



EDUCATION FINANCE WATCH 2022

Introduction

The Education Finance Watch (EFW) is a collaborative effort between the World Bank (WB), the Global Education Monitoring (GEM) Report, and the UNESCO Institute of Statistics (UIS). The EFW aims to provide an annual analysis of trends, patterns, and issues in education financing around the world.

The EFW uses various sources of data, including from UNESCO, the WB, the International Monetary Fund (IMF), and the Organisation for Economic Co-operation and Development (OECD). Data quality and coverage of education finance data has improved, but there are still large gaps in data availability and consistency across the major data sources. The EFW, where needed, uses a coherent methodological approach to deal with missing data. The specific methodology and rationale are described in detail in the accompanying Technical Note.

The EFW 2021 reviewed trends and patterns of education spending for the past 10 years and captured preliminary effects of COVID-19 on the education budgets of a global sample of countries. The EFW 2021 documented that global education spending had increased continuously, in absolute terms, but there were indications that the pandemic would interrupt this trend. Furthermore, it highlighted that the policies that countries adopt to protect and increase education spending differ, but a majority could make better use of the funds allocated. Lastly, in view of the pandemic's



impact on national economies globally, the EFW 2021 underscored diverging trends in education financing, especially between lower and higher income countries.

The EFW 2022 digs deeper into these topics, using the full breadth of available data. The EFW 2022 sheds further light on the impact of COVID-19 on global education financing in 2020, 2021, and 2022 and conducts a focused analysis of recent trends in government education budgets using the latest data available for a subsample of high-income (HICs), low-income and lower-middle income countries (LICs and LMICs), as of May 2022.

Key findings of EFW 2022:

1. In 2020, first year of the COVID-19 pandemic, half of the sample of countries analyzed reduced their annual real spending on education, compared to 28 percent of countries in 2019. On average, per capita spending in low-income countries grew by just 1 percent in 2020, fell by 4 percent in LMICs and by 6 percent in UMICs. Forty percent of LICs and LMICs reduced their spending on education after the onset of the COVID-19 pandemic in 2020, with an average decline in spending of 13.5 percent.
2. The available data on government budgetary commitments suggest that education spending lost space in national budgets of low- and lower-middle income countries in 2021 and 2022. The decline in the prioritization of education spending in government budgets in LICs and LMICs over the last two years is in contrast with trends observed in UMICs and HICs where education as a share of total government budgets was stable in 2019–2021 and in 2022 remained higher than in 2019. In LICs and LMICs, the share of education fell in 2020, rebounded slightly in 2021 but fell again in 2022 below 2019 levels. With overall total public spending being strained by increasing fiscal pressures, there is a risk that education spending in LICs and LMICs will not meet the needs to implement urgent actions to recover learning losses and address the already high learning poverty levels.
3. The COVID-19 pandemic reversed a steady upward trend in per capita real public spending on education in many middle income countries. One-third of lower-middle income countries and half of upper-middle income countries spent less per capita on education in 2019–2020 than they did in 2014–2015. Latin America and the Caribbean is the one region where per capita government spending on education fell below its mid-2010s levels, with an average decline of 3 percent between 2014–2015 and 2019–2020. Low-income



countries maintained higher levels of per capita public education spending in 2019–2020 relative to 2014–2015, with South Asia registering the largest increase (35 percent) in spending during this period.

4. Despite the increased efforts of low-income countries to improve their public education spending, spending levels remain strikingly below those of higher income countries. As a share of GDP, government education spending in LICs rose steadily from the mid-2010s to reach an average of 3.6 percent in 2020, while fluctuating around 4.8 percent for middle- and high-income countries. However, in 2020 government per capita spending was on average nearly 150 and 20 times higher in high- and upper middle-income countries (US\$7,787 and US\$1,079, respectively) than in low-income countries (US\$53). In 2020, average government per capita spending in sub-Saharan Africa

(US\$254) and South Asia (US\$358) was less than one-tenth of average per capita spending in Europe and Central Asia (US\$6,156).

5. Overall, direct aid to education was stagnant in 2020 and fell by US\$359 million in the case of bilateral donors. The decline in bilateral aid to education in 2020 has since been followed with cuts to aid earmarked to education by major donors, with the aftermath of the COVID-19 crisis and the war in Ukraine and shifts in some donor governments' priorities.
6. Households in low- and lower-middle-income countries continue to bear a significant portion of

education costs, accounting for 39 percent of the total spending in education compared to 16 percent in high-income countries. Moreover, within countries, the richest spend far more on education, further entrenching inequality: in 33 low- and middle-income countries, households from the richest quintile spent 4.2 percent of their budget on education compared to just 2.4 percent among households in the poorest quintile.

7. Data availability has improved considerably. Nevertheless, big gaps remain, with just 1 percent of countries reporting 2020 spending according to level of education.



Table 1. Changes in real education spending between pre- (2019) and post-pandemic onset (2020), by income group

	Global		HIC and UMIC		LMIC and LIC	
	2019	2020	2019	2020	2019	2020
Total education spending						
Change in education spending (%)	6.7	1.9	2.9	3.5	11.5	0.0
Share of countries decreasing education spending from previous year (%)	27.7	50.8	22.2	58.3	34.5	41.4
Average decrease in countries that decreased their spending from previous year (%)	-7.9	-8.2	-8.7	-5.1	-7.2	-13.5
Average increase in countries that increased their spending from previous year (%)	12.4	12.4	6.2	15.6	21.4	9.6
Education's share of the total spending						
Average change in percentage points from previous year	0.3	-1.0	-0.1	-0.8	0.8	-1.2
Average share (%)	15.2	14.3	13.8	13.0	17.0	15.9

Total number of countries (N) = 65 (LIC & LMIC = 29, UMIC & HIC = 36).

Note: Changes are expressed in real terms (see technical note for details).

Source: Own estimates using the World Bank BOOST database, as of May 11, 2022.

The disruptions caused by the pandemic also resulted in a decline in the execution rates (actual utilization) of planned education budgets in 2020.⁴ While the overall education budget execution rates fell very little, there are significant differences by types of expenditures (Table 2). While wage expenditures were largely executed according to plans and similarly to 2019, the budget for goods and services saw a significant fall in execution. On average, across the sample, 76 percent of the budget for goods and services was executed, a 10-percentage point decline from the pre-pandemic execution rate of 86 percent. Under-execution on goods and services was more pronounced in low and lower-middle income countries, which had an average execution rate for goods and services of 70 percent in 2020 compared to 79 percent in 2019. Meanwhile, execution rates for capital expenditures increased from 79 to 86 percent from 2020 to 2019, likely reflecting shifts in expenditures to provide remote learning opportunities.

Lower income countries, on average, increased the utilization of their capital budget to 80 percent in 2020, compared to 68 percent in 2019.^{5,6}

The COVID-19 pandemic impacts on education financing may amplify the gap in learning outcomes between lower and higher income countries. Low- and lower-middle income countries with low education and learning outcomes largely registered a more marked decline in the share of education spending in total government spending (Figure 1). The fact that lower-income countries with below-average learning-adjusted years of schooling (LAYS)⁷ devote fewer of their resources to education is likely to increase learning inequalities since public education spending tends to benefit relatively more disadvantaged learners.

If not redressed, the diminished prioritization of education could undermine human capital development, slowdown

4 The execution rate is the proportion of the originally approved budget that was spent in the fiscal year.

5 Countries potentially driving this increase include Mozambique (150 percent), Cabo Verde (120 percent), Ukraine (115 percent), El Salvador (113 percent) and Lesotho (112 percent) (BOOST database).

6 Research has found that lower income countries tend to over-execute remuneration budgets and under-execute “everything else” (Carvalho, Crawford, and Minardi 2020; Crawford and Pugatch 2020) and tend to underspend on infrastructure because of limited absorptive capacity (Presbitero 2016). An analysis of the impacts of the pandemic on expenditures composition and budget execution is beyond the scope of EFW 2022.

7 Median LAYS is 7 based on the sample of 91 countries in the BOOST database. The LAYS metric combines quantity (expected years of schooling) and quality (harmonized learning outcomes). The expected years of schooling measures the number of years of school a child born today can expect to obtain by age 18. It is based on age-specific enrollment rates between ages 4 and 17 and has a maximum value of 14. Meanwhile, harmonized learning outcomes are calculated using a conversion factor. For more details on the methodology, see Filmer et al. (2018); Kraay (2018); Patrinos and Angrist (2018).

Table 2: Budget execution rates before and during COVID, overall, by type of expenditure and by country income group

	Global		HIC and UMIC		LMIC and LIC	
	2019	2020	2019	2020	2019	2020
Total education budget	94.7	93.4	95.5	93.4	93.9	93.4
Wages	101.5	99.5	100.4	98.1	102.7	101.0
Goods and services	86.0	76.0	92.5	81.5	79.2	70.2
Capital expenditures	78.6	85.5	88.9	91.2	67.8	79.6

N = 43 (LIC & LMIC = 21, UMIC & HIC = 22)

Note: Presented here are the execution rates during pre- and post-COVID onset periods. Sample is limited to those with complete execution data on all type of expenditures.

Source: BOOST database, as of May 11, 2022.

