

Introduction

To achieve national and international education goals, many countries will need to invest more in their education systems. During the last decade, government education spending has increased steadily, but the Covid-19 pandemic has impacted public finances dramatically, and the prospects for maintaining these increases have deteriorated. But the education finance challenge is not only about mobilizing resources but also about improving the effectiveness of funding. Unfortunately, recent increases in public education spending have been associated with relatively small improvements in education outcomes. Although access to education has improved, 53 percent of ten-year-olds in low- and middle-income countries are unable to read and understand a short age-appropriate text (World Bank 2019).¹ Tackling the large spending inefficiencies and inequalities common to many education systems will be vital in order to make better use of resources and strengthen the link between spending and education outcomes.

This Education Finance Watch (EFW) is a collaborative effort between the World Bank and UNESCO's Global Education Monitoring (GEM) Report. It draws together and summarizes the available information on patterns and trends in education financing around the world. The EFW will be published every year soon after the main annual release of public expenditure and



World Bank / Ousmane Traore (MAKAVELI)

development assistance data at the end of the year. Each EFW will follow a similar format and explore annual changes in the main sources of education funding (namely governments, households and development assistance).² Each year the EFW also aims to shine a spotlight on an important education financing issue. The spotlight for this year's EFW is on the impact of Covid-19 and provides a snapshot of how education budgets are changing in response to the pandemic.³

- 1 Projections suggest that Covid-19 related school closures are likely to increase this share to between 56 and 63 percent depending on the effectiveness of mitigation measures (World Bank 2020c).
- 2 As this is the first EFW, it takes a retrospective view of spending trends over the past decade, but future EFWs will focus on annual spending changes.
- 3 Since the Covid-19 pandemic affects all sources of education funding, the assessment of its impact is reported separately for each source.

Two-thirds of low- and lower-middle-income countries, included in the data collected for EFW, have cut their education budgets since the onset of the Covid-19 pandemic. In comparison, only a third of upper-middle and high-income countries have reduced their budgets. These budget cuts have been relatively small thus far, but there is a danger that future cuts will be larger, as the pandemic continues to take its economic toll, and fiscal positions worsen. These differing trends, imply a significant widening of the already large spending disparities seen between low- and high-income countries.

The quality and coverage of education finance data is low. As Section 3 shows, the availability of good quality data on core spending indicators is limited. This can make it difficult to track overall levels of funding and how these funds are utilized. Over the past three years, for example, fewer than a fifth of countries reported how much they spend on primary, secondary and tertiary education to UNESCO or the IMF. Real-time information on budget changes, so important in tracking and responding to crises, is not systematically available. EFW will also monitor changes in the quality and coverage of international education spending data and highlight efforts to improve systems and approaches for collecting and using spending data. The data and analysis in each EFW are publicly available, and feedback from readers is welcome, with a view to future improvements.⁴



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⁴ A technical note is also available, explaining the sources of data, how they have been combined and approaches to estimation.

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Mobilizing resources for education



GPE/Tabassy Baro

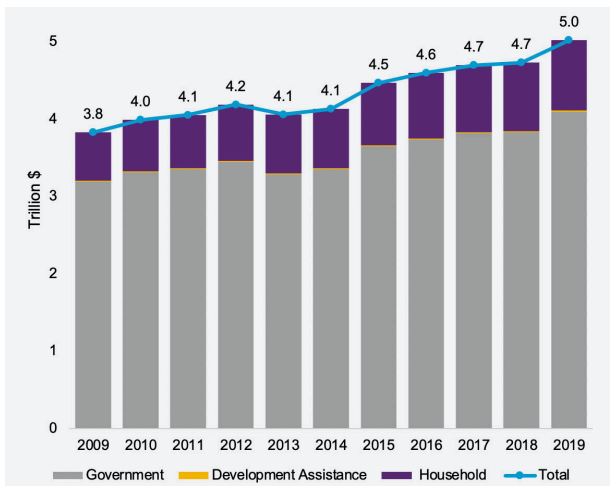
1.1. How has global education spending changed in the last ten years?

Prior to the Covid-19 pandemic, global education spending grew steadily, with low- and middle-income countries registering the fastest growth. Global education spending grew annually in real terms by 2.6 percent per year between 2009 and 2019.⁵ This rate of increase is slower than global economic growth rates and masks two diverging trends. High-income countries, which account for about two-thirds of global education spending, only

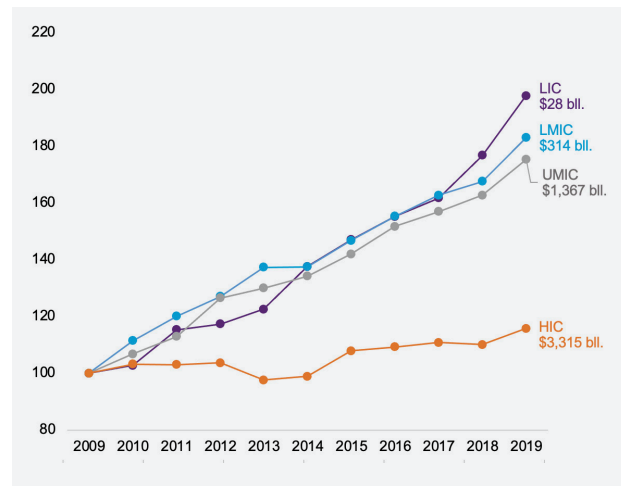
slightly increased their spending over the 10-year period (Figure 1). By contrast, rates of growth were much faster in low- and middle-income countries, where spending on education rose by 5.9 percent a year, such that by the end of the period it was more than 77 percent higher in real terms than at the start. The contribution of households, governments and development assistance to global education spending has remained relatively constant over time, with governments contributing around 82 percent, households 17 percent, and development assistance less than 1 percent.⁶

Figure 1: Real spending on education has grown steadily over the last 10 years

Government, household and official development assistance spending on education, constant 2018 US dollars (trillions), 2009–2019



Growth in real education spending, by income level (2009=100)



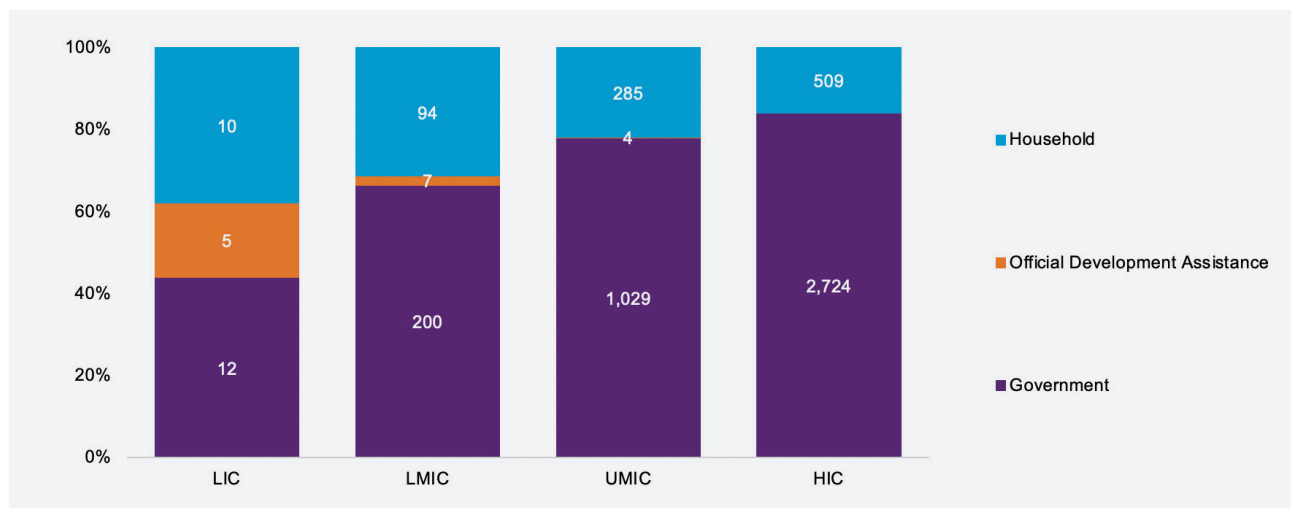
Source: EFW team estimates using data from OECD, UIS, IMF and World Bank online databases.

