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United Nations Girls'
Education Initiative

LEARNING AGAINST THE ODDS

**Evidence and Policies to Support
All Out-of-School Children and
Adolescents in East Asia and Pacific**

UNICEF
for every child

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Foreword

The fundamental right to education for every child is clearly acknowledged in the Convention on the Rights of the Child (CRC), which marks its 30th anniversary this year.

Thanks to the rapid advances in education provision over the past few decades in the East Asia and Pacific region, there has been considerable progress integrating out-of-school children and adolescents into basic education, from pre-primary and primary to lower and upper secondary levels. However, as explained in the Report, a staggering number of 35 million children and adolescents are still out of school; and 1 in 3 of students who remain in school, do not obtain the expected reading or mathematical skills at lower secondary level. As such, a change in the education systems is urgently needed, as doing 'more of the same' is evidently not enough.

In 2015, the United Nations General Assembly passed a resolution to achieve 17 Sustainable Development Goals by the year 2030, within which, education is a key marker. Clearly stated, Sustainable Development Goal 4 on Education (SDG 4) aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all", with the core principle of 'leaving no one behind'.

To this day, the most vulnerable children and adolescents are still the ones most likely to be left behind. Key barriers to education persist, including lack of services, particularly in remote rural areas, for children and adolescents with disabilities, pregnant girls and young mothers, working boys and girls, ethnolinguistic minority groups, the bottom quintile, and those affected by conflict, natural disasters and migration. Gender equality is also still an unresolved issue across the region, with adverse cultural norms and harmful practices, such as school-related gender-based violence, continuing in place. This Report analyzes these trends and suggests 10 specific policies to improve education and learning in the region.

UNICEF strongly believes that every child and adolescent girl and boy has the right to thrive and fulfil her or his potential. To this end, UNICEF in East Asia and Pacific is committed to further work with governments, families, schools and children and adolescents themselves, to enhance education, learning and skills development across all levels. UNICEF will do its best to make the Convention of the Rights of the Child a reality; and will work hard until the day that all children and adolescents, without exception, see the future as a promising and exciting adventure.

Karin Hulshof
Regional Director
UNICEF East Asia and Pacific

Acknowledgements

Wivina Belmonte
Deputy Regional Director
UNICEF East Asia and Pacific

Executive Summary

1. Context: Why Is Caring About Out-of-School Children and Adolescents So Important?

The fundamental **right to education** is clearly acknowledged in **the United Nations Convention on the Rights of the Child (CRC)**, and underlies the need for every girl and boy, regardless of race, economic, political, civil, health or cultural status, to develop and acquire skills for their future learning and well-being.

With the more recent adoption of the **Sustainable Development Goal on education (SDG 4)** in 2015, which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all", pressure mounts further for all countries to reduce the number of out-of-school children – not only those in the so-called 'developing world' – with an uncompromised commitment to **'leaving no one behind'** at the heart of this goal.

In 2017, about **35 million** children and adolescents in the East Asia and Pacific (EAP[1]) region were still not in school (UIS, 2019) (see Figure 1). Of these, **4 million** were of pre-primary school age (**13 per cent** of 1 year before the official primary entry age), **7 million** were of **primary** school age (**4 per cent** of 6 to 11 year old's), **8 million** were of **lower secondary** school age (**8 per cent** of 12 to 14 year old's), and another **16 million** were of **upper secondary** school age (**19 per cent** of 15 to 17 year old's).

In terms of historical trends (see Figure 2), there has been **significant reduction** in the number of out-of-school adolescents at both lower and upper secondary education, particularly for girls. However, those at primary level have seen no improvement over the past 2 decades or more, indicating that the **most vulnerable and excluded** children are yet to be reached and included.

Equity in education, as highlighted in the SDG 4, is also vital for any country's development. If marginalized groups of children are not given the same access to quality education and learning opportunities, the cycle of poverty and disadvantage is perpetuated – a fact that is difficult to reconcile in a world where wealth and abundance is so plentiful for so many. UNICEF therefore works to identify and address the root causes of inequality that affect the most vulnerable children to better understand why some children do not attend school and support those children in learning.