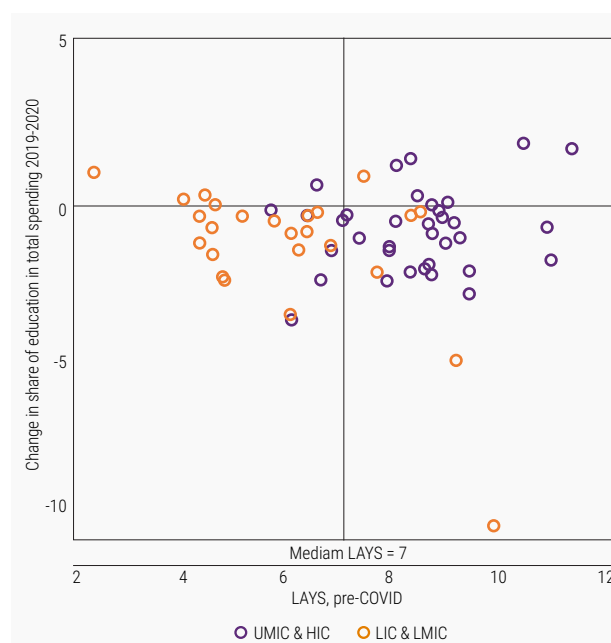
economic growth, and in turn further lower public resources available for education financing. Research indicates a positive relationship between education quality and economic growth (Hanushek and Woessmann 2013). In turn, economic growth enables higher spending on education, initiating a virtuous cycle (Al-Samarrai et al. 2019). Nevertheless, as analyzed in the EFW 2021, increases in education spending do not automatically result in improved learning outcomes; improving spending efficiency is also paramount (World Bank and UNESCO 2021).

The impacts and aftermath of the pandemic makes it more challenging for many countries to achieve recommended international benchmarks on government education spending. The commonly used benchmarks for education spending are to reach 4 to 6 percent of GDP and/or 15 to 20 percent of total government expenditure.⁸ Of 33 low- and lower-middle-income countries in the EFW 2022 database, we can distinguish 3 groups of countries: 15 countries that met both targets, 4 countries that achieved one or the other, and 14 countries that meet neither (Figure 2 and Appendix C). Examples of the first group of countries are Burundi, Cabo Verde, Honduras and Moldova, where education spending reaches around 6 percent of GDP and 20 percent of total government expenditure. Countries in the latter group would need some combination of expanding the share of government spending in the economy and increasing the share of education in total public spending. For instance, for Uganda to reach 4 percent of GDP, either government spending as a share of GDP would need to significantly increase (from the current 19.6 percent to approximately 35 percent) or the country would need to almost double their share of education spending in total public spending (from 11.4 to approximately 22 percent)

8 See the recommendations of the *Education 2030 Framework for Action*.

Figure 1: Lower income countries with poor learning outcomes are committing less to education

Change in the share of education in total government spending vs learning-adjusted years of schooling (LAYS)



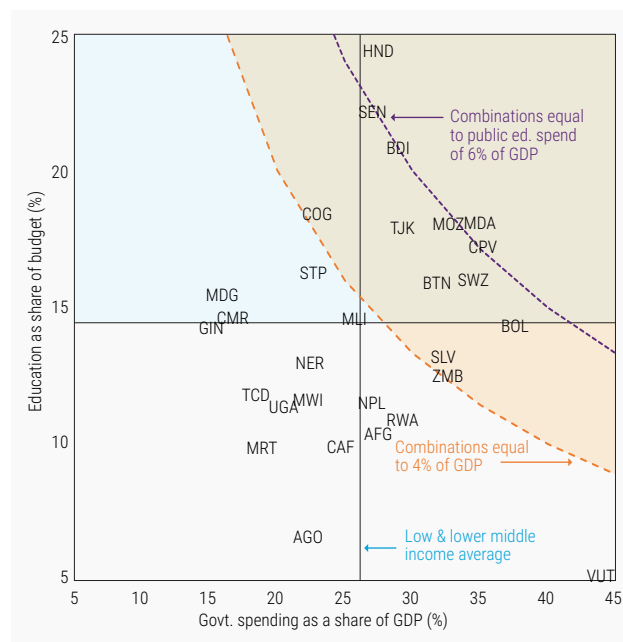
N = 67 countries.

Source: World Bank BOOST and Harmonized Learning Outcomes database.

while maintaining its current government spending relative to GDP (Figure 2). Nepal, a country close to the 4 percent of GDP benchmark, would need to either increase the share of government spending in GDP from 27.4 percent to approximately 35 percent or increase the share of education in total government expenditures from 11.4 to at least 14 percent, or some mix of the two.

Figure 2: About 40 percent of low- and lower-middle-income countries spend below international benchmarks for public education spending

Education as a share of total government expenditure, and government spending as a share of GDP in low- and lower-middle-income countries (%), 2020



N=33 LIC & LMIC. Not all countries are presented in Figure 2. See Appendix C for a full list of countries names and ISO codes in EFW2022 database.

Note: Data presented here do not include interpolated values.
Source: UIS database, accessed March 2022.

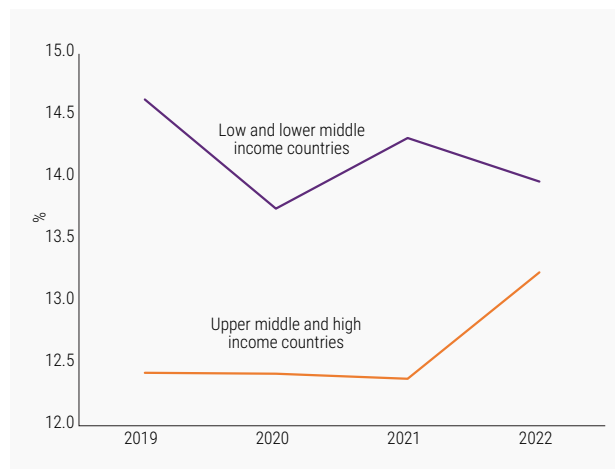
1.2. Government education budgets after the onset of COVID-19.

Unfortunately, there is not readily available data across countries to track actual education spending after the onset of the pandemic. In order to gauge at likely trends, the EFW 2022 extends the analysis carried out in the EFW 2021 of the share of education in national public budgets (planned spending) using 2021 and 2022 data obtained from UIS for a sub-set of low, middle-income and high-income countries.

While higher income countries increased the prioritization of education in their government budgets in 2022, in low- and lower-middle income countries education lost

Figure 3. The prioritization of education in government budgets recovered from its pandemic dip in high-income countries but not in low and lower-middle income countries

Share of education in total government budget, 2019–2022



Note: 54 countries with information for each year were used (LIC & LMIC = 28, UMIC & HIC = 26).

Source: UIS database.

space in national budgets. The share of education in total government budgets in higher income countries remained constant between 2019 and 2021 but increased in 2022. In contrast, in low- and lower-middle income countries this share decreased in 2020, rebounded in 2021 but fell again in 2022, remaining below 2019 levels (Figure 3). With overall total public spending being strained by increasing fiscal pressures, there is a risk that education spending in low and lower-middle income countries is not adequate to meet the needs to implement urgent actions to recover learning losses and address the pre-pandemic already poor learning outcomes.

1.3. Aid to education during the onset of COVID-19.

Total aid to education, including imputations from aid devoted to overall budget support, reached US\$18.1 billion in 2020.^{9,10} In real terms, between 2019 and 2020, total education ODA increased by 15 percent overall, 21 percent for basic education,¹¹ 19 percent for secondary education, and 8 percent for post-secondary education.

9 The most recent year with sector and recipient level data.

10 Total aid to education includes direct aid to education plus 20 percent of general budget support (aid provided to governments without being earmarked for specific projects or sectors).

11 Basic education covers primary education, basic life skills for youth and adults, and early childhood education.

When aid derived from direct budget support flows are excluded, direct (earmarked) aid to education was stagnant in 2020 and dropped by US\$359 million among bilateral donors (Figure 4.b). Among the few major donors in education to increase their direct aid to education, Germany and the World Bank increased their aid to education to sub-Saharan Africa by 25 percent in 2020. Meanwhile, even including imputations from overall budget support, 43 bilateral donors collectively decreased their aid to education by US\$153 million from 2019 to 2020. The decrease was concentrated among four donors (Saudi Arabia, Turkey, United Kingdom, and United States) who collectively decreased aid by US\$747 million while France, Germany, and Japan increased their education aid by US\$597 million.

The increase in total aid to education was largely driven by imputations from aid devoted to direct overall budget support to countries to help manage the impacts of the pandemic. The imputations derived from direct aid transfers to support the overall government budget as a percentage of total aid to education increased from a 10-year average of 9 percent to 19 percent in 2020. Almost the entire increase in total aid to education came from the European Union (US\$0.9 billion) and the IMF’s concessional trust funds (US\$1.6 billion) (Figure 4.a).

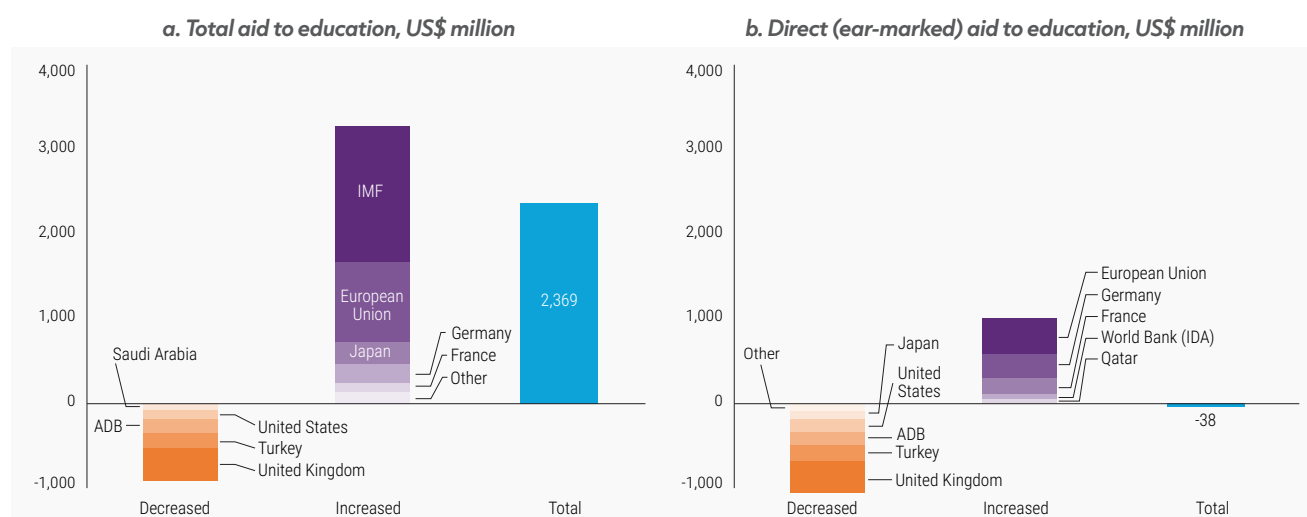
The decline in direct bilateral aid to education is worrisome considering the potential effects of several ongoing

