



**How are Children Progressing
through School?:**
An Education Pathway Analysis

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How are Children Progressing through School?: An Education Pathway Analysis

The goal of achieving universal primary education is within reach for many countries throughout the world, as based on an [Education Pathway Analysis](#) from 103 countries and territories, 92 per cent of children have ever entered primary school.¹ However, a closer look at children's school attendance and progression through the educational system reveals challenges beyond initial access to education: over 40 per cent of these students do not make it to upper secondary school by the age they are expected to reach this level of schooling. And the situation has likely worsened given the ongoing impact of the COVID-19 pandemic.

So, what happens to the 92 per cent of children who enter primary school? Where does their education tend to go off path for so many youth? Are children not completing primary school, or are they not transitioning to lower secondary and then upper secondary school? At what point do children drop out of school, or remain in a level of schooling beyond the prescribed age for that grade? These kinds of questions can now be answered,

thanks to a new UNICEF dashboard on [Education Pathway Analysis](#), which tracks the educational pathways of adolescents of upper secondary school age, which is often those 15 to 17 years of age, in 103 countries and territories.

The Education Pathway Analysis uses data from the Multiple Indicator Cluster Surveys (MICS), as well as Demographic and Health Surveys (DHS), and other nationally representative household surveys. The analysis follows children's educational progress, from entry into primary school through transition to upper secondary school, noting at each stage the percentage of children who never attend, drop out, are overage for the grade, or transition to the next level of education.² Accordingly, it is possible to see children's educational trajectory, and identify at which point they may have dropped out of school, remained at the lower level, or failed to transition to the next level. This information can call attention to inequalities in educational attainment and provide a vehicle to support evidence-based policy making.

1. Although the Education Pathway Analysis does not provide specific information on the 8 per cent of children who never enter primary school, these children tend to be disproportionately represented among the poor, ethnic minorities, children with disabilities, and rural dwellers. Please see <https://www.unicef.org/education> for more information.

2. Please note that the Education Pathway Analysis differs from overall education indicators such as primary school dropout rates. The figures calculated for the Education Pathway Analysis rely only on data for youth of upper secondary school age, whereas indicators on primary school dropout rates, for example, include children of primary school age. For more information on education indicators, please see <https://data.unicef.org/topic/education/overview/>

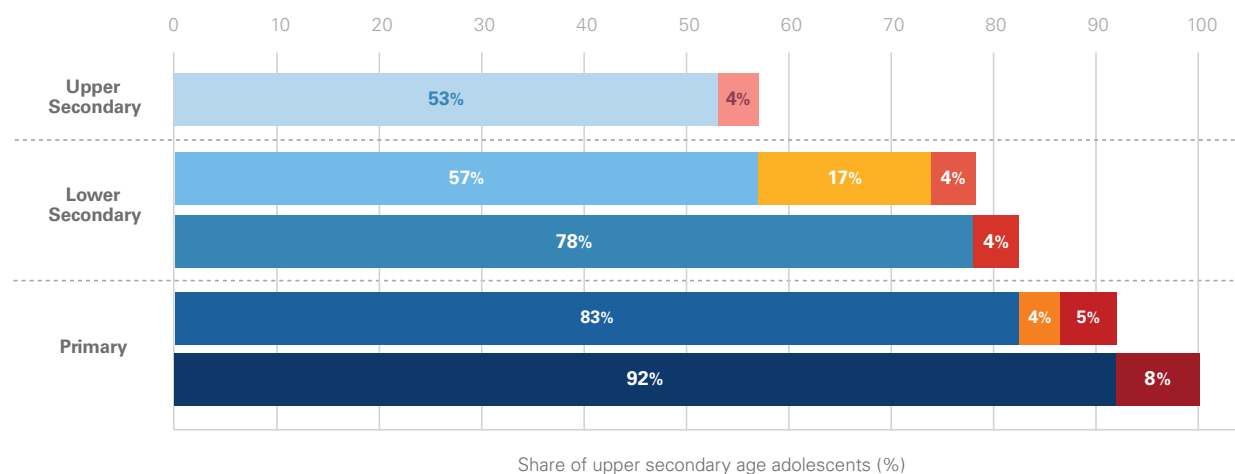
The Global Picture

The Education Pathway Analysis presents the data in a pyramid form, with the percentage of children who ever entered primary school at the bottom and progressing to the percentage of children transitioning to upper secondary school at the top. To provide a global picture, weighted averages of the data from 103 countries and territories are used.

