey
Albania	2011	ILO	96.62	86.70	43.81	10.17	10.17	10.17	9.20	0.00	96.62	LFS
	2011	UIS	95.85	85.23	43.49	0.00	12.00	12.00	10.54		96.14	PC
	2012	ILO	96.26	87.11	44.04	11.11	11.11	11.11	10.02	0.00	96.26	LFS
	2012	UIS	95.51	87.21	45.28	0.00	12.90	12.90	12.33	0.09	96.04	HIES
	2013	ILO	95.94	86.90	43.76	12.91	12.91	12.91	11.37	0.04	95.94	LFS
	2014	ILO	96.52	87.46	45.98	13.19	13.19	13.19	11.09	0.06	96.52	LFS
	2015	ILO	97.06	88.65	48.19	14.81	14.81	14.81	12.99	0.08	97.06	LFS
	2016	ILO	97.22	89.39	46.98	14.32	14.32	14.32	12.43	0.07	97.22	LFS
	2017	ILO	97.31	90.20	47.80	15.46	15.46	15.46	13.38	0.10	97.31	LFS
	2017	UIS	96.51	83.56	46.35			16.15			97.92	DHS
	2018	ILO	97.10	90.27	49.89	16.84	16.84	16.47	13.66	0.22	97.35	LFS
2019	ILO	97.44	90.71	50.71	17.69	17.69	17.32	14.69	0.23	97.68	LFS	

Therefore, in the case of Albania, the combined data for the SDG Indicator 443, it is acceptable to keep years 2011, 2012, and 2017 as reported in UIS, and to add the other available estimates from LFS data in the ILO database (2013-2016 and 2018-2019). In this way the disaggregation by rural urban area and by wealth quintiles (2012) is saved in the UIS database.

Another good example is Palau (see Table 7).

TABLE 7. Palau - Educational attainment by ISCED-11, population 25 +, both sexes.

	Year	Source	at least ISCED1	at least ISCED2	at least ISCED3	at least ISCED4	at least ISCED5	at least ISCED6	at least ISCED7	at least ISCED8	at least ISCED0	Survey
Palau	2013	UIS	98.60	97.12	88.05		33.95					PC
	2014	ILO	98.73	94.09	90.78	46.71	46.71	19.82	9.88	0.00	98.73	HIES
	2020	ILO	96.06	94.36	87.56	35.97	30.66	14.69	2.99	0.28	97.76	PC

NEED TO MAKE A DECISION FOR SPECIFIC CASES

2.3 CASE 3

There is not a cross-domain coherence between LFS and DHS, HIES and Census data. For example, the estimates obtained through Angola LFS are not reconciled with estimates obtained through DHS and HIES data, and with Census based calculations. As shown in the table below, the estimates for the educational attainment rate of population aged 25 years and above who has completed at least the primary education or higher is greater compared to estimates obtained by HIES (2011) and DHS (2015). Whereas the Census calculations converge with estimates based on HIES and DHS data.

TABLE 8. Angola - Educational attainment by ISCED-11, population 25 +, both sexes.

	Year	Source	at least ISCED1	at least ISCED2	at least ISCED3	at least ISCED4	at least ISCED5	at least ISCED6	at least ISCED7	at least ISCED8	at least ISCED0	Survey
Angola	2011	ILO	41.61	22.87	12.30	4.05	4.05	4.05	0.58	0.00	76.39	HIES
	2014	ILO	43.76	28.38	14.10	3.49	3.49	2.05	0.26	0.06	66.63	PC
	2014	UIS	44.00	28.92	15.86	2.63	2.63	2.63			69.12	PC
	2015	UIS	43.41	27.97	17.44			2.00			71.87	DHS
	2019	ILO	70.03	38.47	20.84	5.26	3.92	0.09	0.02	0.00	79.41	LFS
	2021	ILO	74.30	39.98	22.05	4.68	4.18	0.13	0.00	0.00	80.95	LFS

Now the question is: **would the LFS estimates for 2019 and 2021 be included?** Usually in similar cases with Angola, the estimates obtained from LFS data are higher, especially for the educational attainment rate of population aged 25 years and above who has completed at least the primary education or higher (at least ISCED 1).