Notes: In order to estimate global spending, estimates are used for missing country level data (see EFW technical note). World Bank income group classifications in 2020 are used to group countries: LIC = low-income country, LMIC = lower-middle-income country, UMIC = upper-middle-income country, and HIC = high-income country.

5 Global education spending refers to expenditure on education services by governments, households and donors and follows UNESCO Institute of Statistics definitions.
6 The share of development assistance in total education spending is 18 percent in low-income countries, 2 percent in lower-middle-income countries and 0.3 percent in upper-middle-income countries.

Figure 2: Except in low-income countries, governments account for the bulk of education spending

Distribution of total education spending by source, constant 2018 US dollars (billions), 2018–2019



Source: EFW team estimates using data from OECD, UIS, IMF and World Bank online databases.

Notes: In order to estimate global spending, estimates are used for missing country level data (see EFW technical note). 60% of aid expenditure is considered reflected in public budgets (therefore subtracted from government expenditure), with the remaining 40% allocated through other channels.

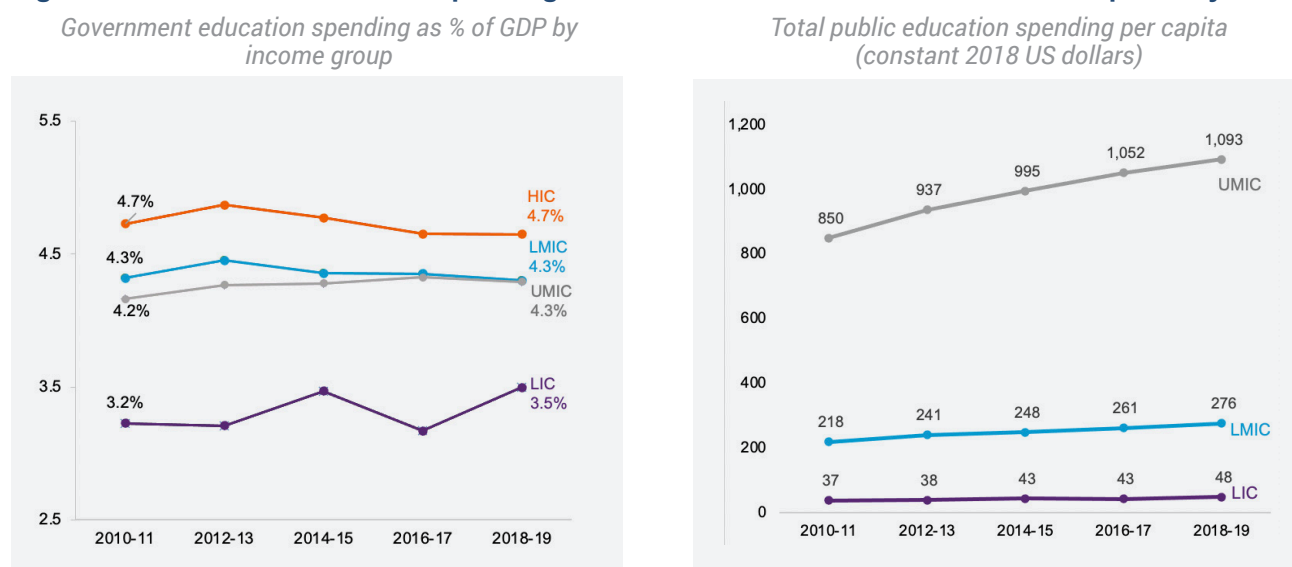
Governments, households, and development partners—in that order—are the main funders of education. Their contributions differ significantly across country income groups (Figure 2). Governments are the largest funders of education in all income groups, while the direct contribution of households to education spending tends to be greater in poorer countries. In 2018–19, for instance, households in high-income countries accounted for only 16 percent of total education spending compared to 38 percent in low-income countries. Household spending on education is several times larger than official development assistance in both low- and lower-middle-income countries. The importance of aid for education funding is also very different among income groups. In low-income countries, aid to education represents 18 percent of total education spending while in lower-middle-income countries it only accounts for 2 percent. The next section looks at how funding from governments, households and development assistance has changed over the last ten years and how the Covid-19 pandemic is affecting current and future funding for education from these three sources.

1.2. How has government education spending changed over the last ten years?

Government funding for education as a share of national income has not changed significantly over the last decade for any income grouping as a whole.⁷ For example, between 2010–11 and 2018–19 government education spending as a percentage of GDP remained at 4.3 percent in lower-middle-income countries, and increased only slightly from 3.2 to 3.5 percent of GDP in low-income countries (Figure 3). However, these income group averages mask differences in trends between individual countries. In the low-income country grouping, government spending as a share of GDP increased from 3.9 to 5.5 percent in Burkina Faso, for example, between 2014–15 and 2018–19, but declined from 5.2 to 4.4 percent in Malawi over the same period.

Current levels of government spending in low- and lower-middle-income countries fall short of the levels required to achieve the SDGs. Governments in richer countries tend to devote a greater share of national income to education than low-income countries

⁷ Given data limitations, the EFW does not report government spending by levels of education (see Figure 11). However, broad patterns show that about 40 percent of total government spending is devoted to primary education, 40 percent to secondary, and 20 percent to tertiary.

Figure 3: Government education spending as a share of GDP has remained flat in the past 10 years

Source: EFW team estimates using data from OECD, UIS, IMF and World Bank online databases.

Note: In order to estimate global spending, estimates are used for missing country level data (see EFW technical note). Per-capita figures use total pre-primary to tertiary school-age population.

(Figure 3). In 2018–19, public education spending in high-income countries was 4.7 percent, compared to 3.5 percent in low-income countries. As populations in low- and middle-income countries are much larger, the share of GDP spent on education is insufficient to achieve the improved quality of education—and access to it—envisaged by the SDGs. A study undertaken by the Global Education Monitoring Report in 2015 estimated that education spending in low- and lower-middle-income countries would need to increase from 3.5 percent to 6.3 percent of GDP between 2012 and 2030 to deliver universal pre-primary, primary and secondary education (UNESCO 2015).

Disparities in spending on education per child or young person between rich and poor countries are large and have continued to widen.⁸ Levels of spending vary enormously between countries in different income groups. For example, in 2018–19, governments in upper-middle-income countries spent 20 times more per child or young person than low-income countries and four times as much as lower-middle-income countries. The differences are even starker between low- and high-income countries. In 2018–19 low-income countries spent