As seen in Chart 1, on a global level, 92 per cent of children ever entered primary school, but only 78 per cent transition to lower secondary school due to dropout, repetition, and non-transition. Furthermore, only 57 per

cent complete lower secondary school by the time they reach an age (15 to 17 in most cases) in which they are expected to be in upper secondary school, and 53 per cent transition to upper secondary school. As for the others, 17 per cent are still attending lower secondary, being above age for the grade, and 4 per cent drop out of lower secondary school. These data indicate that most children who complete a level of schooling do transition to the next level, but many fail to complete the next level in a timely manner, putting them at risk of dropout, or they drop out before finishing.

Chart 1: Globally, although 92 per cent of children enter primary school, fewer than 60 per cent transition to upper secondary school by the age they are expected to be at that level



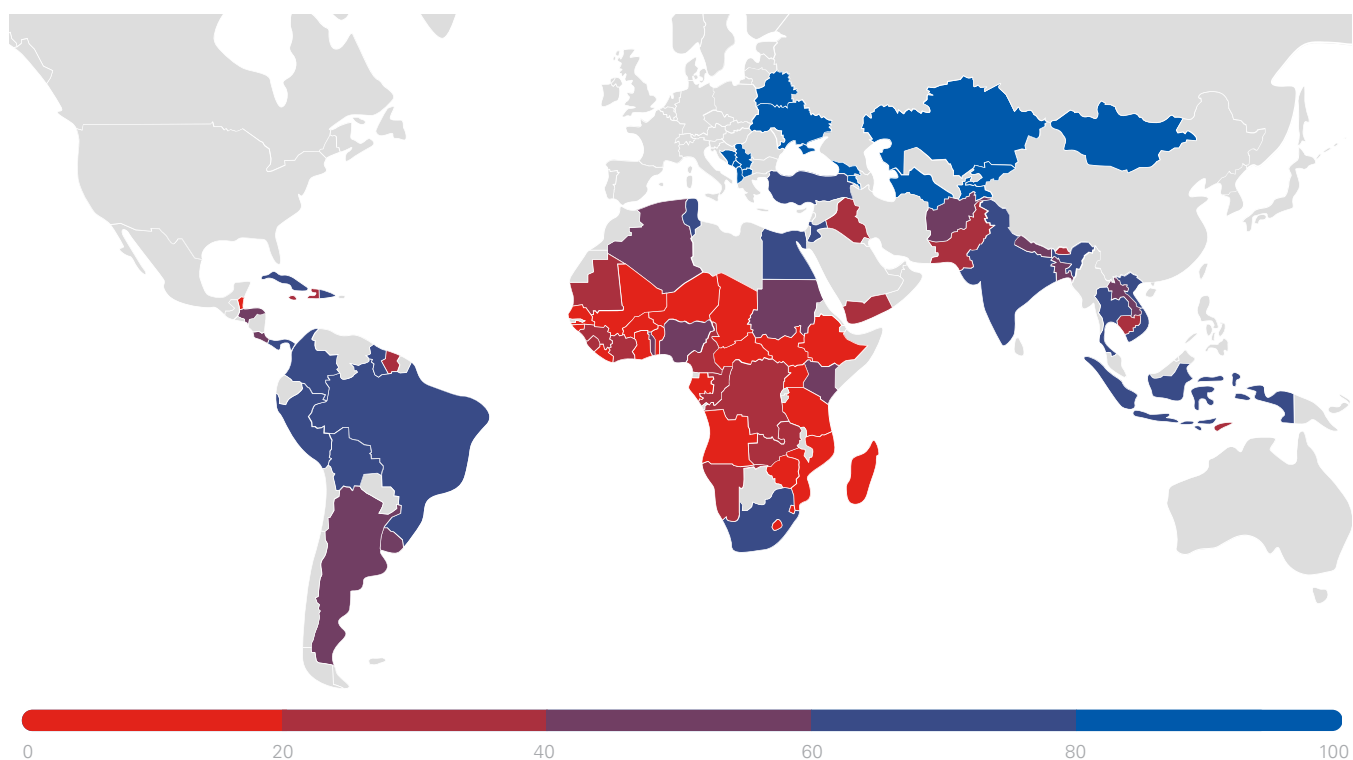
Primary	Lower Secondary	Upper Secondary
<ul style="list-style-type: none"> Ever entered primary Never entered primary 	<ul style="list-style-type: none"> Did not transition to lower secondary Transitioned to lower secondary 	<ul style="list-style-type: none"> Did not transition to upper secondary Transitioned to upper secondary
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Source: UNICEF Education Pathway Analysis database (2021)