Unless we take **bold actions**, children and adolescents will remain disadvantaged and left behind from the rapid economic growth and social transformation processes that are going on in the region. It is in this context that this report aims to provide **up-to-date knowledge** and **evidence** on the **profiles** of out-of-school children, examine **barriers** that children and families face in accessing education, and propose **policy responses** and **strategies** to achieve the SDG 4 targets across the region.

It should be noted that this report is also due to efforts initiated in 2010, when UNICEF and the UNESCO Institute for Statistics (UIS) jointly launched **the Out-of-School Children Initiative (OOSCI)** globally to accelerate actions toward the goal of universal basic education of high quality in 2015.

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1 East Asia and Pacific Region consists of 28 countries, including 13 countries in East and Southeast Asia (Brunei Darussalam, Cambodia, China, DPR Korea, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Thailand, Timor-Leste, Viet Nam) and 15 countries in the Pacific (Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, F. S., Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu).

FIGURE 1. Overview of Out-of-School Children and Adolescents in East Asia and Pacific Region (by sex and level)
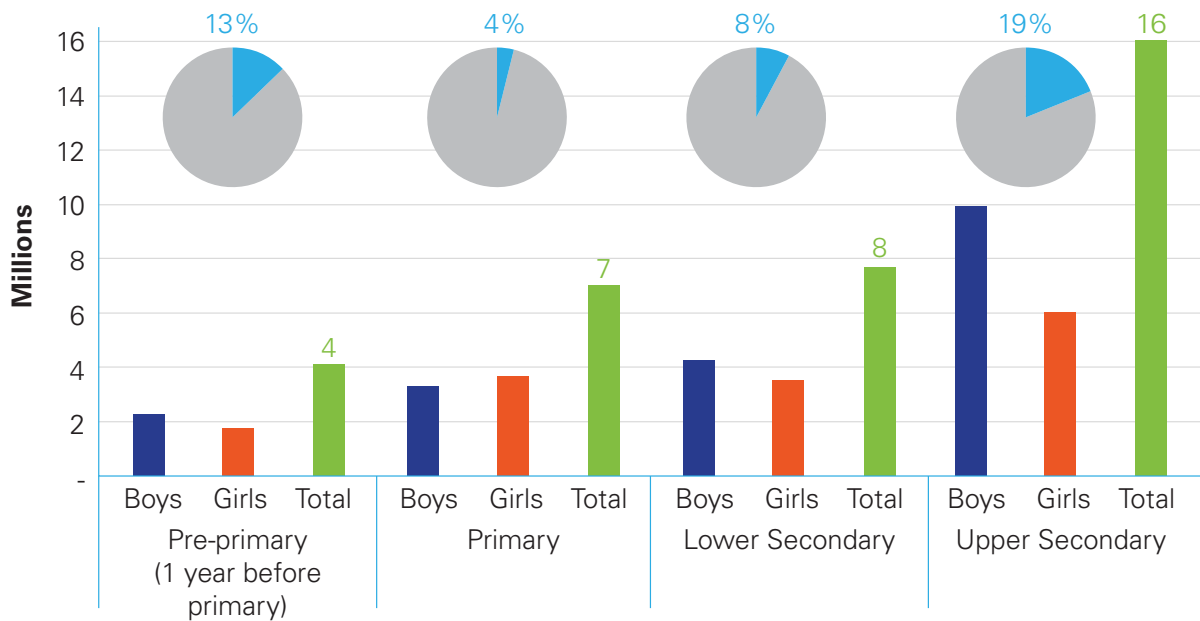
Source: UIS, 2019