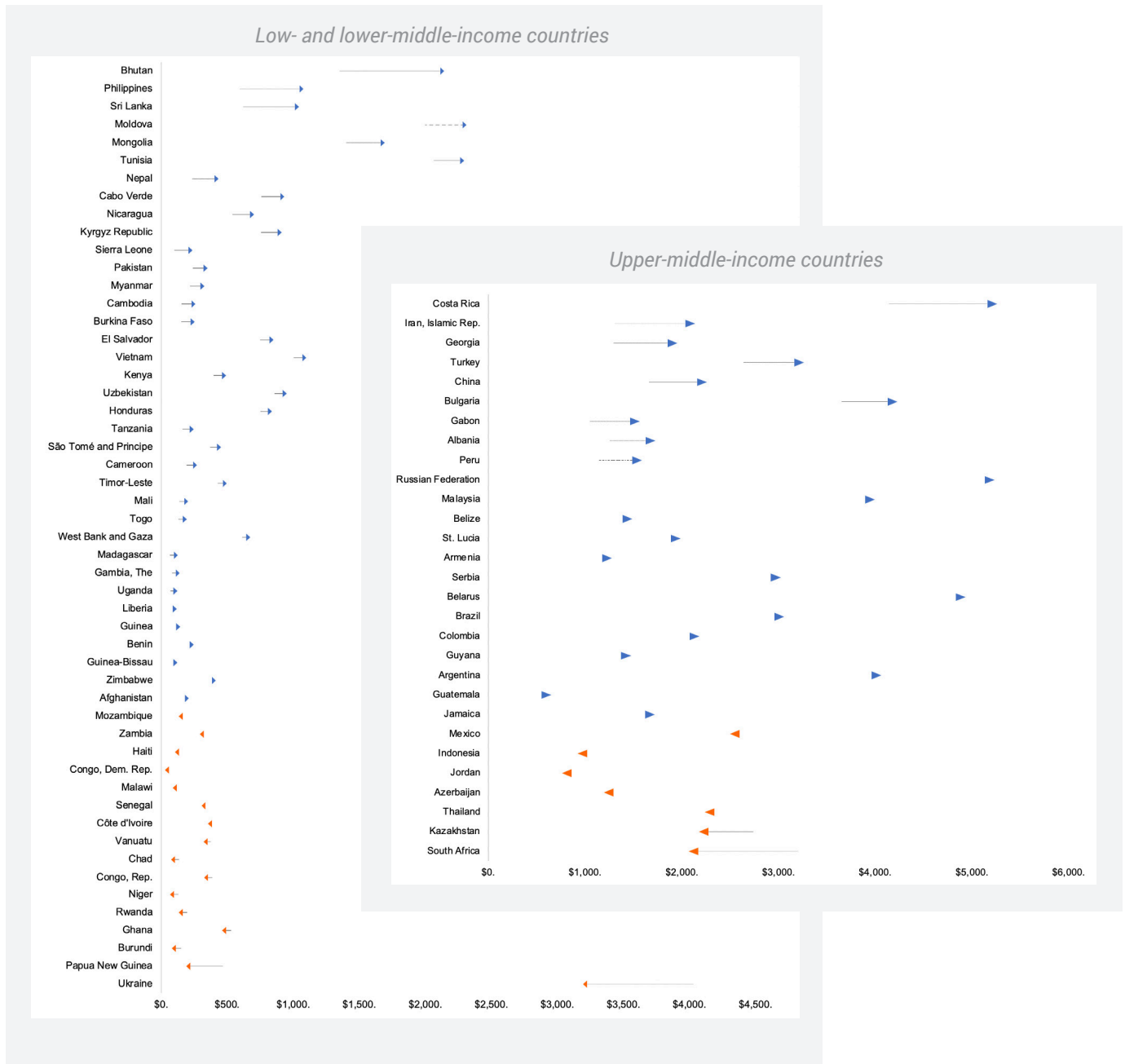
approximately US\$ 48 per school-aged child compared to US\$ 8,501 in high-income countries. Moreover, average trends in per-capita spending in low-income and lower-middle-income countries are diverging in relative and absolute terms from spending in upper-middle- and high-income countries. For example, the gap in spending per capita between low- and upper-middle-income countries increased from US\$ 813 to US\$ 1,045 in real terms between 2010–11 and 2018–19 (Figure 3). Differences in the growth of education spending per child or young person are partly the result of differences in population growth rates between low-income and high-income countries. Between 2009 and 2019, public education spending doubled in real terms in low-income countries (Figure 1) but this translated into an increase in per-capita spending of only 30 percent (from US\$ 37 in 2010–11 to US\$ 48 in 2018–19). By contrast, spending in high-income countries only increased by about 16 percent but spending per-capita increased by 13 percent (from US\$ 7,544 to US\$ 8,501).

Regional and income group averages mask large country differences in spending trends (Figure 4). In roughly 40 percent of low-income countries, spending per child or young person has fallen; in Chad, for instance,

⁸ Trends in spending are tracked on the basis of overall government education spending per child or young person (defined as the pre-primary, primary, secondary and tertiary school-age population). This helps to compare levels of funding between countries or groups of countries, accounts for differences in the size and growth of child and youth populations across countries, and also provides an assessment of the adequacy of funding for all children rather than merely those who are able to attend schools, universities and other educational institutions.

Figure 4: Regional and income group averages mask wide disparities in country spending trends

Changes in government education spending per capita (constant 2017 PPP US dollars), 2013–14 and 2017–2018



Source: UIS, IMF and World Bank online databases.

Note: 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. Countries are ordered in terms of magnitude of change. See EFW technical note for information on compilation of dataset.

this spending fell from PPP\$ 104 to PPP\$ 79 between 2013–14 and 2017–18. Meanwhile, in most low-income countries spending per child or young person increased modestly over this period, with some countries registering large improvements. In Sierra Leone, for example, government education spending per child or young person rose from PPP\$ 99 to PPP\$ 207 between 2013–14 and 2017–18. Over the same period, spending per child or young person fell—albeit generally only slightly—in fewer than a quarter of lower-middle-income countries, mostly in Africa. In Ghana, for instance, government spending per capita fell from PPP\$ 500 to PPP\$ 467 over that period. All countries in South Asia and many in East Asia, Europe, and Central Asia recorded increases in real spending per capita, such as in Sri Lanka, where government education spending per capita rose from PPP\$ 620 to PPP\$ 1,013 over that period.

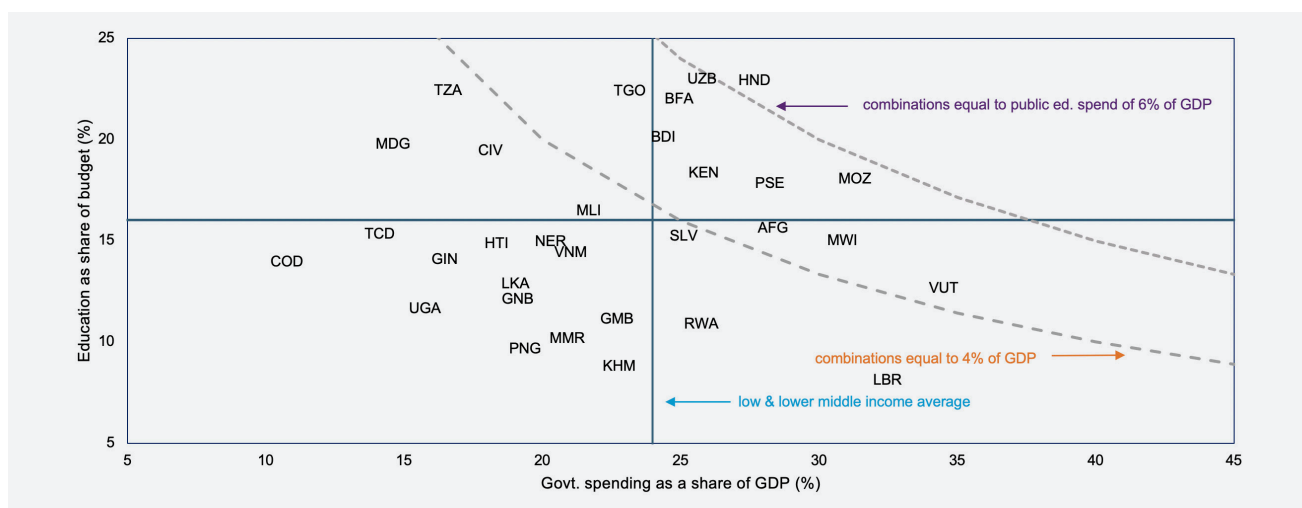
Large differences in education spending as a share of GDP between low-income and high-income countries are not due to differences in the priority accorded to education in government budgets but due to differences in the share of overall government spending in GDP. Government education spending as a share of GDP is the product of the share of total government spending in GDP and the share of total government spending devoted to education. The large differences

between low-income and high-income countries are not attributable to differences in the priority accorded to education in their budgets. Total government spending as a share of GDP is much higher in high-income than in low-income countries. In 2018–19, for example, in low-income countries the share of education spending in the total budget was 15 percent while total public spending as a share of GDP amounted to 22 percent. By contrast, high-income countries devote a slightly smaller share of their budget to education (13 percent) but total public spending as a share of GDP was much larger (30 percent). That is, the main difference between high- and low-income countries stem from the differences in the overall size of the public sector, not differences in how education is prioritized. Moreover, larger GDP and smaller cohorts of school age children and youth translate into much higher per-capita spending on education in high-income countries compared to low-income countries.