Another way to look at the educational pathway data is to consider the education efficiency rate, which represents the share of children who transition to upper secondary school at the age expected for that grade, divided by the share of children who ever enter primary school. Globally, the efficiency rate is 58 per cent (53 per cent transitioning to upper secondary school divided by 92 per cent ever entered primary school). The following heatmap (Map 1) provides the range of

education efficiency rates for all countries and territories in the database. Regional disparities are evident, as most African countries have education efficiency rates below 40 per cent, signaling that the majority of youth do not transition to upper secondary school by the expected age, whereas in Latin America and Asia the rates are typically 60 per cent or above, indicating that most youth do make this transition in the appropriate time.

Map 1: The education efficiency rate is particularly low in African countries



Missing data is shown in grey

Source: Author's calculations based on UNICEF Education Pathway Analysis Database (2010-2020).

Geographical boundaries, names and designations used on these maps do not imply official endorsement or acceptance by the United Nations.

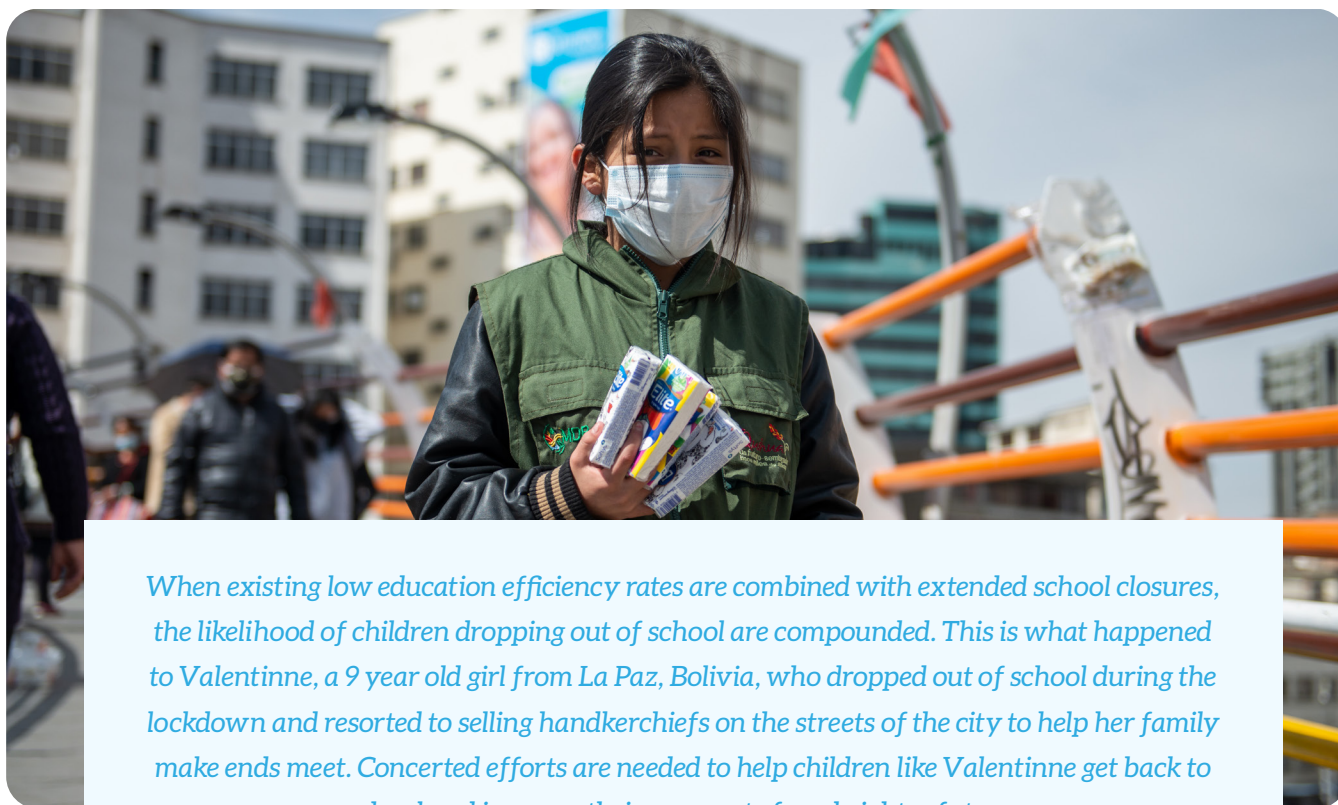


Education Progress and the Pandemic

Although data are not yet available on how the COVID-19 pandemic has directly impacted children's educational pathways, it is still possible to gain some insight by comparing the educational efficiency rate with pandemic-related data, such as school closures and access to remote learning modalities. For example, if a country already has a low education efficiency rate, meaning a small share of children who enter primary school make it to upper secondary school at the appropriate age, and schools have faced prolonged closures due to the pandemic, children will likely be at an even greater disadvantage. These combined factors mean, for example, that fewer children are apt to transition to upper secondary education by the age at which they are expected to do so, contributing to decreases in efficiency rates for education systems and increased risk of dropout among learners.

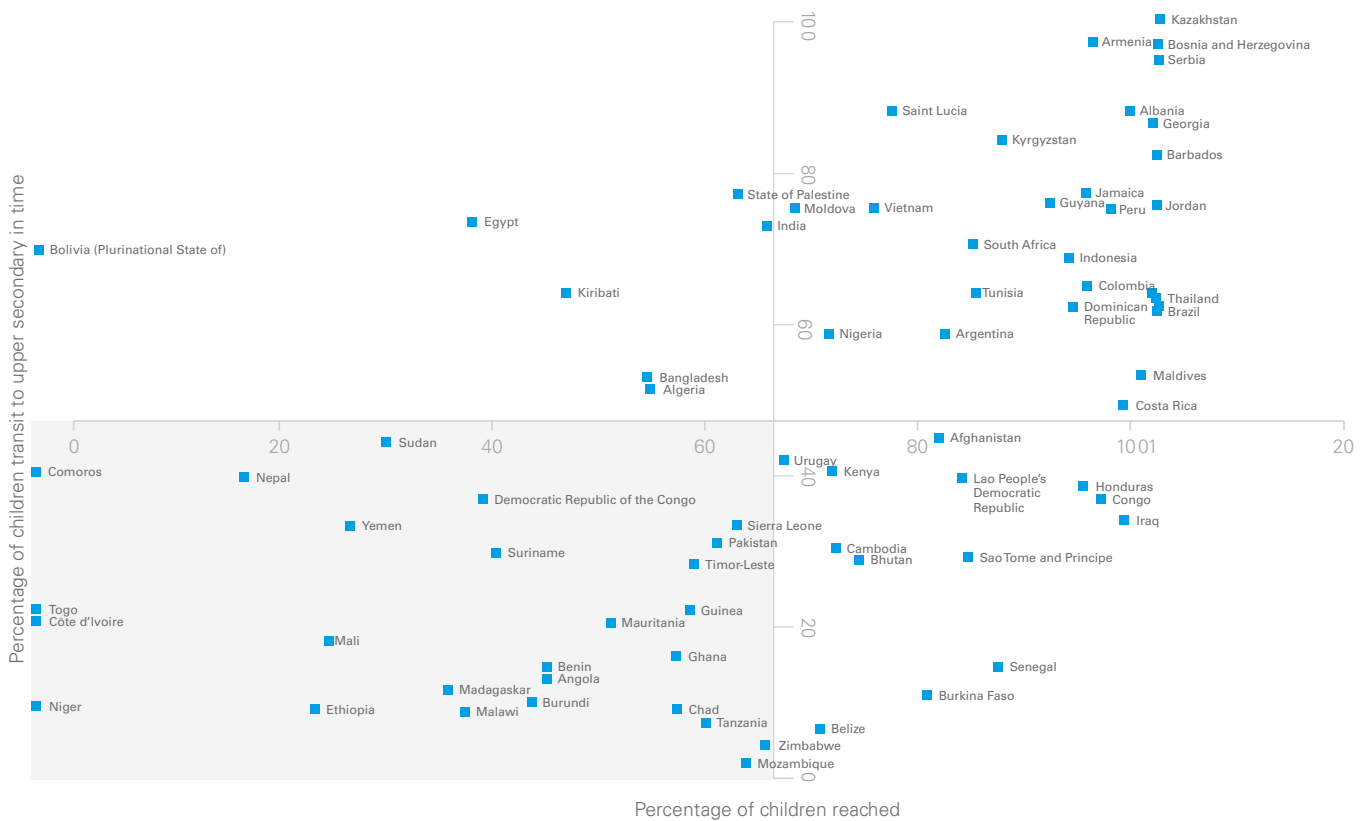
UNESCO has been tracking school closures since the start of the pandemic in March 2020, with data available through May 2021. Whereas the average duration of