FIGURE 2. Trends of Number of Out-of-School Children and Adolescents by Level in East Asia and Pacific Region (2000–2017) (by sex and level)
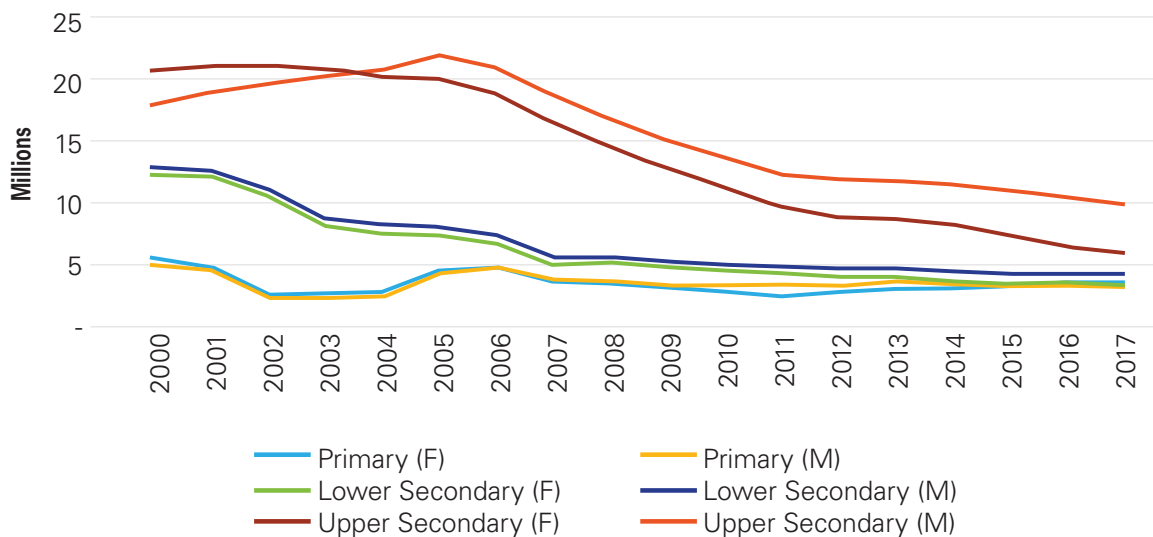
Source: UIS, 2019

2. **Data:** How Can We Count and Find the Out-of-School Children and Adolescents?

This regional report is based on the Conceptual and Methodological Framework (CMF) which defines the Global Out-of-School Children Initiative (OOSCI) and standardizes data and policy analysis across national studies. The approach to modelling the OOSCI analysis is through the **Five Dimensions of Exclusion model**, which presents 5 target groups of children and adolescents defined by the official age of the school level and by their school participation status.

The Five Dimensions of Exclusion are:

Dimension 1	Children of **pre-primary school age** who are **not** in pre-primary (ISCED 02) or primary education (ISCED 1).
Dimension 2	Children of **primary school age** who are **not** in primary (ISCED 1), lower secondary (ISCED 2) or upper secondary education (ISCED 3).
Dimension 3	Children and adolescents of **lower secondary school age** who are **not** in primary or secondary education (ISCED 1, 2 or 3).
Dimension 4	Children and adolescents, irrespective of their age, in **primary school** who are **at risk** of dropping out.
Dimension 5	Children and adolescents, irrespective of their age, in **lower secondary school** who are **at risk** of dropping out.
*Upper secondary age group	Adolescents in this age group are not a dimension per se in the Global OOSC Initiative, as compulsory education ends at age 15 or below in half of the countries with available data in the EAP region, and thus, many are no longer required to attend school. However, given the critical importance of this level of education and learning, particularly in the fast-growing economies of the EAP region, this Report pays attention to upper secondary education when and as relevant.

This report uses a combination of **quantitative** and **qualitative** data sources for identifying out-of-school children and adolescents. To ensure methodological consistency and cross-country comparability in education statistics, this report analyzes internationally comparable data on population and education that were extracted from the databases of the United Nations and the UIS. Also, the report builds on the in-depth analysis in the **national OOSCI studies** conducted in **10 countries**: Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Papua New Guinea, the Philippines, Thailand, Timor-Leste and Viet Nam.

3. Profiles: How Many, Where and Who Are the Out-of-School Children and Adolescents?

3–1. How Many and Where Are the Out-of-School Children and Adolescents?

Dimension 1: Out-of-school children at pre-primary school age

An estimated **4 million** children (**13 per cent**) of pre-primary school age (1 year before primary) are out of school in the EAP region, ranging from less than 3 per cent in the Cook Islands, Malaysia, Thailand and Tuvalu, to nearly 70 per cent in Samoa and Timor-Leste. The largest share live in the Philippines, Indonesia and Cambodia. Notably, however, many countries have experienced sharp declines in the rate of out-of-school children at the pre-primary level since 2000, thanks to the increased investment in this level of education. In most countries, gender gaps slightly favour girls over **boys**. In addition, children from the **poorest** households throughout the region are significantly less likely to be in pre-primary school.