Mobilizing more government funding is often constrained by limited revenues. Figure 5 shows the magnitude of government spending as a proportion of GDP, and the share of this spending devoted to education. Some countries (such as Uganda or Papua New Guinea) fall below income group averages for both indicators while other countries (such as Honduras or

Figure 5: Fiscal space for mobilizing greater funding for education varies considerably across countries

Education as a share of total government budget, and government spending as a share of GDP in low- and lower-middle-income countries (%), 2017–18



Source: EFW dataset using UIS, IMF and World Bank online databases. See EFW technical note for list of ISO codes.

Uzbekistan) are well above. The dashed lines in Figure 5 plot the combinations of the two spending indicators to mark out the zone between two benchmarks—of 4 and 6 percent of GDP respectively—associated with adequate government spending on education in successful countries. For many countries reaching such levels would require increases in overall domestic resource mobilization (total government spending as a share of GDP) in addition to increasing the proportion of the budget devoted to education. For example, given current levels of total government spending, Uganda would have to devote more than a quarter of its overall budget to education to reach even the lower benchmark of 4 percent. Given the competing priorities for government spending, it seems unlikely that significant increases in education funding will be realized with just greater prioritization of education in the government budget. In many countries, it will also require broader domestic resource mobilization efforts to increase government revenues.

The effects of Covid-19 on government education budgets

In order to understand the short-term impact of the Covid-19 pandemic on education budgets, information was collected for a sample of 29 countries across all regions.⁹ The sample represents about 54 percent of the world’s school and university aged population. The information collected was then verified with World Bank country teams. The dataset includes budget data for two years before the onset of the Covid-19 crisis and the first budget after the Covid-19 crisis, allowing for a comparison of trends before and after the crisis began. This represents a first effort to provide a broad picture of trends in education budgets post-Covid-19: it will need to be expanded and refined in future, as it has a few drawbacks. First, the data include the resources of a central government, including local government transfers

(if these are included in the education budget), but exclude any education spending that local governments make from their own resources.¹⁰ Second, budget plans are used, rather than actual spending or midyear allocations (except in the case of Indonesia) which may be important in some countries. However, the budget plans provide clear signals of the prioritization of spending on education and thus can be taken as an early indicator of changes in education spending trends.¹¹

A simple comparison of growth in education budgets pre- and post-Covid shows a positive trend: on average annual budgets increased by 4 percent post-Covid compared to 1.1 percent pre-Covid. However, the share of countries that reduced their education budget increased from 45 to 52 percent. The magnitude of the changes was also generally positive: average decreases in countries that reduced their budgets were smaller (-8.3 compared to -4.6 percent) and average increases slightly larger (8.7 percent compared to 13.2 percent). However, breaking the sample down by income group shows some important differences behind these headline figures.

Education budgets declined after the onset of the Covid-19 pandemic in 65 percent of low- and lower-middle- income countries compared to only 33 percent of high- and upper-middle-income countries (Table 1). Despite more low- and lower-middle-income countries decreasing their budget, the average reductions were smaller post-Covid than pre-Covid (-9.1 versus -3.6 percent). Average budget increases for these countries were slightly higher post-Covid (12.4 versus 8.7 percent). However, the trends for higher income countries were more positive. Not only did a higher share of upper-middle and high-income countries increase their budgets, but the average increase was higher than in low- and lower-middle-income countries (13.8 percent versus 12.4 percent). These divergent trends

9 The sample includes three low-income countries (Afghanistan, Ethiopia, Uganda); 14 lower-middle-income (Bangladesh, Egypt, India, Kenya, Kyrgyz Republic, Morocco, Myanmar, Nepal, Nigeria, Pakistan, Philippines, Tanzania, Ukraine, Uzbekistan); 10 upper-middle-income (Argentina, Brazil, Colombia, Jordan, Indonesia, Kazakhstan, Mexico, Peru, Russia, Turkey); and two high-income countries (Chile, Panama).

10 Except for Ethiopia and Kazakhstan, for which expenditure at the local level was available for 2021. The following countries have education shares below 10 percent and therefore are likely to have other main financing sources besides budget assigned by the central government: Argentina, Brazil, Egypt, India, Myanmar, Nigeria, Pakistan, and Russia.

11 The timing of the fiscal year of the country and the date of the approval of the budget is used to define pre- and post-Covid periods. Pre-Covid budgets are defined as those approved before March 2020, before the onset of the Covid-19 crisis. This is important because the fiscal year varies for countries in the sample and means that the first post-Covid budgets were approved at different times in different countries: February 2021 for those with fiscal years ranging from April to March, July/August 2020 for those with fiscal years ranging from October to September, April/May 2020 for those with fiscal years ranging from July to June, and late 2020 for those with fiscal years ranging from January to December.

Table 1: Change in education budgets before and after Covid-19 (%)

	All countries		High- and upper-middle-income		Low- and lower-middle-income	
	Pre-Covid	Post-Covid	Pre-Covid	Post-Covid	Pre-Covid	Post-Covid
<i>Total education budget</i>						
Change in education budget	1.1	4.0	2.2	6.7	0.3	2.0
Share of countries decreasing education budget	44.8	51.7	41.7	33.3	47.1	64.7
Average decrease in countries that decreased their budget	-8.3	-4.6	-6.9	-7.4	-9.1	-3.6
Average increase in countries that increased their budget	8.7	13.2	8.8	13.8	8.7	12.4
<i>Education's share of the total budget</i>						
Average change in percentage points	-0.5	0.1	-0.3	-0.1	-0.6	0.2
Average share	13.4	13.5	13.7	13.6	13.2	13.4

Source: Country budget documents for selected countries.

Note: Budget changes are expressed in real terms.

will exacerbate pre-existing inequalities between low- and lower-middle-income countries and high- and upper-middle-income countries in education spending (Figure 3).

The share of the total budget going to education did not change very much. Taken together with the magnitude of the changes explained above, this indicates that total budgets grew faster in upper-middle and high-income countries after the crisis (6.7 percent versus 2.0 percent in low- and lower-middle-income countries), and despite a smaller share of that growth going to education, the resulting increase was higher than for lower-income countries (Table 1). Again, this signals a widening of spending inequality between country income levels.

Understanding the broader determinants of these changes in the budget is important, but beyond the scope of this year's EFW. However, a first step is to look at the correlation between the trends pre-Covid and the trend post-Covid for individual countries. Research has shown that the growth in education spending globally is explained largely by economic growth and overall budget growth, rather than changes in the share of the budget going to education (Al-Samarrai, Cerdan-Infantes, and Lehe 2019). Thus, countries with poor macroeconomic performance pre-Covid are likely to have much worse performance post-Covid, likely

affecting their education budgets post-Covid. It is therefore to be expected that if budgets were decreasing pre-Covid, the trend would continue, in the absence of radical policy changes. On the other hand, a positive pre-Covid trend is less obviously predictive of the post-Covid outcome, which would likely be determined by the impact of the crisis on the country. A summary of the changes in trends is given in Table 2.