2.4 CASE 4

In the ILO database, **estimates obtained from same survey (LFS) are not coherent**. The table below shows the data for Bhutan. The LFS estimates for years 2014, 2015, 2021 and 2011 are not coherent with those of years 2018, 2019 and 2020. In this case, the decision of using LFS estimated to obtained SDG 443 estimates become more complicated. The estimates are lower for the closest years to census year (2017), but the differences become wider for years 2021 and 2022. The datapoints of Bhutan and other 18 countries that have similar issues are not included in the tables 1 to 3.

TABLE 9. Bhutan - Educational attainment by ISCED-11, population 25 +, both sexes.

	Year	Source	at least ISCED1	at least ISCED2	at least ISCED3	at least ISCED4	at least ISCED5	at least ISCED6	at least ISCED7	at least ISCED8	at least ISCED0	Survey
Bhutan	2012	UIS	20.43	9.60	5.51	5.38	4.55	4.55	0.75	0.08	31.90	HIES
	2014	ILO	99.97	72.82	59.14	35.92	19.48	18.10	2.61	0.00	100.00	LFS
	2015	ILO	99.81	74.70	59.68	36.17	20.01	17.82	2.56	0.00	100.00	LFS
	2017	UIS	32.36	28.22	17.32	11.00	10.20	10.20	2.15	0.20	44.40	PC
	2018	ILO	27.01	21.00	13.57	7.11	7.11	7.11	0.97	0.00	37.22	LFS
	2019	ILO	33.56	24.22	16.03	9.82	9.82	8.34	1.36	0.07	42.35	LFS
	2020	ILO	37.44	27.33	18.69	11.59	10.05	9.14	1.45	0.04	46.95	LFS
	2021	ILO	99.43	74.65	41.42	24.13	23.48	19.61	2.88	0.11	99.86	LFS
	2022	ILO	99.46	75.75	42.04	24.27	23.77	20.46	2.85	0.14	99.97	LFS

2.5 CASE 5

LFS estimates are coherent, but not with the estimated in the UIS dataset. For example, for Rwanda, the ILO dataset has LFS estimates for years 2017-2022, which are correct. While the estimated in the UIS dataset are based on population census (2012), HS (2014), DHS (2015), HIES (2018) and DHS (2020). The combination of sources is complex because it should be an evaluation of accuracy. **Are the LFS estimates in the ILO dataset overestimated or are the estimates in the UIS dataset underestimated?**

TABLE 10. Rwanda - Educational attainment by ISCED-11, population 25 +, both sexes.

	Year	Source	at least ISCED1	at least ISCED2	at least ISCED3	at least ISCED4	at least ISCED5	at least ISCED6	at least ISCED7	at least ISCED8	at least ISCED0	Survey
Rwanda	2012	UIS	31.08	12.18	8.42	0.00	3.62	2.10	0.24	0.03	68.07	PC
	2014	UIS	32.69	11.97	8.46	0.00	3.32	2.29	0.21	0.01	76.31	HS
	2015	UIS	35.36	12.01	7.52			2.21			74.56	DHS
	2017	ILO	80.33	19.58	14.55	6.97	6.97	5.62	0.73	0.04	80.50	LFS
	2018	ILO	81.22	19.88	14.82	7.21	7.21	5.85	0.73	0.03	81.37	LFS
	2018	UIS	35.99	13.40	9.86	0.00	4.13	4.13	0.30	0.02	78.25	HIES
	2019	ILO	81.64	20.82	15.34	7.41	7.41	6.02	0.77	0.07	81.74	LFS
	2020	ILO	82.89	22.85	16.18	7.46	7.46	6.27	0.84	0.08	82.99	LFS
	2020	UIS	42.25	16.38	10.96			3.31			79.42	DHS
	2021	ILO	82.53	23.25	15.82	6.98	6.98	5.87	0.67	0.05	82.65	LFS
	2022	ILO	82.99	22.44	15.27	6.77	6.77	5.75	0.65	0.04	83.12	LFS

TABLE 11. Countries for which the estimates are not coherent and need further assessment of data accuracy