school disruption is 33 weeks, some countries, such as India, Iraq, Nepal, the State of Palestine, and Uganda, have had schools partially or fully closed for over 55 weeks during this time period (more than 20 weeks above average). Countries throughout Latin America and the Caribbean have also had among the longest duration of school closures in the world. But the most worrisome countries are those that already have a low educational efficiency rate, where a small share of children progress from primary school to upper secondary school in a timely manner, and this has been coupled with prolonged school closures during the pandemic. Many of these countries are in Africa, among them Angola, Eswatini, Ghana, Lesotho, Mozambique, Rwanda, South Sudan, and Uganda. Certain countries in Asia, however, including Bhutan, Iraq, Nepal, and Pakistan, are also in this category. Even before taking into consideration the effects of the pandemic, children can be at risk of dropping out of school before reaching upper secondary school, or remain in a grade beyond the appropriate age.



When existing low education efficiency rates are combined with extended school closures, the likelihood of children dropping out of school are compounded. This is what happened to Valentinne, a 9 year old girl from La Paz, Bolivia, who dropped out of school during the lockdown and resorted to selling handkerchiefs on the streets of the city to help her family make ends meet. Concerted efforts are needed to help children like Valentinne get back to school and improve their prospects for a brighter future.

Chart 2: Many African countries have both low remote learning reachability (measured at the peak of the pandemic, April 2020) and a low share of students transitioning to upper secondary



Source: Author's calculations based on UNICEF Education Pathway Analysis database (2021) and UNICEF reachability report (2020)

To respond to the pandemic, most countries have adopted some form of remote learning policy so that children can continue to learn while schools are closed. The combination of remote learning policies, along with the availability of household assets that can be used for remote learning such as televisions, radios, computers, and the internet, represent the potential reachability of remote learning. Chart 2 compares the percentage of children who are potentially reached by remote learning with the upper secondary education efficiency rate. While this provides an indication of the potential impact on their educational trajectory while schools are either fully or partially closed, some nuances are in order. Much is still unknown about the outcomes and impacts of remote learning that go beyond exclusion due to the digital divide. Other factors, such as the non-engagement of remote learners could be at play as well, which could contribute even further to the risk of children and youth dropping out of school.

In this instance, it is the countries in the lower left quadrant that are most at risk of poor educational progress for children under pandemic conditions. These countries are largely in the African region, which is a part of the world that has both extremely low remote learning reachability and a small share of children who transition to upper secondary school at the age expected for this level of schooling. Children in Cote d'Ivoire, Ethiopia, Mali, Niger, and Togo are at the greatest disadvantage, as fewer than 10 per cent of children are potentially reached by remote learning, while fewer than 30 per cent make it to upper secondary school by the appropriate age. This is in stark contrast to children from Eastern Europe and West Asian countries such as Bosnia and Herzegovina, Kazakhstan, and Serbia, where at least 70 per cent of children are potentially reached by remote learning, and over 90 per cent transition to upper secondary school at the appropriate age. It is important to note, however, that even in countries where potential reachability is high,

disparities exist for certain modalities of remote learning, particularly computer-based learning, especially among children who are already marginalized. Unless efforts are made to close the digital divide among all learners, more children could be at risk of dropping out, especially as efforts to advance the digitization of the education system progress.

The upward trend in the chart points to the relationship between remote learning reachability and children's educational progression. With few exceptions (such as Bolivia and Egypt), countries with a low percentage of children potentially reached by remote learning are also those that have a small share of children reaching upper secondary school by the appropriate age. The reverse is also true. This trend can be explained at least in part by a country's policy response as well as its socioeconomic

status, as wealthier countries tend to have more efficient educational systems (fewer dropouts, for example), as well as better reachability of remote learning.