Analysis of the trends in individual countries reveals a very mixed picture. Table 2 shows the share of countries that increased or decreased their budget post-Covid, according to their trends pre-Covid. For the overall sample, it shows that just above half of the countries (52 percent) continued the previous trend (24 percent of them a decreasing trend and 28 percent an increasing trend). The rest of the countries shifted trends: 21 percent of the countries with decreasing budgets increased their budgets post-Covid, and 28 percent of countries with increasing budgets decreased their budgets post-Covid.

Lower-income countries are more likely to continue a decreasing trend in their education budgets or to shift from a positive to a negative trend after Covid. The differences, again, suggest that inequalities in education spending are likely to increase. While only 8 percent of higher income countries continued a decreasing trend, 35 percent of lower income countries did. Furthermore,

Table 2: Change in education budgets after Covid-19 by earlier status (%)

		All countries	High- and upper-middle-income	Low- and lower-middle-income
Countries with decreasing budgets pre-Covid	Decreased post-Covid	24	8	35
	Increased post-Covid	21	33	12
Countries with increasing budgets pre-Covid	Decreased post-Covid	28	25	29
	Increased post-Covid	28	33	24
	Total	100	100	100

Source: Country budget documents for selected countries.

while only 25 percent of higher income countries flipped from positive to negative growth in the budget, 29 percent of lower income countries did. Conversely, while 33 percent of higher income countries flipped from a negative to a positive trend, only 12 percent of lower income countries did. Also, a greater share of higher income countries with a positive trend pre-Covid continued that trend afterwards than did lower income countries (33 percent versus 24 percent).

When comparing budget changes for countries by their pre-Covid levels of learning adjusted years of schooling (LAYS), countries starting from a higher level pre-Covid saw their budget increasing more than those starting from a lower level. The sample was divided into “high LAYS” and “low LAYS” pre-Covid using the median value of the Learning Adjusted Years of Schooling Index in the sample countries.¹² Low LAYS countries increased their budgets by 2.5 percent on average, compared with 5.4 percent of high LAYS countries. About 47 percent of high LAYS countries decreased their education budgets, compared with 57 percent of low LAYS countries.¹³ Although this analysis is from a limited sample of countries, and the relevant trends will thus need to be followed up closely, these early trends indicate that inequality in education spending and outcomes across countries is likely to increase as a result of the Covid crisis.

Responding to the Covid crisis requires additional spending to adapt schools for compliance with the necessary measures to control contagion and to fund programs to make up for the losses in learning students experienced while schools were closed (Tanaka 2020). It is not clear that countries that have seen a decline in their education budget will be able to cover these costs alongside the regular increases in funding needed to support growing school-age populations. Despite the urgent need for adequate funding to allow school systems to reopen safely, about half of the countries in the sample cut their education budgets. This scarcely bodes well for the future, when macroeconomic conditions are expected to worsen.

1.3. How has aid to education changed?

Aid has remained at about 0.3 percent of donor countries’ gross national income for the last 15 years. In 2005, European Union countries committed to allocate 0.7 percent of gross national income (GNI) to official development assistance (ODA). While other countries have not committed to this target, it is a useful benchmark to assess the priority they accord to ODA. The OECD Development Assistance Committee (DAC) countries increased ODA from 0.21 percent to 0.30 percent of GNI between 2001 and 2019 (though most of that increase was in the early 2000s); and levels have remained around 0.3 percent since 2005. Of the 30 DAC countries, only five met the 0.7 percent target in 2019.

¹² The median LAYS in our sample is slightly lower than the global median (7.6 versus 7.9). When using mean LAYS (7.4 in our sample) to categorize countries instead of the median, the results do not differ qualitatively.

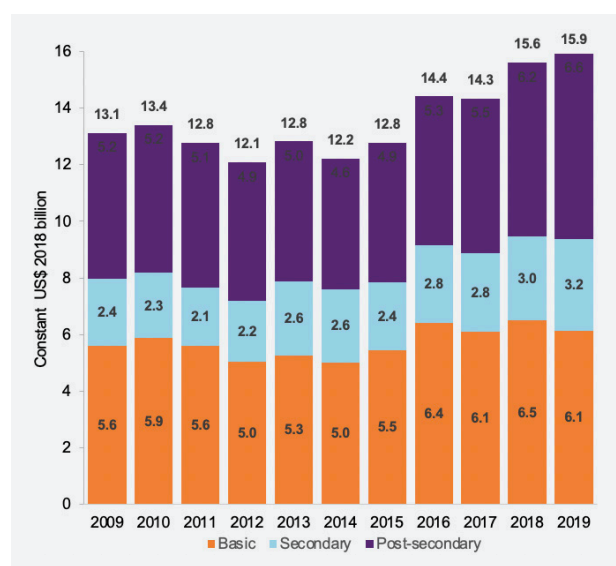
¹³ The average post-Covid decrease in countries that decreased their budget was much larger in high LAYS countries (-7.0 percent) than in low LAYS countries (-2.6 percent).

Since 2009, total aid as a share of the national income of recipient countries has increased for low-income countries but fallen for lower-middle-income countries. Between 2009 and 2019, total ODA as a share of GNI fell from 1.2 percent to 0.7 percent in lower-middle-income countries. However, in low-income countries, it fell initially from 9.6 percent in 2009 to 7.9 percent in 2015 but has since increased to 10.8 percent in 2019. It has exceeded 20 percent, on average, in recent years in the Central African Republic, Liberia, Malawi and Somalia.

Aid for education has increased by 21 percent over the last 10 years which translated into an annual increase of 2 percent. Disbursements had increased rapidly in the 2000s, more than doubling from US\$ 6 billion in 2002 to reach a peak of US\$ 13.3 billion in 2010. However, over the next five years, aid to education stagnated, before picking up again in 2016 (Figure 6). Total ODA declined by 9 percent between 2010 and 2014 in the aftermath of the great financial crisis. However, since 2014 aid to education has increased by 30 percent reaching its highest recorded level of US\$ 15.9 billion in 2019.

Figure 6: Aid has increased by 21 percent over the last 10 years

Total aid to education disbursements, by education level, 2009–19 (constant 2018 US dollars: billions)



Source: GEM Report team analysis based on OECD CRS (2021).

The share of aid allocated to different education levels has remained relatively stable with basic education receiving 43 percent of total aid between 2009 and 2019.

Over the same period, secondary education received 19 percent of total aid to education and post-secondary the remaining 39 percent. A large share of aid allocated to post-secondary education are scholarships and student imputed costs for higher education in donor countries. For example US\$ 4 billion (61 percent) of total aid to post-secondary education in 2019 was used for these purposes.

Since 2009, the Middle East and North Africa region exhibited the largest increase in aid to basic education.