Country	Year	Source	at least ISCED1	at least ISCED2	at least ISCED3	at least ISCED4	at least ISCED5	at least ISCED6	at least ISCED7	at least ISCED8	at least ISCED9	at least ISCED10	Survey	1 - included in combined datasets 0 - not included 2 - no decision taken
Angola	2011	ILO	41.6	22.9	12.3	4.0	4.0	4.0	0.6	0.0		76.4	HIES	1
Angola	2014	ILO	43.8	28.4	14.1	3.5	3.5	2.0	0.3	0.1		66.6	PC	0
Angola	2014	UIS	44.0	28.9	15.9	2.6	2.6	2.6				69.1	PC	1
Angola	2015	UIS	43.4	28.0	17.4			2.0				71.9	DHS	1
Angola	2019	ILO	70.0	38.5	20.8	5.3	3.9	0.1	0.0	0.0		79.4	LFS	2
Angola	2021	ILO	74.3	40.0	22.0	4.7	4.2	0.1	0.0	0.0		81.0	LFS	2
Benin	2017	UIS	20.7	10.4	5.0			2.5				38.3	DHS	1
Benin	2018	ILO	33.7	16.1	16.1	5.0	5.0	0.0	0.0	0.0		33.7	HIES	2
Benin	2019	UIS	25.6	14.1	7.5			3.5				37.0	HIES	1
Bhutan	2012	UIS	20.4	9.6	5.5	5.4	4.6	4.6	0.8	0.1		31.9	HIES	1
Bhutan	2014	ILO	100.0	72.8	59.1	35.9	19.5	18.1	2.6	0.0		100.0	LFS	2
Bhutan	2015	ILO	99.8	74.7	59.7	36.2	20.0	17.8	2.6	0.0		100.0	LFS	2
Bhutan	2017	UIS	32.4	28.2	17.3	11.0	10.2	10.2	2.2	0.2		44.4	PC	1
Bhutan	2018	ILO	27.0	21.0	13.6	7.1	7.1	7.1	1.0	0.0		37.2	LFS	1
Bhutan	2019	ILO	33.6	24.2	16.0	9.8	9.8	8.3	1.4	0.1		42.3	LFS	1
Bhutan	2020	ILO	37.4	27.3	18.7	11.6	10.0	9.1	1.5	0.0		46.9	LFS	1
Bhutan	2021	ILO	99.4	74.7	41.4	24.1	23.5	19.6	2.9	0.1		99.9	LFS	2
Bhutan	2022	ILO	99.5	75.7	42.0	24.3	23.8	20.5	2.8	0.1		100.0	LFS	2
Cameroon	2010	UIS	36.3	36.2	18.2	13.5	1.4					60.9	LFS	1
Cameroon	2014	ILO	72.4	40.4	21.2	9.2	7.1	5.8	2.5	0.2		72.5	HS	2
Cameroon	2018	UIS	60.2	30.3	14.3			6.4				74.9	DHS	1
Dem.Rep. Congo	2012	ILO	71.9	45.9	45.9	8.3	8.0	7.4	0.2	0.2		71.9	LFS	2
Dem.Rep. Congo	2013	UIS	56.8	42.5	19.9	0.0	5.4	1.7				81.7	DHS	1
Dem.Rep. Congo	2016	UIS	63.6	50.7	27.3	0.0	9.1	3.5	0.1	0.0		82.4	HIES	1
Dem.Rep. Congo	2018	UIS	62.0	48.3	25.2			7.4				83.4	MICS	1
Ethiopia	2011	UIS	24.6	12.5	8.8	5.9	1.1					24.8	HIES	1
Ethiopia	2013	ILO	34.7	17.7	7.8	3.9	1.3	1.3	0.2	0.0		39.9	LFS	2
Ethiopia	2016	UIS	20.0	11.1	6.9			1.3				38.0	DHS	1
Ethiopia	2019	UIS	22.3	10.3	4.5							37.4	HIES	1
Guinea	2010	UIS		11.7		5.0		2.8				15.9	HS	1
Guinea	2014	UIS	16.4	10.9	6.7	5.4		4.4	0.1			22.4	PC	1
Guinea	2016	UIS	24.5	16.6	11.1			7.2				30.7	MICS	1
Guinea	2018	UIS	18.6	12.6	7.4	6.5		6.2	2.5	0.1		27.9	DHS	1
Guinea	2019	ILO	72.1	46.9	32.5	31.1	27.5	22.7	10.7	0.5		72.1	LFS	2