crises, which may have longer-term impacts on aid to education. The COVID-19 crisis and its aftermath, the war in Ukraine, and shifts in some governments’ priorities have led to three major donors in education announcing severe cuts to their overall aid budget, also negatively impacting aid to education. Following the announcement in November 2020 that it would reduce its ODA target from 0.7 percent to 0.5 percent of GNI, the United Kingdom DA fell by GBP 4.5 billion in 2021 (ICAI 2021). Norway reduced its support to education by US\$19 million in 2020 and postponed its payments to the Global Partnership for Education until 2021 (Donor Tracker 2022). Germany has signaled a repurposing of their aid budgets to finance spending derived from the influx of refugees from Ukraine, reducing ODA spent abroad by 12 percent (DW 2022). Sweden announced a 20 percent cut in its aid budget, but an amendment was recently rejected by Parliament (United Nations 2022; Riksdagen 2022). Canada and France look set to maintain aid as a priority, with France committed to hit the target of allocating 0.7 percent of GNI to ODA by 2025 (Devex 2021; Donor Tracker 2022). The United States, the largest donor to education, increased total ODA by 14 percent in 2021; much of which was emergency funding for COVID-19 vaccines (OECD 2021).

Education aid lost ground to other sectors in 2020. It is estimated that OECD DAC countries spent 7 percent of total aid, or US\$12 billion, on interventions related to

Figure 4. Increases in aid to education in 2020 were mainly driven by direct budget support

Changes in aid to education, 2019–2020



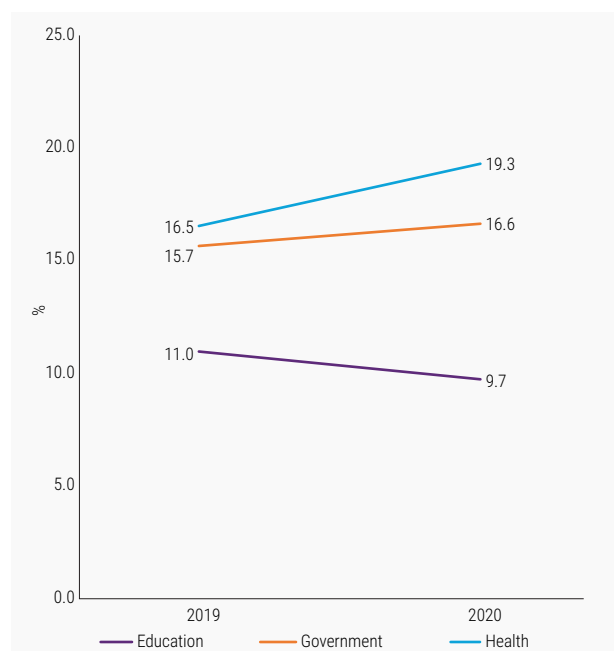
Note: Total aid to education includes direct aid to education plus an imputation of 20 percent of aid devoted to general budget support (aid provided to governments without being earmarked for specific projects or sectors). Direct aid to education is specifically earmarked to fund education spending. Source: Own estimates based on OECD CRS database.

COVID-19 in 2020. The share of the health sector in total ODA increased, as expected, from 16.5 percent in 2019 to 19.3 percent in 2020. The share of government and civil society support¹² in total ODA rose to 16.6 percent, whereas the share of education fell from 11.0 percent to 9.7 percent, the lowest in five years (Figure 5).

It should be noted that while overall external aid increased in response to COVID-19, most donor countries remain below international aid benchmarks. Total ODA increased in 2020 and further in 2021, reaching US\$179 billion, up by 4.4 percent in real terms relative to 2020 according to preliminary OECD data. However, in 2021, only five of the 30 OECD Development Assistance Committee (DAC) countries (Denmark, Germany, Luxembourg, Norway, and Sweden) achieved the international target of allocating 0.7 percent of gross national income (GNI) to ODA. Germany began meeting this target in 2019. Conversely, the United Kingdom decreased its aid from 0.7 percent in 2019 to 0.5 percent in 2020. The level of ODA as a share of DAC members' GNI increased slightly, from 0.30 percent in 2019 to 0.33 percent in 2020 and 2021, although this maintains the long-term stagnant trend since 2005. Of non-DAC members, the United Arab Emirates spent nearly 1 percent of GNI on ODA.

Figure 5: Education was not prioritized in total aid flows in 2020

Education, government and civil society, and health, population policies/programs and reproductive health as a share of total sector allocable aid, 2019–2020



Source: Own estimates based on the OECD CRS database (2022).

12 “Government and civil society” include public sector policy and administrative management; public finance management; decentralization and support to subnational government; procurement; domestic resource mobilization; law and justice; democratic participation and civil society etc.

2

Education spending - Longer term trends and patterns



This section puts the observed trends in education spending during the onset of COVID-19 in a longer term perspective, and also analyzes changes in the patterns of the sources of spending.

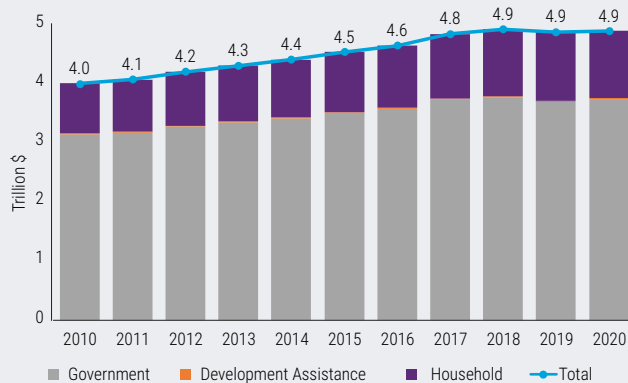
2.1. How has total education spending changed over the last ten years?

Total global education spending over the last 10 years before COVID-19 increased steadily, from US\$4 trillion in 2010 to US\$4.9 trillion in 2018, and then stagnated with the onset of the pandemic. Figure 6.a depicts the evolution

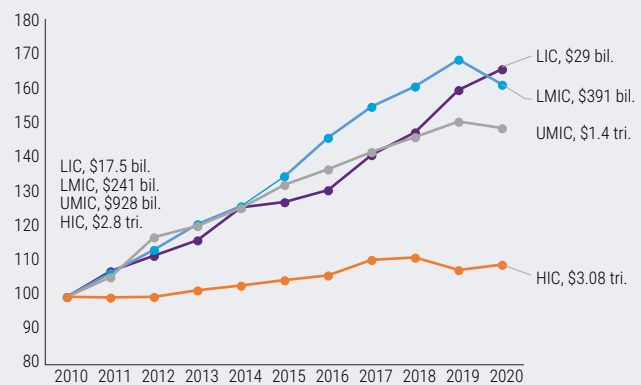
of total real spending in education, considering spending by governments (net of ODA), international education aid, and expenditures made by households. All country income groups increased total real spending on education over the period up to the onset of COVID-19. The relative increase was greater in low- and middle-income countries than in high-income countries.¹³ Only low-income countries continued to increase total real education spending in 2020, reaching a level that was 65 percent higher in 2020 than in 2010 (Figure 6.b). Meanwhile, the dip in total education spending in 2020 was largest among middle-income countries, falling from its peak of US\$1.81 trillion in 2019 to US\$1.78 trillion in 2020.

Figure 6: Total real spending on education has remained constant in 2020

a. Government, household, and official development assistance spending on education, constant 2020 US\$, trillion, 2010 – 2020



b. Evolution of total real education spending (all sources), by country income group 2010 - 2020 (2010 = 100)



Note: Income grouping follows the 2020 World Bank country income classification. Interpolation was done to fill missing data and ensure comparable sample of countries in all periods.

Source: Own estimates using EFW 2022 database¹⁴.

13 High-income countries account for more than 60 percent of global education expenditures.

14 To avoid double-counting, government expenditure nets out actual ODA received by countries. The EFW 2022 estimates are different from EFW 2021 estimates for three reasons: (1) The difference in the methodology in estimating the imputed values for government and household spending; (2) availability of more country data, supplemented by the data mapping exercise conducted by UIS, as well as the World Bank BOOST database; and (3) the downward adjustments in GDP estimates from last year's data, especially for upper-middle- and high-income countries. Accordingly, the estimate was updated, for instance, from US\$4.7 trillion to US\$4.9 trillion for 2018 and 2019.

Governments' own resource mobilization remains the main funding source for education, although households account for a sizable share of total spending in low and lower-middle income countries. More than three quarters (76 percent) of global education spending stems from government spending net of ODA contributions to education. Globally, households contributed a little less than one-quarter of global education spending in 2020, but in low-income countries that share was 35 percent. In comparison, households in high-income countries contributed 16 percent of total education spending. The continued increase in total education spending in low-income countries was sustained by external aid to education, which increased by 15 percent from 2019 to 2020 (Figure 7).