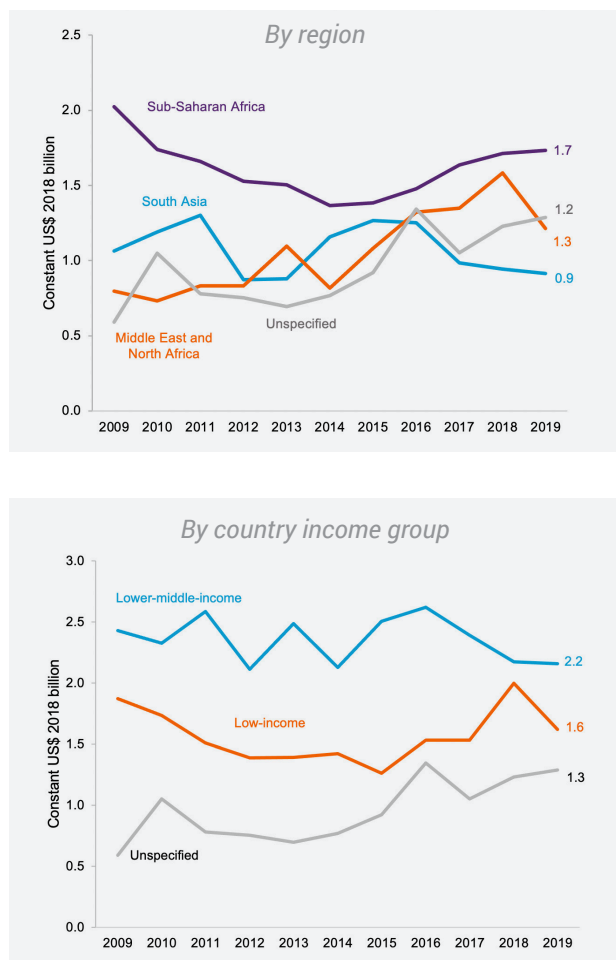
Between 2009 and 2019, aid to basic education in the region increased from US\$ 798 to US\$ 1,214 million (Figure 7). Its share in overall ODA to basic education also increased from 18 percent in 2009 to 24 percent in 2019, largely in response to emergencies, initially in Iraq and then in the Syrian Arab Republic and Yemen. Meanwhile aid to education in Sub-Saharan Africa has been on an upward trend over the last five years. Between 2014 and 2019 aid to Sub-Saharan Africa increased from US\$ 1.4 to US\$ 1.7 billion. This is likely to underestimate the total allocated to Sub-Saharan Africa because a share of aid that is not allocated to countries (unspecified aid) in the OECD database is likely to flow to the region.¹⁴ With respect to the distribution of ODA by country income group, low-income countries saw aid to basic education fall between 2009 and 2015. Since 2015, aid to basic education in low-income countries has been increasing and reached US\$ 1.6 billion in 2019. Allocations to lower-middle-income countries have also fluctuated but have fallen from US\$ 2.6 billion in 2016 to US\$ 2.2 billion in 2019 (Figure 7).

In per-capita terms, aid to basic education in low-income countries is higher than in lower-middle-income countries. Assuming that all unspecified recipients of aid to basic and secondary education are low- and lower-middle-income countries, the total amount of aid received for those purposes by those countries, in 2019 was US\$ 7.6 billion. These aggregate levels of aid translate into spending of US\$ 14 per primary school-age child in low- and US\$ 8 in lower-middle-income countries (constant 2018 dollars). In secondary education, it corresponds to US\$ 7 and US\$ 3, respectively, per secondary school-age adolescent.

¹⁴ Between 2009 and 2019, unspecified aid averaged \$1 billion per year of which approximately \$370 million were disbursements by the Global Partnership for Education. About 79 percent of GPE disbursements went to Sub-Saharan Africa (UNESCO 2020). GPE disbursements to recipient countries are not recorded in the OECD DAC-CRS and are therefore included in the unspecified category in Figure 7.

Figure 7: Aid to basic education has increased the most in the Middle East and North Africa

Aid disbursements to basic education (constant 2018 US dollars: billions), 2009–2019



Source: GEM Report team analysis based on OECD CRS (2020).

The effects of Covid-19 on aid to education

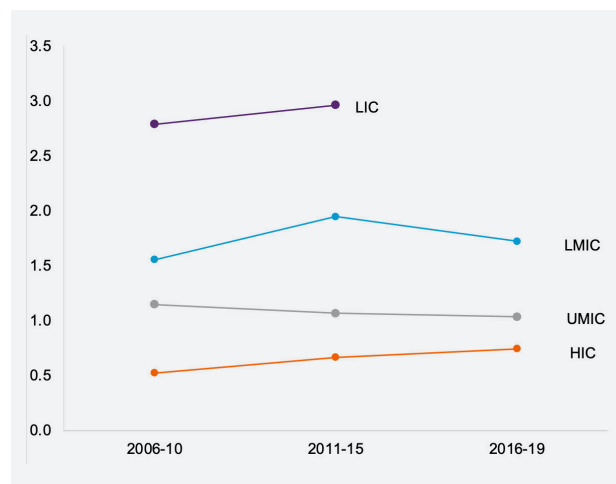
Aid to education is likely to contract as a result of Covid-19. A joint UNESCO-UNICEF-World Bank survey of national education responses suggested that 88 percent of low- and 76 percent of lower-middle-income countries had received development assistance to cover Covid-related costs in education (UNESCO, UNICEF, and World Bank 2020). Some of this aid may have been repurposed to respond to the emergency. For example, lower than expected GPE disbursements in 2018–19 mean that GPE was well positioned to respond flexibly to the pandemic by providing more than US\$ 500 million in 2020 to help countries mitigate the impact of school closures. However, this does not mean that the prospect for aid is positive. Donor countries are likely—and some have already begun—to shift their budget away from aid to domestic priorities related to unemployment and support packages to businesses. Donor priorities may shift to health or other emergencies, as a survey of DAC members suggests (OECD 2020). Moreover, international student mobility—which accounts for US\$ 3.1 billion of current aid allocations to education—has been curtailed as a result of the pandemic, so this is likely in effect to lead to a drop in aid to education since it accounts for US\$3.1 billion of current aid allocations to education. Overall, some estimates predict that aid to education may fall by US\$ 2 billion from its peak in 2020 and not return to 2018 levels for another six years (UNESCO 2020).

1.4. How has household education spending changed?

Households in low- and lower-middle-income countries tend to contribute a greater share of total education spending than those in upper-middle and high-income countries. As a share of national income, household spending on education in low-income countries tends to be approximately six times greater than spending by households in high-income countries (Figure 8). The greater spending by households in low- and lower-middle-income countries is also reflected in their share of overall education spending. For example, in 2018–19, households in low-income countries accounted for 43 percent of total education spending, compared to only 16 percent for households in high-income countries (Figure 2).

Figure 8. Households contribute much more to education in low- and lower-middle-income countries than households in upper-middle- and high-income countries

Total household education expenditure, % of GDP



Source: EFW calculations based on EFW database.

Note: Total household spending as percentage of GDP is computed by aggregating all expenditures by level (namely primary, secondary and tertiary) and dividing the total by the country's GDP. See EFW technical note for details on the calculations. LIC data is unavailable for the years 2016–2019.

While data is limited, household education spending as a share of GDP has increased in low-income countries and households still contribute significantly to the costs of education. Constructing averages for low-income countries is only possible prior to 2016 but this shows that household spending as a share of national income increased from 2.8 to 3.6 percent between 2006–10 and 2011–15 (Figure 8).¹⁵ There has been a decline, albeit modest, in education spending as a share of GDP by households in middle-income countries since 2011–15. In contrast, household spending in high-income countries has increased steadily from 0.5 to 0.7 percent of GDP between 2006–10 and 2016–19. The bulk of total household education spending tends to support children in primary and secondary education. For example, data for 2012 from Ethiopia shows that 72 percent of total spending by households is on primary and secondary education.

¹⁵ In 2006–2010, only 35 percent of the low-income countries in the EFW database had data on household spending as a share of GDP. In 2011–2015, that proportion fell to 17 percent. Only three countries have data for both periods.

¹⁶ Forecasts based on the US\$ 1.90 poverty line. The global poverty rate is forecast to increase from 8.4 percent in 2019 to between 8.9 and 9.4 percent in 2021.