Iraq	2012	ILO	57.1	31.0	21.5	15.3	15.3	7.6	0.4	0.1	80.3	HIES	1
Iraq	2013	UIS	79.4	44.1	29.7	19.9	10.7					HIES	1
Iraq	2018	UIS	57.7	32.3	23.4			10.4			80.0	MICS	1
Iraq	2021	ILO	32.5	32.1	22.9	16.6	16.6	10.9	0.5	0.1	80.1	LFS	2
Jordan	2010	UIS	85.2	74.1	41.4	27.1	16.2				89.9	LFS	1
Jordan	2017	ILO	55.6	40.9	40.9	28.6	18.7	18.7	2.1	0.7	91.2	LFS	0
Jordan	2017	UIS	87.3	69.2	48.3			20.9			92.5	DHS	1
Jordan	2018	ILO	56.3	41.0	41.0	29.2	19.3	19.3	1.9	0.6	91.5	LFS	0
Jordan	2018	UIS	89.7	81.0	43.7	33.1	22.8		2.0	0.6	93.2	LFS	1
Jordan	2019	ILO	57.8	41.9	41.9	28.3	18.5	18.5	1.7	0.5	91.9	LFS	2
Jordan	2020	ILO	57.9	41.5	41.5	28.1	18.6	18.6	1.7	0.7	91.7	LFS	2
Jordan	2020	UIS	89.2	80.7	50.2	32.6	22.7		2.1	0.7	92.8	LFS	1
Jordan	2021	ILO	58.8	42.3	42.3	28.9	19.1	19.1	2.0	0.7	92.6	LFS	1
Lesotho	2018	UIS	58.2	30.0	20.5			3.9			91.9	MICS	1
Lesotho	2019	ILO	99.6	42.6	6.5	6.1	6.0	5.6	1.6	0.1	99.7	LFS	2
Madagascar	2015	ILO	71.7	50.4	19.7	8.4	6.1	2.7	0.1	0.0	76.9	LFS	2
Madagascar	2018	UIS	49.1	28.5	9.7		4.7	2.8	1.5	0.3	73.0	PC	1
Madagascar	2021	UIS	41.2	18.4	8.9			2.9			79.2	DHS	1
Malawi	2011	ILO	72.1	19.3	10.5	2.6	1.0	0.8	0.6	0.2	72.1	HIES	2
Malawi	2015	UIS	47.3	19.7	12.4			1.4			80.1	DHS	1
Malawi	2017	ILO	79.6	22.8	13.0	2.8	1.2	0.9	0.7	0.2	79.6	HIES	2
Malawi	2020	ILO	81.3	24.0	12.9	3.0	2.0	1.1	0.9	0.1	81.3	HIES	2
Malawi	2020	UIS	46.8	18.8	12.2			1.3			82.6	MICS	1
Maldives	2014	ILO	41.0	41.0	17.4	10.7	1.4	1.4	0.0	0.0	41.0	PC	2
Maldives	2016	ILO	43.2	43.1	23.1	17.2	8.5	8.5	2.0	0.1	43.2	HIES	2
Maldives	2017	UIS	63.0	41.4	16.1			6.4			77.3	DHS	1
Maldives	2019	ILO	92.9	56.7	28.7	25.6	11.0	11.0	4.2	0.1	93.2	HIES	2
Mauritania	2012	ILO	31.4	21.5	7.3	4.3	4.3	4.3	0.3	0.0	51.6	LFS	1
Mauritania	2013	UIS	30.5	15.1	9.5	2.9	2.9	2.5	2.2	0.3		PC	1
Mauritania	2015	UIS	32.2	18.4	7.5			5.2			53.4	MICS	1
Mauritania	2017	ILO	59.6	59.6	10.1	6.0	5.2	4.7	1.0	0.4	59.6	LFS	2
Mauritania	2019	ILO	21.0	12.1	5.6	3.3	3.3	2.9	1.9	0.1	72.4	HIES	2
Rwanda	2012	UIS	31.1	12.2	8.4	0.0	3.6	2.1	0.2	0.0	68.1	PC	1
Rwanda	2014	UIS	32.7	12.0	8.5	0.0	3.3	2.3	0.2	0.0	76.3	HS	1
Rwanda	2015	UIS	35.4	12.0	7.5			2.2			74.6	DHS	1
Rwanda	2017	ILO	80.3	19.6	14.5	7.0	7.0	5.6	0.7	0.0	80.5	LFS	2
Rwanda	2018	ILO	81.2	19.9	14.8	7.2	7.2	5.9	0.7	0.0	81.4	LFS	2
Rwanda	2018	UIS	36.0	13.4	9.9	0.0	4.1	4.1	0.3	0.0	78.3	HIES	1
Rwanda	2019	ILO	81.6	20.8	15.3	7.4	7.4	6.0	0.8	0.1	81.7	LFS	2
Rwanda	2020	ILO	82.9	22.9	16.2	7.5	7.5	6.3	0.8	0.1	83.0	LFS	2