2.2. How has government education spending changed over the last five to ten years?

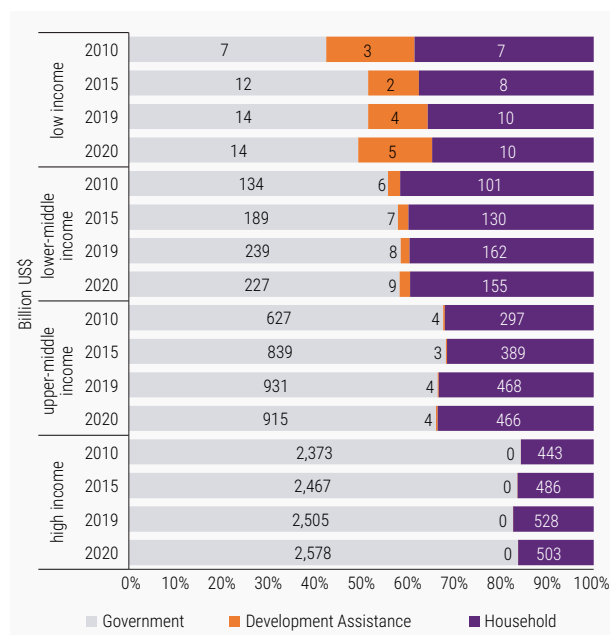
Government education spending, as a percentage of GDP, has remained largely unchanged in all country income groups since 2010 – except for low-income countries. Across the 10-year period, the share of government education spending in GDP has fluctuated marginally between 4.7 percent and 4.9 percent for middle- and high-income countries, and in 2020 is on par with its level in 2010 (Figure 8.a). Meanwhile, the share of government education spending in GDP increased steadily in low-income countries since 2016, reaching an average of 3.6 percent in 2020, still below international benchmarks.

The COVID-19 pandemic reversed a gradual upward trend in per capita public spending on education in low- and lower-middle-income countries. Per capita government spending grew on average between 2010 and 2019 by 2.7 percent in low-income countries, 2.3 percent in lower-middle-income countries, 2.9 percent in upper-middle-income countries, and by 1.1 percent in high-income countries. In 2020, per capita public spending grew by just 1 percent in low-income countries and fell by 4 percent in lower-middle countries and by 6 percent in upper-middle-income countries. It should be noted that over 75 percent of the world's school-age population reside in middle-income countries.

There remain huge disparities in the levels of per capita public spending across countries (Figure 8.b). In 2020, on average, per capita education spending in low-income countries was only 17 percent (US\$52) of the spending in lower-middle-income countries (US\$318) and 5 percent

Figure 7: Governments account for less than half of total education spending in low-income countries

Distribution of total education spending by source, year, and country income group, percentage and billions US\$



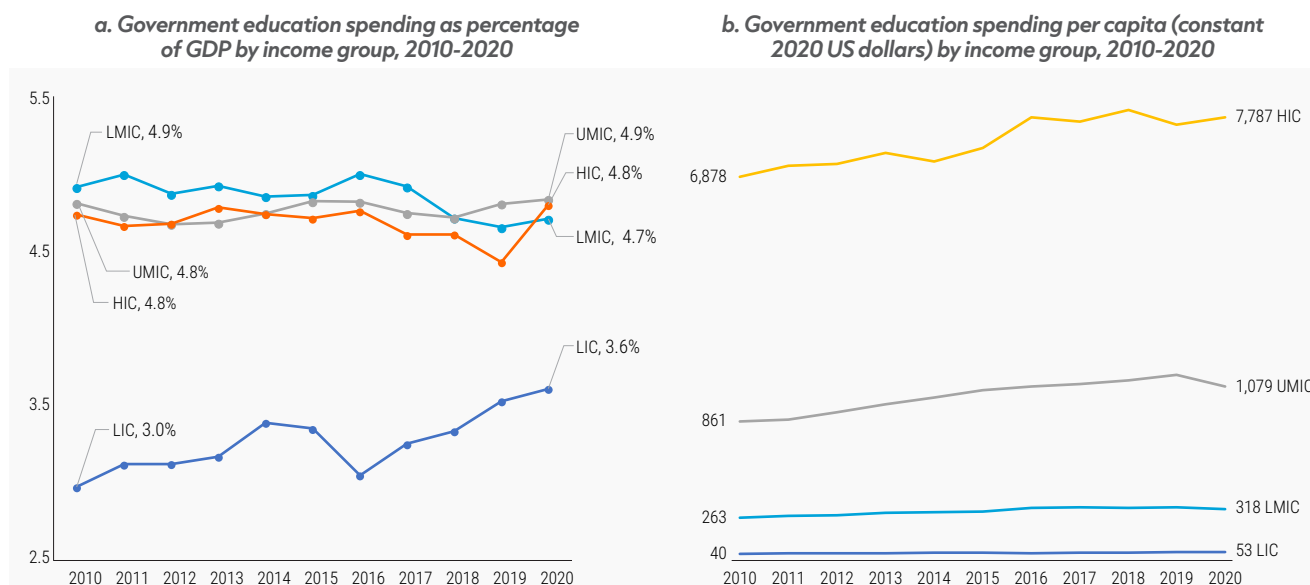
Note: Interpolation was done to fill missing data and ensure comparable sample of countries in all periods.

Source: Own estimates using EFW 2022 database.

of per capita spending in upper-middle-income countries (US\$1,079). Government per capita spending was on average nearly 150 times higher in high-income countries (US\$7,787) than in low-income countries. In 2019-2020, average government per capita spending in sub-Saharan Africa (US\$254) and South Asia (US\$358) was less than one-tenth that of Europe and Central Asia (US\$6,156) and less than 5 percent of North America's (US\$11,956). Even within country income groups, per capita education spending varies significantly, from US\$17 in the Central African Republic to US\$119 in Tajikistan, and in lower-middle income countries from US\$75 in Pakistan to US\$1,247 in Moldova.

Zooming into the more recent evolution of public education spending across regions reveals distinctive patterns in the levels and prioritization of education spending with the onset of the pandemic (Figure 9). Despite its dip with the onset of the pandemic, average per capita government spending on education remained higher in 2019-2020 in all regions except in Latin America and the Caribbean. Average per capita government education spending fell on average by 3 percent in Latin America and the Caribbean, with

Figure 8: In low-income countries, public spending has grown as a share of GDP but remains very low in per capita terms



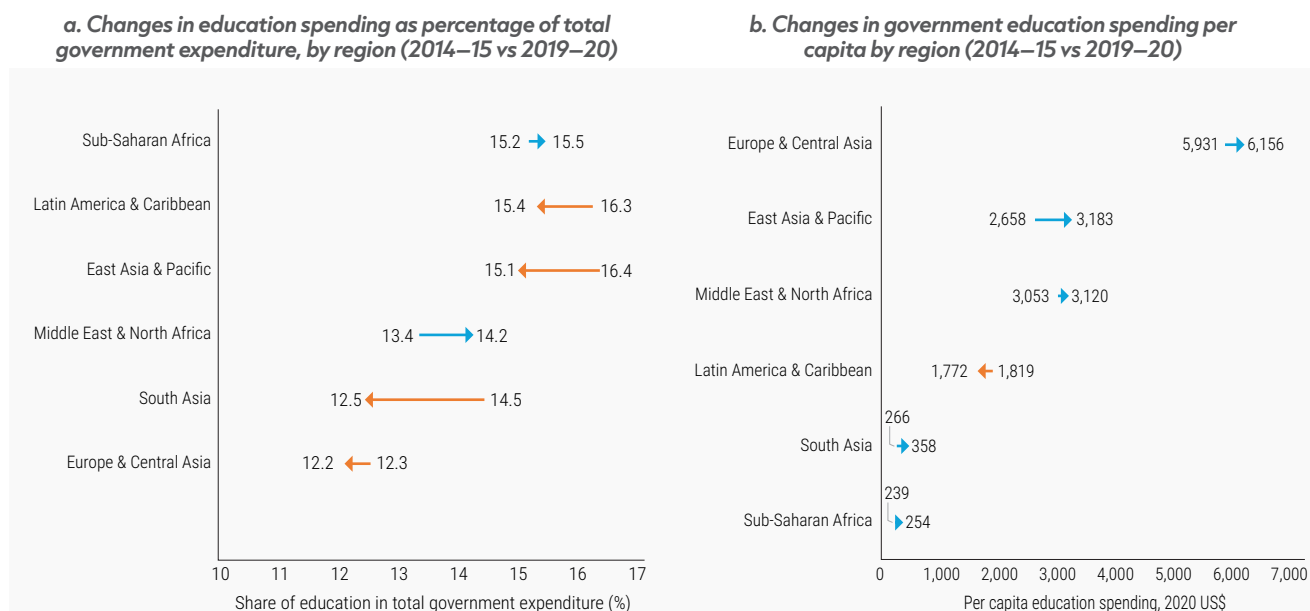
Note: Estimates on spending as percentage of GDP include interpolated values. Interpolation was done to fill missing data and ensure comparable sample of countries in all periods.

Source: Own estimates using EFW database.

Note: To calculate, total public education spending is divided by total pre-primary to tertiary school-age population. Estimates (interpolated values) are used for missing country level data.

Source: Own estimates using EFW database.

Figure 9: Government education spending by regions, 2014-15 vs 2019-20



Note: Estimates are used in place of missing country-level data. Composition of countries is the same in the two time periods (2014-2015 and 2019-2020). The blue arrows show a rise, while the orange arrows show a fall.

Source: Own estimates using EFW 2022 database.

Note: Estimates are used in place of missing country-level data. Composition of countries is the same in the two time periods (2014-2015 and 2019-2020). Per-capita figures use total pre-primary to tertiary school-age population. The blue arrows show a rise, while the orange arrows show a fall.

Source: Own estimate using EFW 2022 database.

significant variation across countries.¹⁵ East Asia and the Pacific registered the largest absolute increase in the level of per capita government spending on education (US\$525) from 2014–2015 to 2019–2020. This increase is driven by high-income countries in the region, with half of lower-middle-income countries and 60 percent of upper-middle-income countries registered a reduction in their per capita education spending in this period. In relative terms, South Asia showed the largest regional increase in per capita government spending by 34 percent between 2014–2015 and 2019–2020.

Meanwhile, the share of education spending in total government expenditure fell in most regions with the onset of the pandemic. The exceptions were sub-Saharan Africa and the Middle East and North Africa, where this share remained marginally higher (by 0.2 and 0.8 percentage points, respectively) in 2019–2020 relative to 2014–2015. The prioritization of education in total government spending as well varies significantly within regions. In sub-Saharan Africa and East Asia and the Pacific, the share of education spending in total government spending ranges from 4.3 percent in Somalia to 34.6 percent in Sierra Leone and from 5.3 percent in Vanuatu to 31 percent in the Solomon Islands (See Appendix A).