As the pandemic lingers, and remote learning continues to be a necessary option for children, countries will have to improve their remote learning policies, otherwise children in much of Africa and some parts of Asia will have their educational progress stalled even further. A study done pre-pandemic estimated global losses of 32.6 billion USD for primary education alone due to dropout and repetition.³ The impact of the pandemic on dropout and repetition at all levels of education is likely to be much higher. Therefore, low and lower-middle income countries in particular will need financial support so that they can extend remote learning to more children to help forestall further educational losses.



3. Mizunoya, S. & Zaw, H.T. (2017). Measuring the holes of the ship: Global cost estimations of internal inefficiency in primary education, *International Journal of Educational Development*, 54, 8-17.

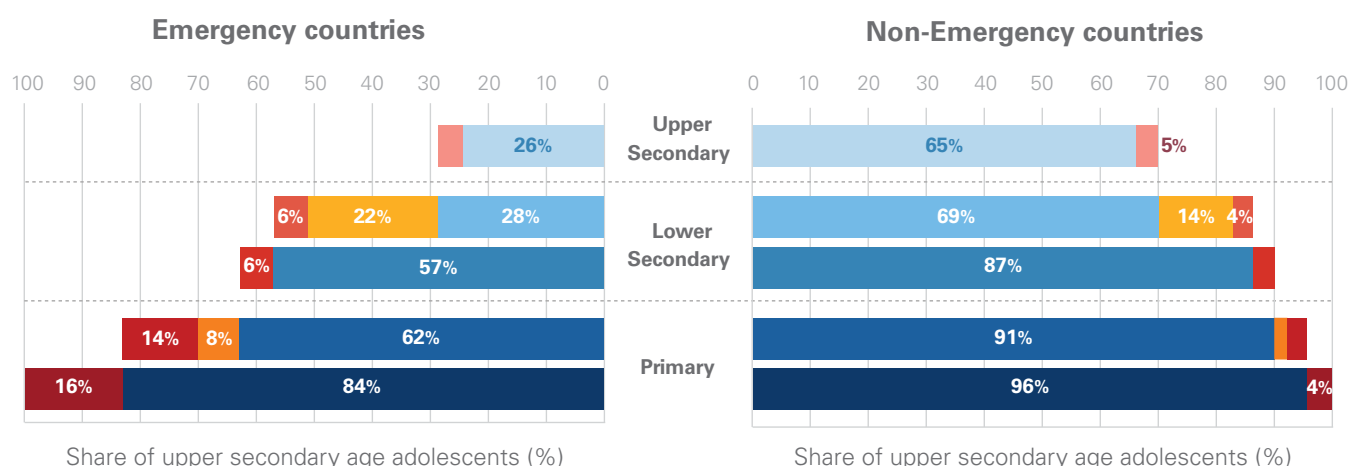
Examining Emergency and Non-Emergency Countries

Although the pandemic has assuredly hindered children’s educational advancement, the situation prior to the onset of COVID-19 was still quite dire in some instances, particularly for certain groupings of countries. The Education Pathway Analysis allows for a “deeper dive”, so that regional and other groupings of countries can be compared. For example, it is possible to look specifically at emergency countries, or Humanitarian Action for Children (HAC)⁴ countries, where children are living through conflict and crisis, and compare that to countries without these emergency situations.

A comparison of emergency and non-emergency countries (Chart 3) reveals clear differences in education pathways from the beginning, as 16 per cent of children from emergency countries never enter primary school,

while only 4 per cent of children from non-emergency countries never do so. These differences persist, and widen across children’s educational trajectory. Compared to children from emergency countries, a greater percentage of children from non-emergency countries attend and complete primary, transition and complete lower secondary, and transition to upper secondary. The difference between the two country groupings is largest for children completing lower secondary, as there is a 41 percentage point gap between children in emergency countries completing lower secondary (28 per cent) by the expected age versus children in non-emergency countries (69 per cent). These stark differences highlight the negative impact that conflict and crisis can have on children’s educational progress.