The effects of Covid-19 on household education spending

The pandemic has resulted in a large and negative income and health shock for many households. Global poverty rates are expected to rise for the first time since the 1998 Asian financial crisis. Forecasts suggest that as many as 93 million additional people will fall into poverty between 2020 and 2021 as a result of the pandemic (World Bank 2020d).¹⁶ The largest increases in poverty are expected to be in South Asia and Sub-Saharan Africa, where education systems rely heavily on household financial contributions (see Figure 8). The impact of the pandemic on household incomes is likely to reduce their ability to support the costs of education. Unless these declines are actively addressed, they will most probably lead to higher school drop-out rates. Research on previous economic shocks in low-income countries demonstrated the resulting reduced incomes, lowered household education spending, and lowered rates of school participation (World Bank 2020a). These effects are likely to be more acute in the current crisis since education systems are also faced with additional costs associated with reopening schools safely, and there is emerging evidence to show that in some countries households are expected to bear some of these additional Covid-related costs. Although social protection programs have been stepped up in many countries to support households through the pandemic, the response in low-income countries has been fairly small. For example, additional social protection measures in low-income countries averaged around US\$ 6 per capita compared to US\$ 28 and US\$ 56 in lower- and upper-middle-income countries respectively (Gentilini, Almenfi, and Dale 2020).

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Using funds equitably and efficiently



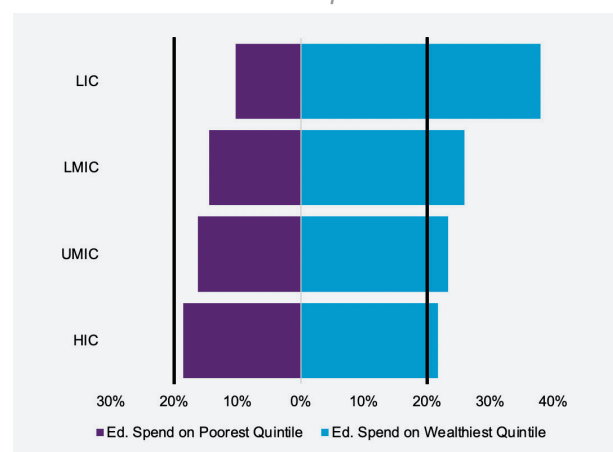
Aulia Erlangga/CIFOR

Public spending on education can be highly unequal, with wealthier groups often capturing a greater share of the available resources. Inequalities tend to be highest in poorer countries where differences in enrollment patterns by income quintile tend to be most pronounced and can result in significant inequalities in public education funding across the income distribution (Figure 9). In LICs, for instance, 40 percent of total public education funding benefits the wealthiest quintile, and only 10 percent the poorest. These inequalities can be exacerbated by subnational differences in education spending. It is very common for a child living in one part of a country to attend a school that receives several times as much funding as a roughly comparable school elsewhere in the same country. For example, in Sudan, spending per child is approximately six times as much in the highest spending region as it is in the lowest spending region (Figure 9). Subnational public spending differences tend to reinforce existing patterns of poverty and disadvantage. In many countries, per-capita education spending is significantly lower in poorer regions than in wealthier regions. For example, in Uganda, the relationship between district per-capita spending on education and levels of poverty is negative and statistically significant (Manuel et al. 2019).

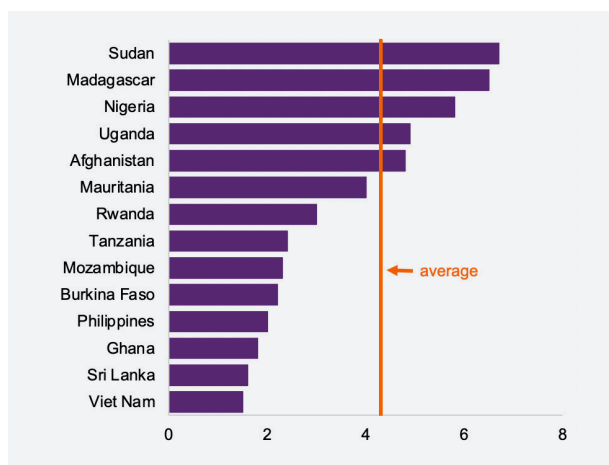
There are large differences among countries in terms of translating government education spending into years of schooling and learning outcomes. On average, richer countries tend to have higher spending and better learning outcomes. However, some countries at similar levels of per-capita spending achieve significantly better outcomes. For example, as shown in the right-hand panel of Figure 10, countries like Chad and Niger spend amounts similar to those of Malawi, Afghanistan and

Figure 9: Public education spending is unequal

Distribution of total public education funding by income quintile



Multiple between highest and lowest-spending regions (based on per-capita education spending)



Source: Left-hand panel: UNICEF (2020). Right-hand panel: Manuel et al. (2019) and various World Bank Public Expenditure Reviews.

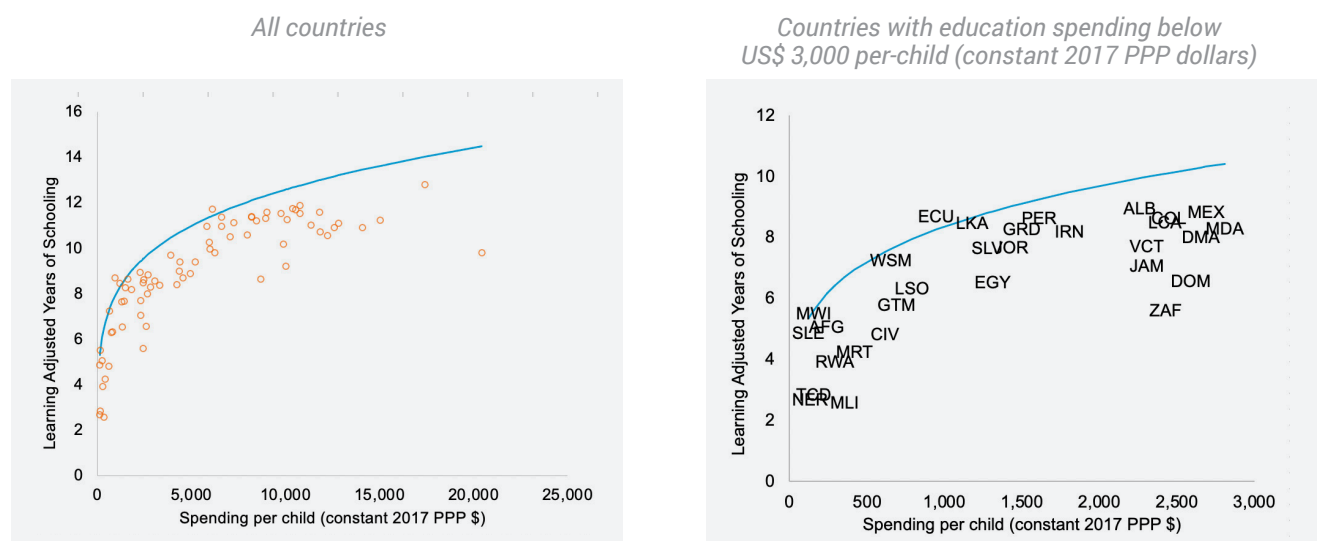
Note: Left-hand panel: black vertical lines represent 20 percent of public spending—if public spending were equally distributed, the poorest and wealthiest quintiles would each receive 20 percent of it.

Sierra Leone, but achieve less than half of the learning adjusted years of schooling. Clearly many factors drive these differences in efficiency. Some factors relate to characteristics of service delivery that are difficult to change. It is generally cheaper, for instance, to provide education services in densely populated and more urbanized countries than their more sparsely populated counterparts. However, many education systems also suffer from spending inefficiencies that are the result of suboptimal spending decisions, limited accountability, and the diversion of education funds for other uses.

Increases in spending per-capita over the last ten years have not always improved education outcomes. A recent study showed that average increases in per-capita education spending increased education outcomes by a relatively small amount. It showed that the spending elasticity for cases where spending had increased was only 0.08, meaning that, for every 10 percent increase in per-child spending, outcomes improved by only 0.8 percent (Al-Samarrai, Cerdan-Infantes, and Lehe 2019).¹⁷ Using the new data on learning adjusted years of schooling it is possible to look at how changes in spending per capita have affected education outcomes over the last ten years. Although only a small group of countries have available data, this shows that only roughly three-quarters of countries that increased spending per capita registered improvements in outcomes.