Rwanda	2020	UIS	42.3	16.4	11.0			3.3			79.4	DHS	1
Rwanda	2021	ILO	82.5	23.2	15.8	7.0	7.0	5.9	0.7	0.0	82.6	LFS	2
Rwanda	2022	ILO	83.0	22.4	15.3	6.8	6.8	5.8	0.7	0.0	83.1	LFS	2
Sierra Leone	2014	ILO	98.6	74.7	51.2	36.7	17.1	3.3	0.6	0.0	98.8	LFS	2
Sierra Leone	2017	UIS	32.1	22.7	8.2			2.1			39.4	MICS	1
Sierra Leone	2018	ILO	32.6	21.6	14.8	5.7	1.9	1.9	0.3	0.0	41.9	HS	1
Sierra Leone	2019	UIS	33.5	23.2	12.1			2.0			41.5	DHS	1
Togo	2011	ILO	58.9	55.1	46.2	28.2	14.8	5.5	2.4	0.6	59.1	HIES	0
Togo	2011	UIS	30.4	18.3	9.3	5.4					51.2	HIES	1
Togo	2015	ILO	57.4	54.1	44.9	28.1	14.3	5.7	1.6	0.3	57.5	HIES	2
Togo	2017	ILO	40.1	19.3	8.9	8.6	4.2	3.1	1.3	0.2	40.1	LFS	0
Togo	2017	UIS	43.2	21.1	9.5			3.1			64.4	MICS	1
Uganda	2010	UIS	44.3	28.8	10.7	0.0	8.2	3.0				HS	1
Uganda	2012	ILO	38.7	16.1	7.9	5.8	5.8	1.8	0.4	0.0	74.1	LFS	1
Uganda	2012	UIS	32.5	24.0	9.9	0.0	8.2	1.7			75.4	HS	1
Uganda	2016	UIS	42.3	19.2	12.3			0.9			80.9	DHS	1
Uganda	2017	ILO	80.3	28.2	27.5	10.0	7.8	2.9	0.0	0.0	80.7	LFS	2
Uganda	2021	ILO	86.4	39.5	38.8	12.6	9.5	4.4	0.0	0.0	87.2	LFS	2