Chart 3: Children in Emergency Countries are less likely to enter school and transition to upper secondary school than children from Non-Emergency Countries



Primary	Lower Secondary	Upper Secondary
<ul style="list-style-type: none"> Ever entered primary Never entered primary 	<ul style="list-style-type: none"> Did not transition to lower secondary Transitioned to lower secondary 	<ul style="list-style-type: none"> Did not transition to upper secondary Transitioned to upper secondary
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Source: UNICEF Education Pathway Analysis database (2021)

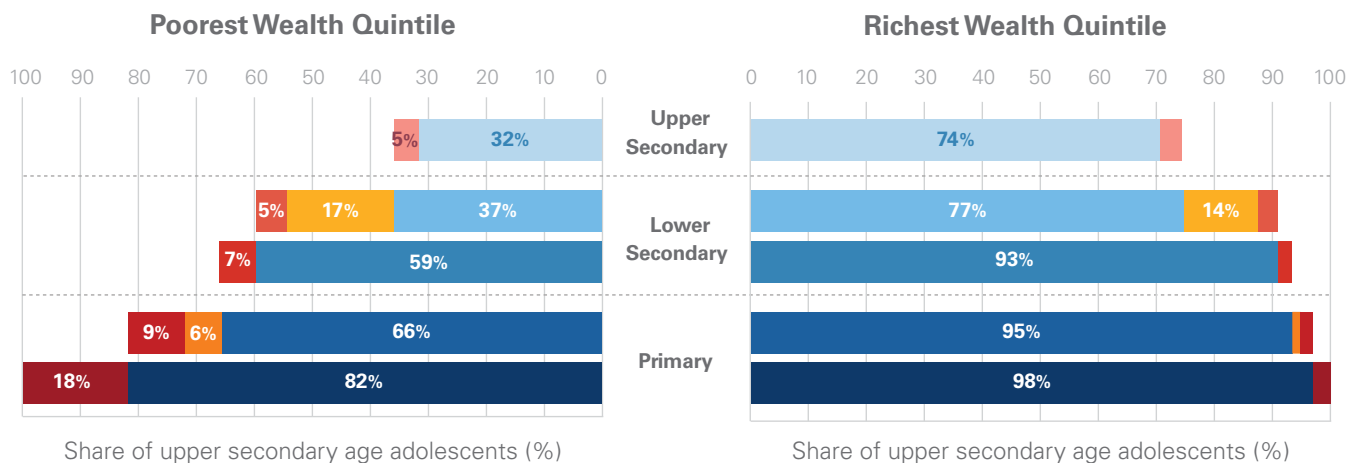
4. Emergency countries refer to UNICEF’s Humanitarian Action for Children (HAC) appeal countries that are conflict- and disaster-affected. For the entire list of emergency countries, please [click here](#).

Comparing Different Groups of Children

Another feature of the Education Pathway Analysis is that it is possible to compare the educational trajectories of different groups of children, including girls and boys, rural and urban dwellers, and children from different wealth quintiles. Any two group comparisons are possible. Differences in education pathways on a global level are especially pronounced when comparing wealth quintiles (Chart 4). Based on the weighted data from 103 countries and territories, 95 per cent of children in the

wealthiest quintile complete primary school, whereas only 66 per cent of those from the poorest quintile do so. The gap between richer and poorer children continues to widen at each level of education, to where more than twice the percentage of children from the richest families transition to upper secondary at the appropriate age as those from the poorest families (74 per cent versus 32 per cent).

Chart 4: Globally, poorer children are at a disadvantage from the start, and the gap continues to widen



Primary	Lower Secondary	Upper Secondary
<ul style="list-style-type: none"> Ever entered primary Never entered primary 	<ul style="list-style-type: none"> Did not transition to lower secondary Transitioned to lower secondary 	<ul style="list-style-type: none"> Did not transition to upper secondary Transitioned to upper secondary
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Source: UNICEF Education Pathway Analysis database (2021)

Based on the analysis drawn from 103 countries and territories, differences in the educational pathways between males and females are scant, particularly initially, as nearly an equal percentage, 79 and 78 per cent of boys and girls, respectively, transition to lower

secondary. A small gender gap is present for youth transitioning to upper secondary, as 54 per cent of girls make this transition, compared to 52 per cent of boys. However, these values mask some major differences by gender that exist in some countries.