Figure 10: Countries differ in how effectively they translate funding into outcomes

Expenditure Per Child and Learning-Adjusted Years of Schooling (LAYS), 2020



Source: EFW calculations based on Human Capital Index (HCI) and EFW database and following an approach outlined in Al-Samarrai et al. (2019).

Note: Spending per child is computed as total public education spending on primary and secondary education divided by the school-age population. The curved line is an estimated stochastic frontier. The further below the frontier a country lies the less efficient it is.

¹⁷ The learning adjusted years of schooling (LAYS) is a metric that combines components of 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).

3

Monitoring and reporting education spending



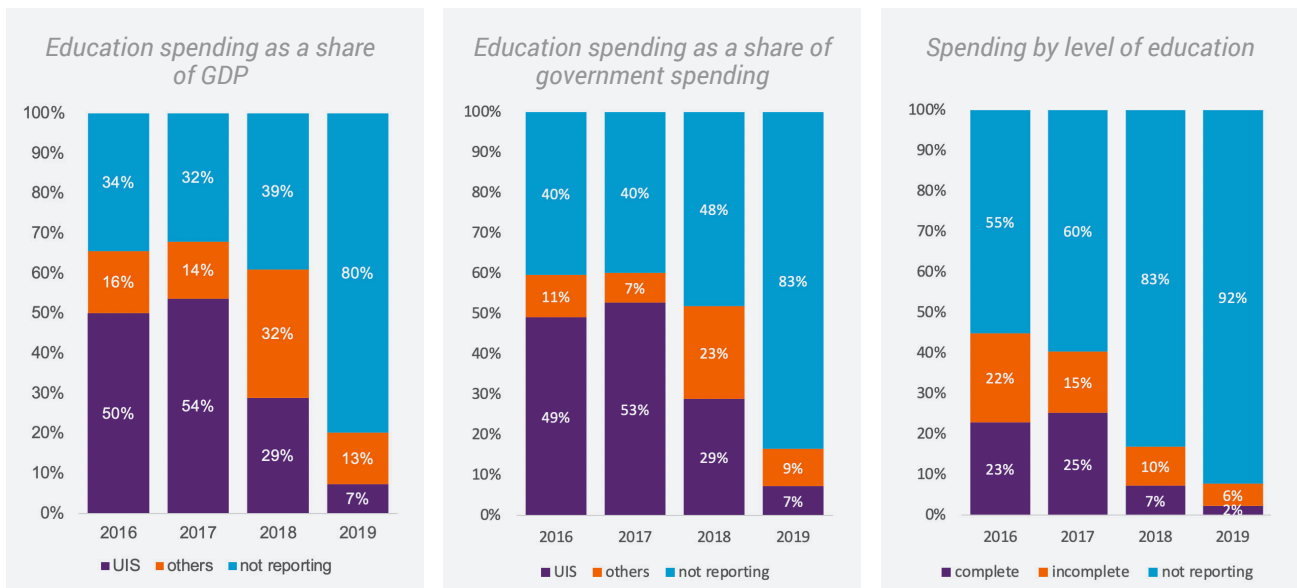
UNICEF Rwanda/2020/Saleh

Progress in the education sector must be monitored on the basis of information on funding levels and how these funds are used. This is also central to accountability and ensuring that commitments to improve education outcomes are backed up by adequate funding. Without this information, it is impossible to track trends in education funding and to tackle spending inequalities and inefficiencies outlined in EFW.

Despite the importance of data for monitoring, comparable information on core education finance indicators is only available for a relatively small number of countries.¹⁸ The EFW has combined information on government spending on education from three main sources: UNESCO Institute of Statistics (UIS), the International Monetary Fund (IMF) and the World Bank’s EdStats database. Even using all three of these

Figure 11: Information on core education spending indicators is available for fewer than two-thirds of countries

Number of countries with data on core education spending indicators, 2016–2019



Source: EFW dataset using UIS, IMF and World Bank online databases.

Note: The total number of countries covered in the EFW database is 218. For data reporting on spending by level, only those with complete data on primary, secondary and tertiary level are counted as ‘complete’; those with at least one data point on any of the levels are categorized as ‘incomplete’.

¹⁸ There are no large or consistent differences in data reporting rates for countries in different income groups.

international data sources, only 61 percent of countries reported government education as a percentage of GDP in 2018. Information on spending at different education levels was available in only 17 percent of countries, much of that incomplete and sometimes inconsistent (Figure 11). While the UIS database provides the majority of data used in EFW (79 percent), other sources tend to provide more information for the most recent years. For the year 2018, for example, it provided only 45 percent. This suggests that although a time lag is inevitable in the reporting of cross-country data it is possible to reduce it.

Improved quality and coverage of data will necessitate ensuring the comparability of existing data sources and adopting new approaches. The EFW has drawn together the three main sources of government spending data, but differences in approaches to measurement mean that different sources of data provide different magnitudes for core education indicators. For example, there was an absolute difference of 0.7–0.8 percentage points between the World Bank, IMF and UIS datasets in the

value of education spending as a percentage of GDP for countries showing information in more than one dataset. Reducing these differences, by trying to align definitions and approaches, could yield markedly better data coverage and quality. The Covid-19 section of EFW also shows that although information on spending is frequently available online it is buried in government budget documentation that is generally neither easy to find nor to interpret. Working with countries to develop protocols to use readily available information on government budgets and spending could also improve the quality and timeliness of spending data. Finally, there has been significant progress on developing better tools for collecting information on education spending through, for example, utilizing a National Education Accounts approach and strengthening education modules in household expenditure surveys conducted regularly by national statistics offices (IIEP, UIS, and Pôle de Dakar 2016, Oseni et al. 2018). What is now most clearly needed is to encourage wider adoption of these approaches by providing technical support to statistical and planning agencies at the country level.



GPE/ Kelley Lynch

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Summary



Global spending on education has increased continuously in absolute terms over the last 10 years but the signs are that the pandemic may interrupt this upward trend.

Since 2010, funding for education has grown most rapidly in low- and lower-middle-income countries, where the gaps between the funding needed to achieve the SDGs and current allocations are the widest. The EFW has highlighted the pandemic's impact on household income and donor funding, and this is likely to reduce education funding. The impact of these reductions is likely to be felt most acutely in low- and lower-middle-income countries, where these sources of funding make up a large share of total education spending. Although the data collected for EFW on government education budgets paints a mixed picture, the deterioration in government finances over the medium term suggests that without concerted efforts to prioritize education, the outlook for mobilizing the required resources for education will worsen.

The policies that countries adopt to protect and increase education funding will differ, but most can make better use of the funds allocated for education.

The severity of the health and economic shock caused by the pandemic will determine to a large extent the policies required to finance the response in a given country, and thereby minimize disruptions to the development of education there (World Bank 2020b). However, EFW has highlighted that education systems in many countries face significant challenges in using funding effectively. The pandemic has brought these spending inequalities and inefficiencies into sharp focus, and over the medium term it is vital that spending be aligned more tightly to improvements in education outcomes.

The pandemic also highlights the critical importance of monitoring the patterns and trends in funding of education.

Tackling the global learning crisis and monitoring the impacts of the pandemic will require better information on how well education systems are functioning. This includes better information on the levels and sources of funding and how these funds are used to ensure that education is available to all. As EFW has shown, more can be done with existing data sources to sharpen the picture of education financing. But efforts to build capacity and systems to collect and track education spending are also needed to improve both the quality and coverage of existing sources. Next year's EFW will report back on progress.

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