2.3. How has earmarked aid to education changed over the last ten years?

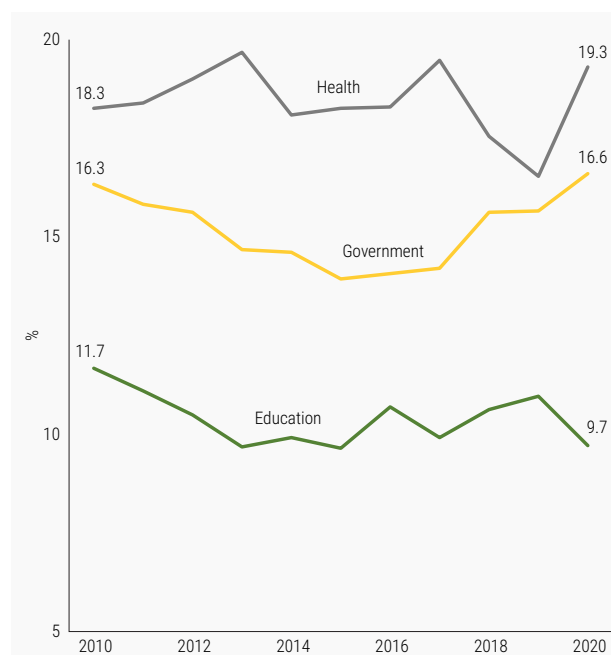
The share of earmarked aid to education has declined over the past 10 years. The share of education in total aid (not including aid devoted to overall budget support) fell from 11.7 percent in 2010 to 9.7 percent in 2020. This is in contrast to aid to health and other government and civil society spending¹⁶, which have increased their share. Aid to education is approximately half of aid allocated to these two sectors. While the health sector ODA increased its share in total aid significantly in 2020, as a natural response to COVID-19, education's share dipped (Figure 10).

The share of aid allocated to each level of education has remained relatively stable over the past 10 years. Aid to basic and post-secondary education account for around 40 percent of total aid to education each, and secondary education for 20 percent (Figure 11).

As a result, the effective level of aid going to basic education remains very low. Taking a 3-year average between

Figure 10: The share of earmarked aid to education has declined over the last 10 years

Education, government and civil society, and health, population policies/programs and reproductive health as a share of total sector allocable aid, 2010–2020



Note: Calculated using sector specific allocation only. It does not include imputed aid amount from general budget support to ensure comparability across three sectors presented in the figure.

Source: Own estimates based on the OECD CRS database (2022).

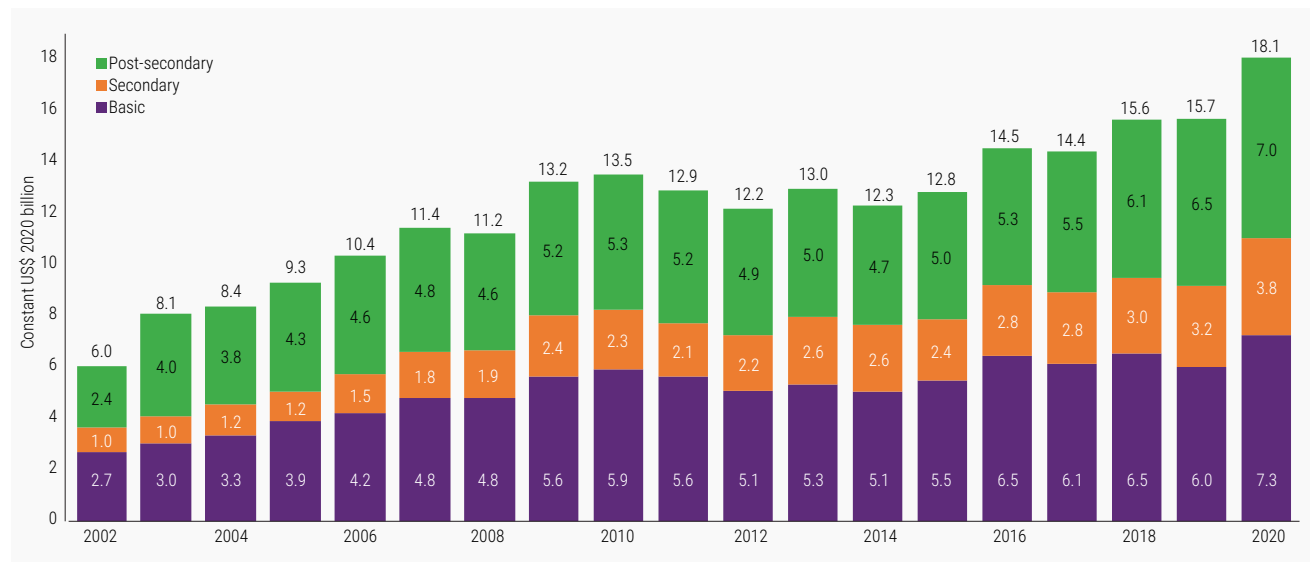
2018 and 2020, low-income countries received US\$1.6 billion per year in aid to basic education while lower-middle income countries received US\$2.6 billion per year. In effect, this amounted to US\$16 per primary school-age child in low-income countries, and US\$7 in lower-middle income countries.

2.4. How important is household education spending across income groups?

The importance of household spending on education is underappreciated. Out-of-pocket spending on education is largely a result of low government spending, which forces parents to pay for items that otherwise would be available free of cost, but also varies with household wealth, ambition, or peer pressure to ensure that their children have access to education of the highest possible quality. The

¹⁵ Country figures are presented in Appendixes A and B.

¹⁶ “Government and civil society” include public sector policy and administrative management; public finance management; decentralization and support to subnational government; procurement; domestic resource mobilization; law and justice; democratic participation and civil society etc.

Figure 11: The share of aid by level of education has remained relatively stable over the past 10 years*Aid to education, by level, 2002-2020*

Source: Own estimates based on the OECD CRS database (2022).

level of household spending on education may be related not only to the level and equity of government spending, but also to the overall redistributive effect of taxation. The higher the share of households in total education spending, the larger the risk of inequality in learning.

A considerable portion of household income in low- and middle-income countries is devoted to spending on education. Analysis of reports from approximately 100 low- and middle-income countries between 2009 and 2020 found that, on average, households allocated 3.2 percent of their total expenditure to education. Evidence suggests that this share remains relatively stable over time. For instance, the share of total household spending on education was 3.8 percent in 2007 and 4.1 percent in 2017 in Peru, 2 percent in 2010 and 2.3 percent in 2016 in Turkey, and 6.3 percent in 2002 and 6.1 percent in 2018 in Vietnam. However, there are a few cases where the share has been rising, such as in some sub-Saharan African countries. In Uganda, the share increased from 5 percent in 2012 to 7.8 percent in 2016. In Ghana, three successive rounds of the Living Standards Survey show that the share of education spending was not only the world's largest, but also had increased from 8.9 percent in 2006 to 10.6 percent in 2013 and 13.1 percent in 2017 (Ghana Statistical Service 2008; 2016; 2019).

The share of education in total household spending varies across countries. It ranges from less than 1 percent in some southeastern European countries,

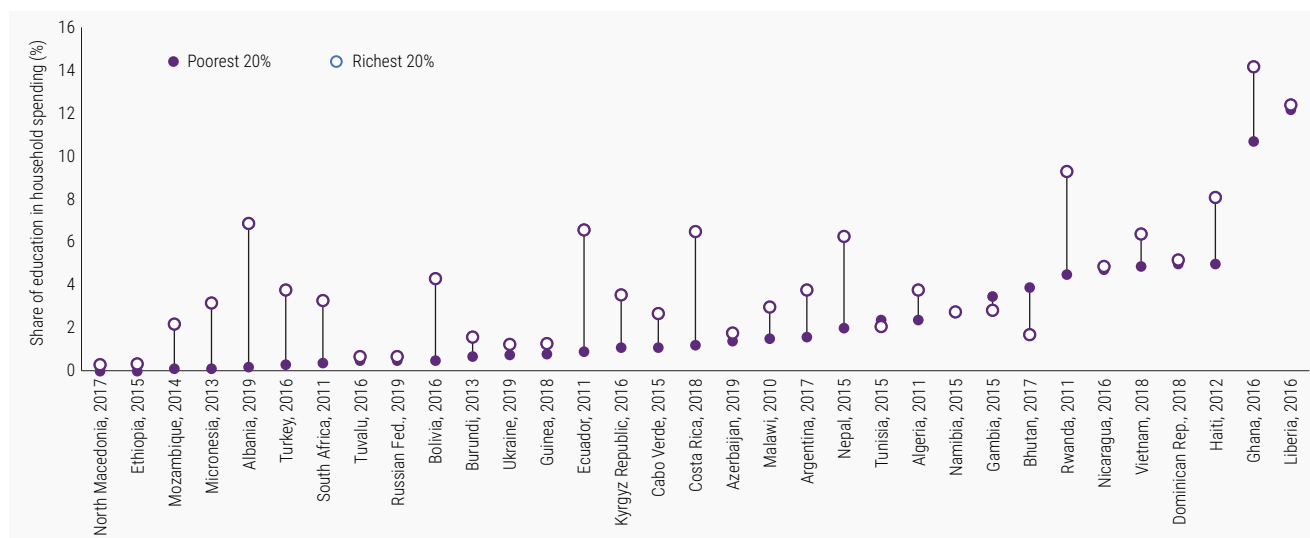
including Bosnia and Herzegovina, North Macedonia, and Romania, and in several sub-Saharan African countries, including Burundi, Ethiopia, and Lesotho, to more than 6 percent in countries with a high percentage of private schools, such as Haiti and Lebanon, and in other sub-Saharan African countries, including Rwanda, Uganda, and Zambia.