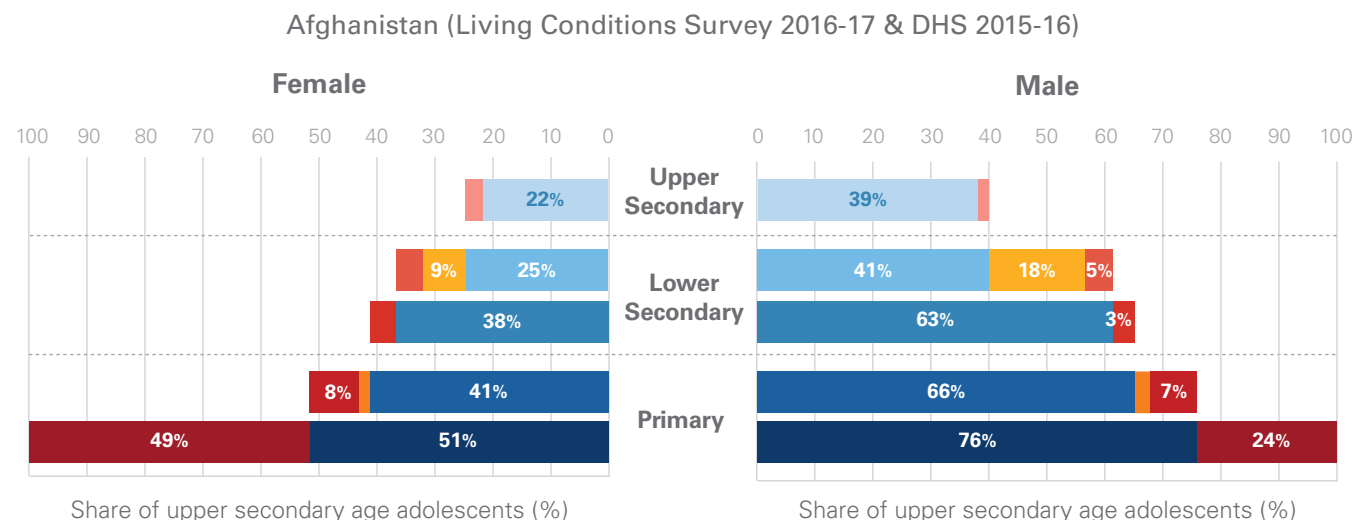
The Case of Afghanistan

While girls may hold a slight educational advantage on the aggregate level, the same cannot be said for every country in the world. The Educational Pathway Analysis allows for group comparisons on a country level as well, making it possible to see where individual countries stand when it comes to such things as gender equality in education.

The experience of Afghanistan is a stark example (Chart 5). Girls are at a strong educational disadvantage from an early age, as an astonishing 49 per cent of girls never even enter primary school, as compared to just 24 per cent of boys. The contrast with the global picture for girls is even more dramatic, as globally only 9 per cent of girls

never enter primary school. Because only half of girls in Afghanistan ever go to primary school, it is not surprising that an even smaller share complete primary and transition to lower secondary. The gender gap remains at 25 percentage points at these levels, as 63 per cent of boys in the country transition to lower secondary school at the expected age, compared to just 38 per cent of girls. And only 22 per cent of girls aged 16 to 18 in Afghanistan transition to upper secondary school, whereas nearly twice the share of boys this age do so. Seeing these side-by-side comparisons for a country such as Afghanistan draws attention to the significant work that needs to be done to improve educational access for girls around the world.

Chart 5: Half of girls never even enter primary school in Afghanistan



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Source: UNICEF Education Pathway Analysis database (2021)



The charts presented in this report are only a small sampling of the kinds of analyses that can be done with the education pathway dataset. Group comparisons (male/female, rural/urban, wealth quintile) can be done within a country, or even across countries. The way the data are structured, it is possible to compare different groups in the same country, such as rural and urban children in Burundi, or to compare the same groups in different countries, such as children from the poorest quintile in Honduras and Mongolia. It is even possible to compare different countries and different groups, such as girls in Tanzania with boys in Tajikistan. The Education Pathway Analysis allows for countless comparisons both within and between countries. And as highlighted above, links can be made to pandemic-related data such

as school closures and remote learning reachability to help ascertain the impact of COVID-19 on children's learning progress.

Researchers, government officials, NGOs, policy makers, and other education stakeholders can take advantage of these data to see how one country stacks up against any other country, or against global figures in different domains, or how different groups within the same country compare. This wealth of information on children's educational pathways can help guide education policy and programming, as it pinpoints just where children tend to go off track as they pursue their education, and can help countries determine where best to prioritize and direct resources.



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