Dimension 2: Out-of-school children at primary school age

An estimated **7 million** children (**4 per cent**) of primary school age are out of school in the EAP region.[2] Of these, approximately 30 per cent are concentrated in Indonesia, while the highest rates occur in Timor-Leste and several countries in the Pacific, such as Marshall Islands, Papua New Guinea and Solomon Islands. Again, most countries have reduced the proportion of out-of-school children at primary age since 2000 due to prioritization of basic education, but numbers remain stable. Many of these out-of-school children enter school late and are subsequently classified as over-aged students for their grade.

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2   This UIS estimate includes inferred data for China, DPR Korea and Thailand for which data are not available, and so is possibly an under-estimate of the true total.

When this occurs, their risk of dropping out of school may become higher. Across the EAP region, there have been large increases in girls' enrolment in primary education, with most countries either reaching gender parity or going beyond parity to have more girls than **boys** in school. Typically, there are large gaps associated with characteristics such as **wealth**, rural or urban **residence**, **disability**, **minority** ethnic or language groups and rural-urban **migration**.

Dimension 3: Out-of-school adolescents at lower secondary school age

An estimated **8 million** children and adolescents (**8 per cent**) of lower secondary school age are out of school in the EAP region. Of these, most children are in Indonesia, Myanmar, the Philippines and Thailand. As is the case for Dimension 2, this estimate could be substantially higher if true figures for China and a few other countries were included. At this age, the vast majority of out-of-school children in most countries are those who previously went to school but have since **dropped out**. In most countries, there is a gender gap with more girls in school than **boys**. In numerical terms, girls' disadvantage in access to basic education has largely been eradicated in the region, although **girls** may still face numerous barriers in terms of experiences in and around school (e.g. violence, discrimination etc.) and access to further education and work opportunities. Similar inequalities by **wealth**, **residence**, **ethnicity**, **language** and **disability** are observed as for Dimension 2. **Child labour**, which is concentrated in rural areas and among the poorest households, risks affecting adolescents' school attendance and learning outcomes.

Dimension 4: Primary school students who are at risk of dropping out

Drop-out rates from primary education for the region as a whole have declined from 10 per cent in 2000 to **6.3 per cent** in 2016. In Cambodia, the Cook Islands, Myanmar, the Solomon Islands, Timor-Leste and Tuvalu, 1 in 5 children (20 per cent) or more leave school before the last grade of primary education. Exposure to early childhood care and education – considered to be a key predictor of whether children are likely to stay in school and complete primary education – varies widely across the region. For most countries, few children are over-age; however, Cambodia, Timor-Leste, Papua New Guinea and the Solomon Islands all have more than 20 per cent of such over-age children and adolescents.

Dimension 5: Lower secondary school adolescents who are at risk of dropping out

As children enter lower secondary education, it becomes increasingly common to be **over-age**, which in turn affects the **drop-out** rates throughout secondary schooling. In 8 countries, 20 per cent or more of children at lower secondary level are at least 2 years over-age with 2.6 per cent of students in Samoa to 32 per cent in Cambodia in 2016. Larger gender gaps also emerge at this level, where **boys** appear to be lagging behind girls in terms of grade progression.

Upper secondary age adolescents: no longer required to attend school

Of the **16 million** adolescents of **upper secondary** school age (15 to 17 years old), many are **no longer required to attend**[3], as compulsory education ends at age 15 or below in half of the countries with available data in EAP. For example, compulsory education ends at age 16 in Indonesia, which accounts for nearly 13 per cent of the region's out-of-school adolescents. At the same time, however, countries such as the Philippines have made upper secondary education compulsory. Women are less likely to be out-of-school in this upper secondary age group, and only 3 countries of the 18 with recently available data show a slight advantage for males (Lao PDR, Papua New Guinea, Tokelau). While many of these adolescents may be working or accessing informal education or training opportunities, it is important to understand the equity gaps in their access to education and learning.

Based on the data, most countries in the region can be classified into **3 broad typologies.**

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3   It is for this reason that the Global OOSC Initiative has not included upper secondary education in its analytical framework of the Five Dimensions of Exclusion. However, given the critical importance of this level of education and learning, particularly in the fast-growing economies of EAP region, this Report pays attention to the upper secondary education when and as relevant.