Richer households tend to spend a higher proportion of their income to education. Poorer households are more likely to spend more of their income on food and other necessities and are less likely to be able to afford to pay for education services. In 30 of 33 countries with data, households from the richest quintile spent a higher share of their total consumption on education than those from the poorest quintile. The average shares were 2.4 percent for the poorest households and 4.2 percent for the richest (Figure 12).

Households account for a major share of total education spending in many countries. Household education expenditures as a share of GDP can be estimated by multiplying the share of education in household consumption expenditure with household consumption expenditure as a share of GDP, as published in the World Development Indicators. The latter varies by country because of considerable differences in economic, social, and political conditions. Globally, household consumption as a share of GDP was 59 percent in 2020, ranging from less than 40 percent in rich oil-producing countries, including

Figure 12: Richer households spent a larger share of their budget on education than poorer households

Share of education in total household spending, by income quintile, 2010s

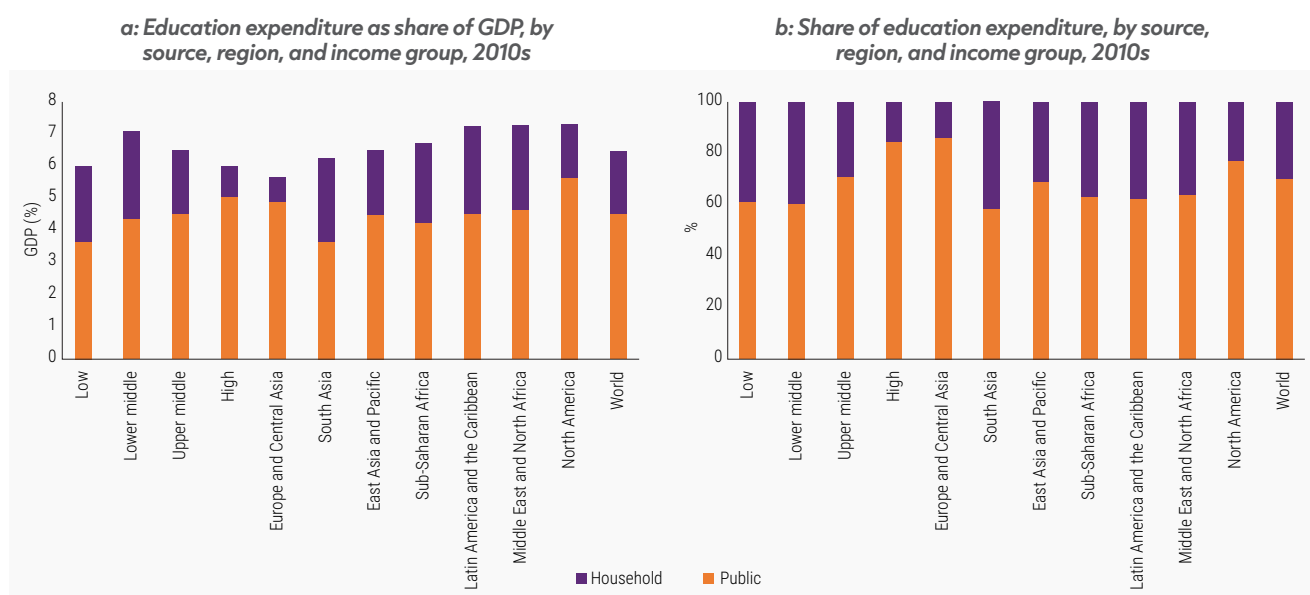


Source: Own estimates based on national household budget survey reports.

Oman, Saudi Arabia, and the United Arab Emirates, to close to or even exceeding 100 percent in low-income countries that rely on remittances, such as Haiti, Liberia, and Somalia (World Bank 2021). This indirect estimate of household education expenditure as a share of GDP can be complemented with direct estimates provided by

the UIS and OECD, generating a data set of almost 140 countries. On average, households spend 1.9 percent of GDP on education. Given that governments in this sample of countries spend on average 4.5 percent of GDP on education (Figure 13.a), households account for 30 percent of total education spending.¹⁷ The share ranges

Figure 13: Households account for almost 40 percent of total education spending in low- and lower-middle-income countries

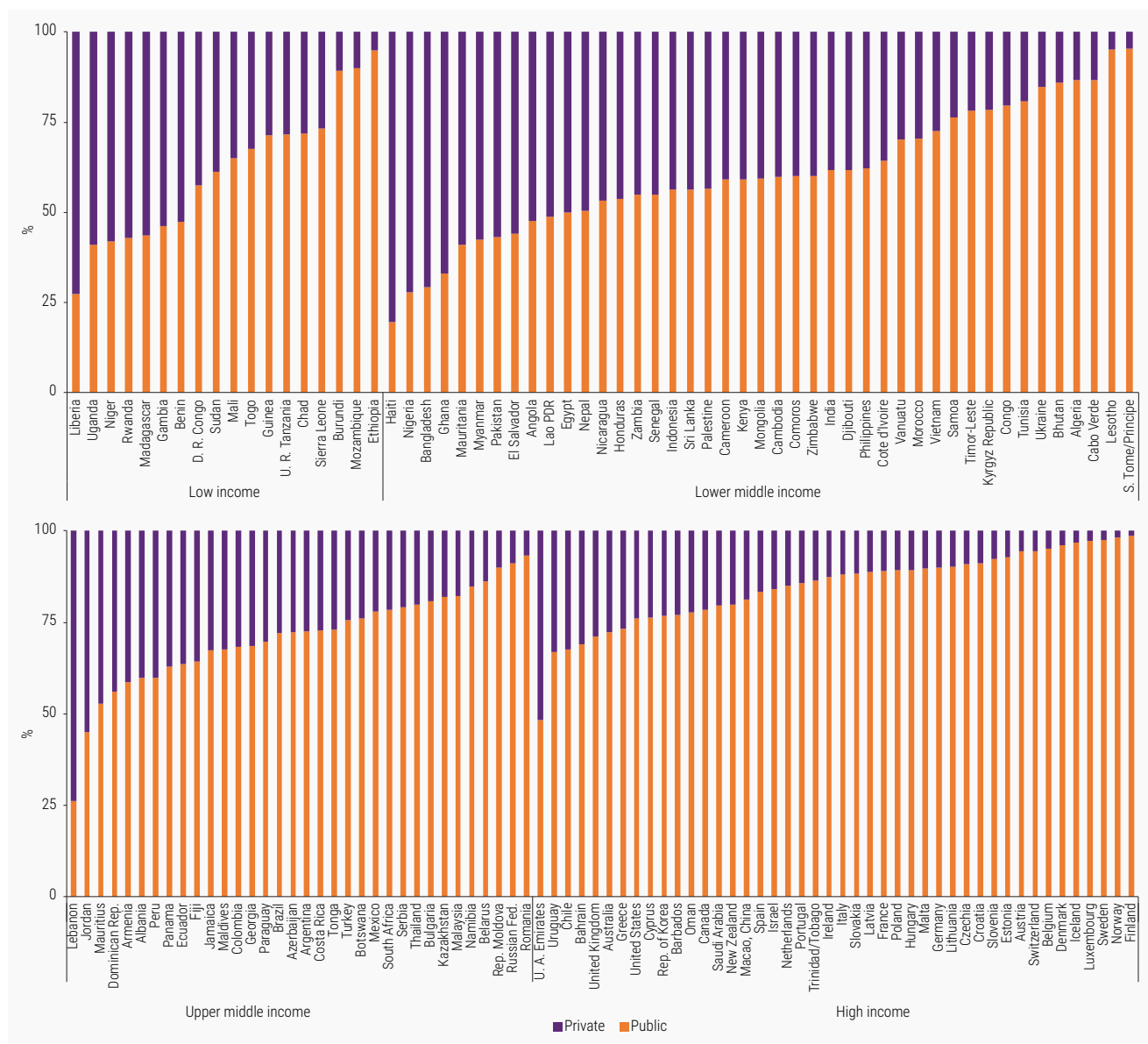


Source: Own estimates based on national household budget survey reports and UIS and OECD data.

17 This is an unweighted average and covers only the countries with available information.

Figure 14: There is large variation in the share of households in total education spending among countries

Share of education expenditure, by source and income group, 2010s



Source: Own estimates based on national household budget survey reports and UIS and OECD data.

from 15 percent in high-income to 39 percent in low- and lower-middle-income countries and from 14 percent in Europe and Central Asia to 42 percent in South Asia, with North America (23 percent), East Asia and the Pacific (31 percent), the Middle East and North Africa (36 percent), sub-Saharan Africa (37 percent), and Latin America and the Caribbean (38 percent) falling in between (Figure 13.b).

There is significant variation between countries in the share of household education spending in total education

spending. For instance, in 39 percent of low-income and 26 percent of lower-middle-income countries but just 6 percent of upper-middle-income and 2 percent of high-income countries, households account for more than half of total education spending. There is also significant variation within each income group. For instance, among low-income countries, households account for 5 percent of total education spending in Ethiopia and 10 percent in Mozambique but 59 percent in Uganda and 73 percent in Liberia. Among lower-middle-income countries, the shares are 5 percent in Lesotho and Sao Tome

and Principe but 71 percent in Bangladesh and 72 percent in Nigeria. Among upper-middle-income countries, households account for 7 percent of total education spending in Romania and 9 percent in the Russian Federation, 55 percent in Jordan, and 74 percent in Lebanon (Figure 14).