3 Annex I

TABLE 12. Age disaggregation in the ILO database

Type	Variable name	Variable label
1	AGE_YTHADULT_YGE15	Age (Youth, adults): 15+
	AGE_YTHADULT_Y15-64	Age (Youth, adults): 15-64
	AGE_YTHADULT_Y15-24	Age (Youth, adults): 15-24
	AGE_YTHADULT_YGE25	Age (Youth, adults): 25+
2	AGE_AGGREGATE_TOTAL	Age (Aggregate bands): Total
	AGE_AGGREGATE_YLT15	Age (Aggregate bands): <15
	AGE_AGGREGATE_Y15-24	Age (Aggregate bands): 15-24
	AGE_AGGREGATE_Y25-54	Age (Aggregate bands): 25-54
	AGE_AGGREGATE_Y25-64	Age (Aggregate bands): 25-64
	AGE_AGGREGATE_Y55-64	Age (Aggregate bands): 55-64
	AGE_AGGREGATE_YGE65	Age (Aggregate bands): 65+
3	AGE_10YRBANDS_TOTAL	Age (10-year bands): Total
	AGE_10YRBANDS_YLT15	Age (10-year bands): <15
	AGE_10YRBANDS_Y15-24	Age (10-year bands): 15-24
	AGE_10YRBANDS_Y25-34	Age (10-year bands): 25-34
	AGE_10YRBANDS_Y35-44	Age (10-year bands): 35-44
	AGE_10YRBANDS_Y45-54	Age (10-year bands): 45-54
	AGE_10YRBANDS_Y55-64	Age (10-year bands): 55-64
	AGE_10YRBANDS_YGE65	Age (10-year bands): 65+

TABLE 13. Education disaggregation in the ILO database

Type	Variable name	Variable label
1	EDU_AGGREGATE_TOTAL EDU_AGGREGATE_LTB EDU_AGGREGATE_BAS EDU_AGGREGATE_INT EDU_AGGREGATE_ADV EDU_AGGREGATE_X	Education (Aggregate levels): Total Education (Aggregate levels): Less than basic Education (Aggregate levels): Basic Education (Aggregate levels): Intermediate Education (Aggregate levels): Advanced Education (Aggregate levels): Level not stated
2	EDU_ISCED11_TOTAL EDU_ISCED11_X EDU_ISCED11_0 EDU_ISCED11_1 EDU_ISCED11_2 EDU_ISCED11_3 EDU_ISCED11_4 EDU_ISCED11_5 EDU_ISCED11_6 EDU_ISCED11_7 EDU_ISCED11_8 EDU_ISCED11_9	Education (ISCED-11): Total Education (ISCED-11): X. No schooling Education (ISCED-11): 0. Early childhood education Education (ISCED-11): 1. Primary education Education (ISCED-11): 2. Lower secondary education Education (ISCED-11): 3. Upper secondary education Education (ISCED-11): 4. post-secondary non-tertiary education Education (ISCED-11): 5. Short-cycle tertiary education Education (ISCED-11): 6. bachelor's or equivalent level Education (ISCED-11): 7. master's or equivalent level Education (ISCED-11): 8. Doctoral or equivalent level Education (ISCED-11): 9. Not elsewhere classified
3	EDU_ISCED97_TOTAL EDU_ISCED97_X EDU_ISCED97_0 EDU_ISCED97_1 EDU_ISCED97_2 EDU_ISCED97_3 EDU_ISCED97_4 EDU_ISCED97_5 EDU_ISCED97_6 EDU_ISCED97_UNK	Education (ISCED-97): Total Education (ISCED-97): X. No schooling Education (ISCED-97): 0. Pre-primary education Education (ISCED-97): 1. Primary education or first stage of basic education Education (ISCED-97): 2. Lower secondary or second stage of basic education Education (ISCED-97): 3. Upper secondary education Education (ISCED-97): 4. post-secondary non-tertiary education Education (ISCED-97): 5. First stage of tertiary education (not leading directly to an advanced research qualification) Education (ISCED-97): 6. Second stage of tertiary education (leading to an advanced research qualification) Education (ISCED-97): Level not stated

TABLE 14. ISCED disaggregation in the ILO database

Aggregate levels of Education	ISCED-11	ISCED-97
Less than basic	X. No schooling	X. No schooling
	0. Early childhood education	0. Pre-primary education
Basic	1. Primary education	1. Primary education or first stage of basic education
	2. Lower secondary education	2. Lower secondary or second stage of basic education
Intermediate	3. Upper secondary education	3. Upper secondary education
	4. Post-secondary non-tertiary education	4. Post-secondary non tertiary education
Advanced	5. Short-cycle tertiary education	5. First stage of tertiary education (not leading directly to an advanced research qualification)
	6. Bachelor's or equivalent level	
	7. Master's or equivalent level	
	8. Doctoral or equivalent level	6. Second stage of tertiary education (leading to an advanced research qualification)
Level not stated	9. Not elsewhere classified	Level not stated