Overall, most spending comes from households whose children attend private schools. In countries in South Asia such as India and Pakistan and in countries in Latin America and the Caribbean such as Colombia and El Salvador, most spending on primary and secondary education in absolute terms comes from families whose children attend private schools – and goes mainly to pay for fees. But there are some cases in sub-Saharan Africa where household spending takes places in families whose

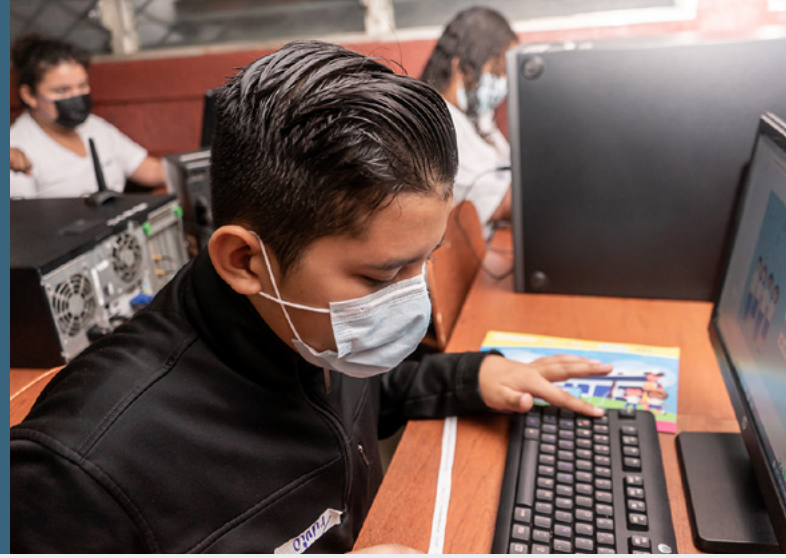
children attend public schools, including Ghana, Kenya, and Zambia.

High education spending levels mean that households must save and borrow for education. About one in six families in low- and middle-income countries saves to pay school fees. Analysis of the 2014 Global Findex Database has found that about 8 percent of households also borrow, with shares ranging from 6 percent in high-income countries to 12 percent in low-income countries. Similar proportions of the poorest 40 percent and richest 60 percent of households borrow to pay fees in low- and lower-middle-income countries, although slightly more of the richest manage to save. In Haiti, Kenya, the Philippines, and Uganda, 30 percent or more of households borrow for school fees (UNESCO 2021).



3

Data Spotlight: Monitoring education spending



The availability of education finance data has improved. When the first EFW was published in 2021, data on the 2019 share of education in total government spending was available for just 16 percent of countries. A year later, this indicator is reported in the UIS database for 64 percent of countries (with data for an additional 9 percent of countries available from other sources).

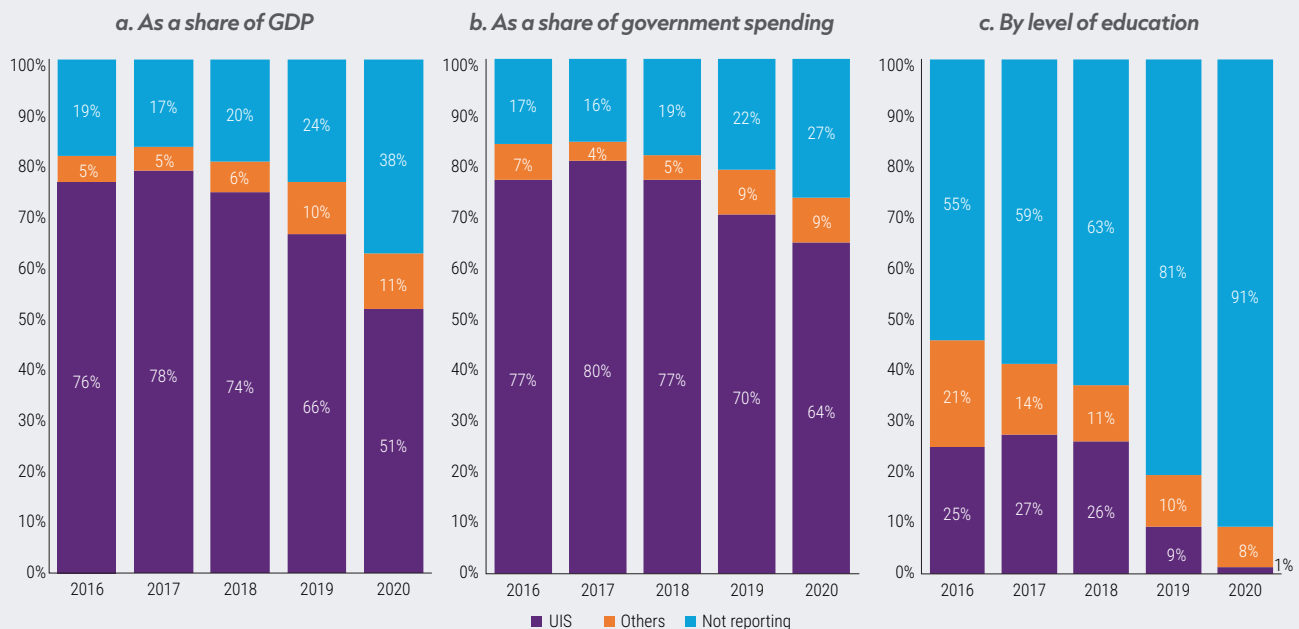
Nevertheless, significant gaps in education spending data remain. As of April 2022, nearly 20 percent of countries had not reported 2016 data on education spending as a share of GDP, and more than one-third had not reported 2020 data (Figure 15.a). Very few countries have made

available data on public education spending for 2021. Data availability is better for the indicator on education spending as a share of total government spending, but more than one-fourth of countries have not reported 2020 data (Figure 15.b). Most countries do not report data by level of education, and national reporting practices vary. Only 1 percent of countries and territories (3/218 countries and territories) reported education spending by level of education in 2020 (Figure 15.c).

The sources for education spending data are expanding. The EFW 2022 benefitted from additional sources of data not included in the EFW 2021. Historically, the

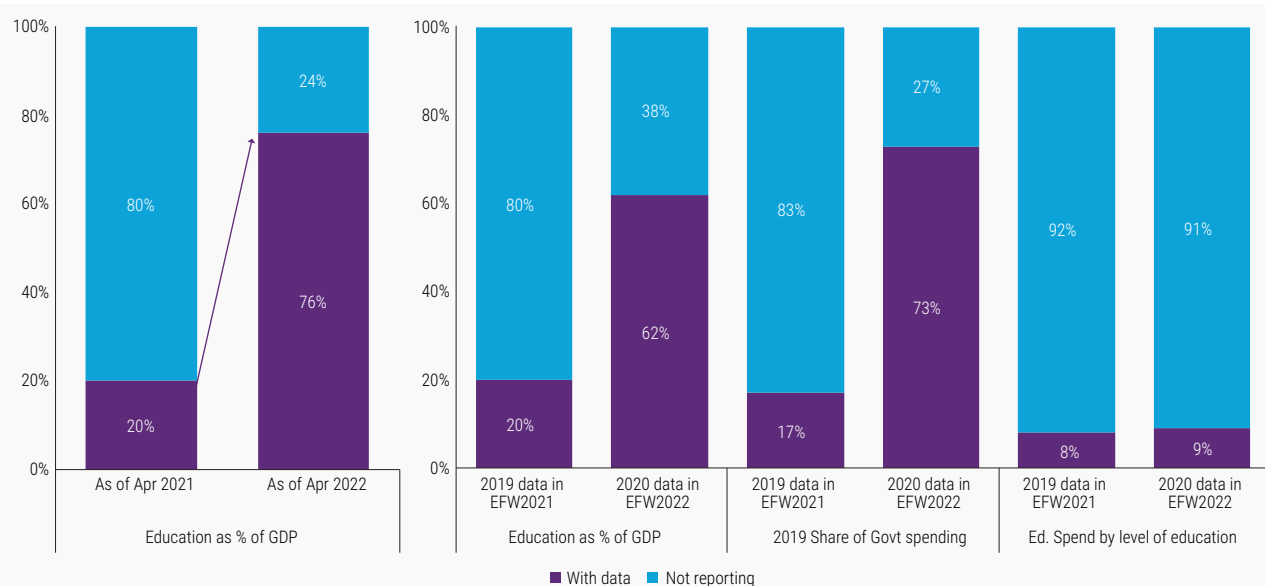
Figure 15: Despite improved overall data availability, the gap in disaggregated data is still severe

Percentage of countries reporting on public expenditure indicators, by year



Note: The 'Others' data represent all other data points not included in the UIS dataset but nonetheless reported in other data sources (WB BOOST, WB WDI, WB PER, and IMF GFS).

Source: Own estimates using EFW database.

Figure 16: Data availability improved significantly*a. 2019 data in EFW 2021 vs EFW 2022**b. 2019 data in EFW 2021 vs 2020 data in EFW 2022*

Source: Own estimates using EFW 2021 and EFW 2022 database.

UIS has reported on total government spending on education (as a percentage of GDP or of total government spending) from Questionnaire B of the Education Formal Survey and the UNESCO OECD Eurostat finance questionnaire. In 2021, the UIS expanded the inclusion of alternative official sources to report. Data from international institutions, such as the World Bank's BOOST initiative and Public Expenditure Reviews and the IMF's Government Finance Statistics, as well as national budget and expenditure estimates published in government economic reports have been integrated in the database following a process of standardization to establish comparability. Integrating various data sources has helped develop more complete and up-to-date series, both for recent and earlier years.¹⁸ By contrast, data for the EFW 2021 (as of April 2021) had included data that UIS collected using its own survey only. As such, with respect to 2019 data, coverage increased from 20 percent to 76 percent for data on the share of education expenditure in GDP (Figure 16.a). The improvement in reporting of recent-year data (2019 data in the EFW 2021, 2020 data in the EFW 2022) is pronounced for education spending as both a percentage of GDP and a percentage of total government spending.

However, disaggregated data by level remains a challenge with just 9 percent of countries reporting in 2020 (Figure 16.b).

The EFW 2022 has adopted a different methodology of imputing missing values than the EFW 2021. The updated methodology, applied in Section 1, did not use statistical modeling to impute missing values. Instead, the EFW 2022 used available information from various sources, in particular trends and growth rates, to interpolate or extrapolate missing information. Specifically, the data that the UIS shared—which is already a combination of various data sources—served as the base or primary series, and where missing, interpolation or extrapolation was done using information from IMF or BOOST, whichever was closer in terms of average values. With the new methodology, the number of countries covered in the analysis has increased by 21 percent over the previous methodology, making the analysis more robust.¹⁹ An accompanying technical note to this report provides a detailed presentation of the methodology, as well as a comparison between the old and the new database.

18 Global efforts on strengthening the monitoring mechanism have continued. As part of the Technical Cooperation Group on Sustainable Development Goal 4 Indicators, the Finance Working Group conducted a mapping exercise regarding education expenditure indicators, which resulted in the higher reporting rates.

19 The comparison was made using the period of 2009 to 2019, which was the period covered in the EFW 2021.

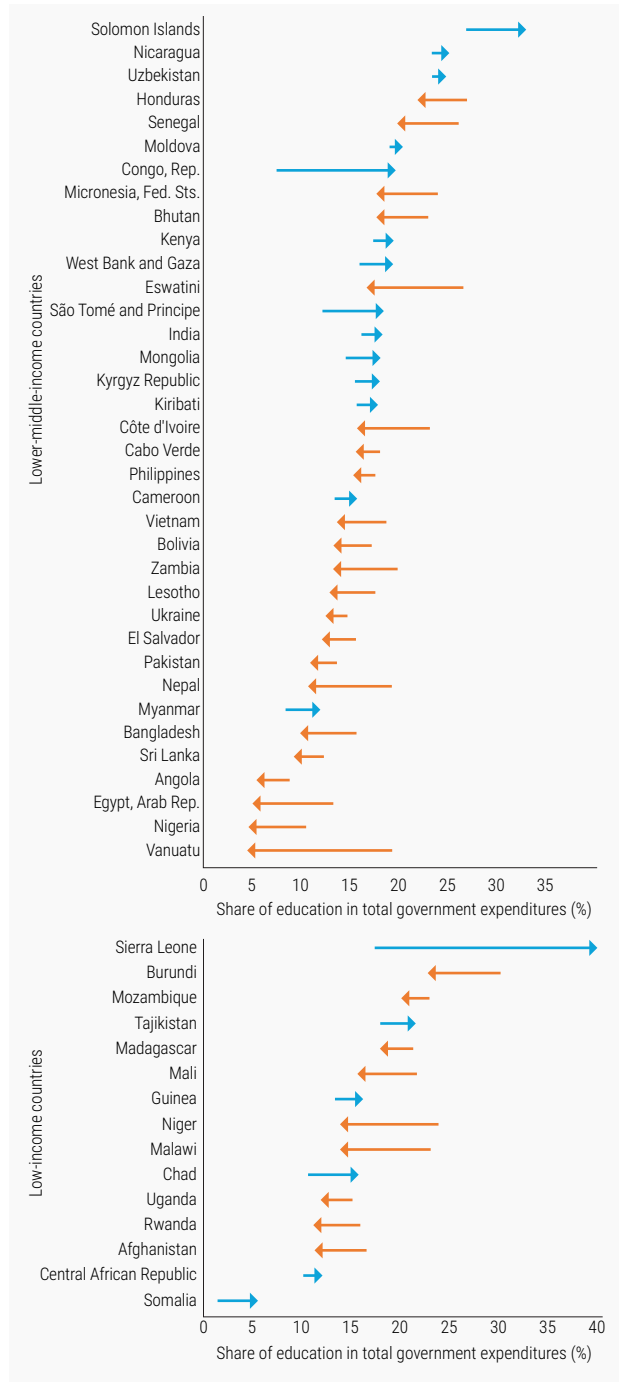
Household income and expenditure surveys are underused as sources of household education spending. Almost every country in the world conducts household surveys, but their potential for analyzing education expenditure has not been used, and these datasets vary in terms of accessibility and quality. There can be considerable variations in the questions, as well as the coverage in relation to education expenditures. For instance, some countries collect aggregated education expenditures by household, whereas others collect information on individual members. The list of items included, how they are grouped, and recall periods also differ (Oseni et al. 2020). Significant resources are required to standardize them so that comparable data on issues such as education expenditures can be extracted.

An alternative is to rely on governments' own reporting. Although household budget survey *data sets* may be difficult to access and process, household budget survey *reports* are publicly available. In most cases, these reports include a summary table of how households allocate expenditures to various purposes. Almost all countries separate out the share of education in household consumption expenditures. Despite differences in formulations, averaging over thousands of households within each country and over many countries can help cancel out some of these potential biases and errors. Nevertheless, this offers a temporary solution to a long-standing problem. A concerted effort must be made to directly analyze household budget survey micro data.



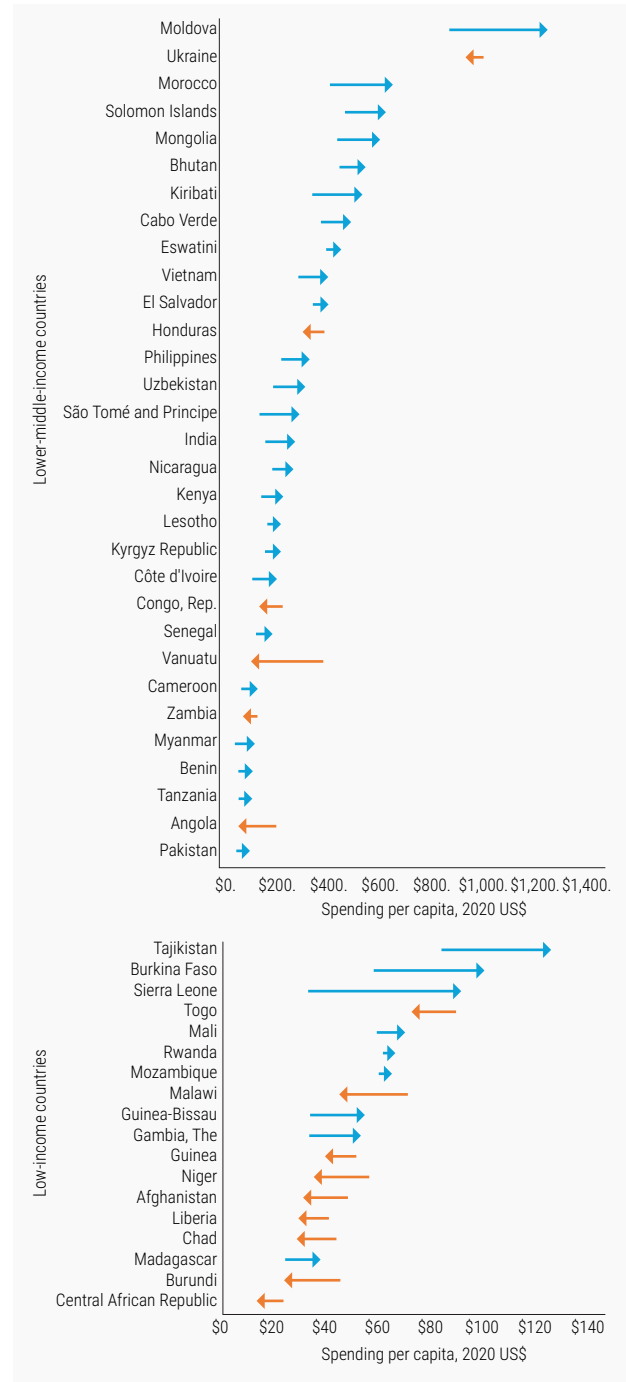
Appendixes

Appendix A. Education spending as percentage of total government expenditures, changes from 2014-2015 to 2019-2020



Source: UIS (education spending as percentage of total government expenditures), Unit: US\$ (2020=100)

Appendix B. Per capita public education spending, changes from 2014-2015 to 2019-2020



Source: UIS (education spending as percentage of GDP), and WDI and IMF (GDP data in US\$, rebased to 2020)

Appendix C. Status of selected low-income and lower-middle-income countries in achieving international benchmark targets on education spending 2020, %

Country name	Country code	Income group	% TGE	% GDP
Burundi	BDI	LIC	20.7	5.0
Central African Republic	CAF	LIC	9.8	2.2
Chad	TCD	LIC	11.7	2.9
Guinea	GIN	LIC	14.3	2.2
Madagascar	MDG	LIC	15.3	3.1
Malawi	MWI	LIC	11.5	2.9
Mali	MLI	LIC	14.5	3.8
Mozambique	MOZ	LIC	17.9	6.3
Niger	NER	LIC	13.3	3.8
Rwanda	RWA	LIC	10.8	3.3
Sierra Leone	SLE	LIC	34.2	8.8
Uganda	UGA	LIC	11.2	2.6
Angola	AGO	LMIC	6.5	2.4
Cabo Verde	CPV	LMIC	17.1	7.6
Cameroon	CMR	LMIC	14.4	3.2
Congo, Rep.	COG	LMIC	18.3	4.5
Côte d'Ivoire	CIV	LMIC	15.1	3.4
Eswatini	SWZ	LMIC	15.9	5.3
Honduras	HND	LMIC	24.3	6.4
India	IND	LMIC	16.5	4.5
Kenya	KEN	LMIC	17.9	5.1
Lesotho	LSO	LMIC	13.8	7.7
Mauritania	MRT	LMIC	9.7	1.9
Moldova	MDA	LMIC	18.0	6.4
Morocco	MAR	LMIC	14.8	6.8
Nicaragua	NIC	LMIC	22.8	4.6
Philippines	PHL	LMIC	14.2	3.9
São Tomé and Príncipe	STP	LMIC	16.1	5.0
Senegal	SEN	LMIC	22.1	5.5
Solomon Islands	SLB	LMIC	31.9	12.8
Uzbekistan	UZB	LMIC	20.5	4.9
Vanuatu	VUT	LMIC	5.1	2.2
Zambia	ZMB	LMIC	12.4	3.7

Note: Data presented here do not include interpolated values. Low- and lower-middle-income countries with information on both indicators are included in this list. %TGE: education spending as a share of total government expenditure, %GDP: education spending as a percentage of GDP, LIC: low-income country, LMIC: lower-middle-income country.

Source: UIS database, accessed March 2022.

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