Typology 1: Countries with high out-of-school rates

Across all education levels throughout many Pacific States, Cambodia, Papua New Guinea and Timor-Leste, **more than 10 per cent** of children are **out of school**. While data is limited on pre-primary, it is considered that these countries have high out-of-school rates at this level too. In Cook Islands and Tuvalu, less than 4 per cent of pre-primary age children are out of school, while in Samoa, the figure jumps dramatically to 63 per cent. Attachment to schooling also tends to be weak for some of these countries (Cambodia, Solomon Islands, Timor-Leste), as indicated by **high drop-out** rates in primary and/or lower secondary levels. **Policy priorities** for these countries are likely to include ensuring that a school is accessible, including in remote and poor areas, and addressing poverty-related barriers to education. Policies to increase children's access to early learning programmes/pre-school can also help reduce out-of-school rates and weak attachment at subsequent education levels.

Typology 2: Countries with weak attachment to primary education

In Cook Islands, Lao PDR, Myanmar, Samoa and Tuvalu, although enrolment in primary education is relatively high (less than 10 per cent out-of-school rates), attachment to school is low with **high drop-out** rates before completion of the primary education cycle. **Policy priorities** to reach and retain children in this group require identification of country-specific barriers to school access and completion – including for the most marginalized groups – with a focus on the quality of teaching and learning policies in the early grades. This also requires careful analysis of overlapping factors of disadvantage, such as girls from the poorest households in remote rural areas, child labour and the most disadvantaged geographical regions etc. Data-driven early warning systems, for example, could identify risks and prevent premature dropout.

Typology 3: Countries with weak transitions and/or attachment to lower secondary education

More than **10 per cent** of children remain **out of school** or **drop out** at **lower secondary** age and do not finish the compulsory education cycles in Fiji, Indonesia, Malaysia, Niue, Philippines, Thailand, Tonga, and Viet Nam. These countries are nearly all **lower-middle income** countries but are quite diverse. In some countries, such as Indonesia, Malaysia and Tonga, a significant number of children are not continuing and/or completing lower secondary education after high levels of primary school participation. Some countries could be included in both Typologies 2 and 3 – such as Myanmar and Lao PDR – which face both weak attachment to primary education and weak transitions to lower secondary schools. **Policy priorities** need to focus on the transition to lower secondary education, including alternative forms of educational provision for those who are unable to stay in the formal system, and related issues such as preventing irregular school attendance, repetition and drop-out.

Across those 'typologies', all countries must prioritize strategies to ensure the **most marginalized** groups of children and adolescents are enrolled and supported to stay in school and learn effectively. Once in school, policies will need to provide these children with an **inclusive and supportive learning environment** to ensure that all children have the opportunity to complete basic education with solid learning outcomes.

3–2. Who Are the Out-of-School Children and Adolescents?

Major **characteristics** of out-of-school children and adolescents in the EAP region are as follows, with the most vulnerable populations usually characterized by **several combined factors of disadvantage** – such as gender, ethnicity and geographic location – which are not easily disentangled (e.g. ethnic minority girls from poorest household in remote rural area).

Children and adolescents from poor households	Children and adolescents from the poorest households (usually defined as the lowest 20 per cent in the income quintile) are much more likely to be out of school at pre-primary, primary or lower secondary levels (in Dimensions 1, 2 or 3) than children from richer families in all countries, where data is available.
Children and adolescents living in rural areas	Disparities in school attendance can be based on area of residence, creating large rural-urban gaps (e.g. Cambodia, Lao PDR, Timor-Leste). In some cases, the rural-urban gap may be compounded by differences in poverty incidence, so that the rural poor are worse off than the general rural population, and notably worse off than the urban poor, as is the case in Cambodia, Indonesia, and Viet Nam.
Children and adolescents living in remote areas or small islands	The isolation of small islands or other remote locations in mainland countries tend to cause a scarcity in the supply of education (e.g. fewer schools, more physical barriers, fewer qualified teachers). Although data are not always available, studies indicate this is likely to be an issue for attending school in the Pacific Islands, especially Solomon Islands, Micronesia, F. S., Palau and Marshall Islands, as well as in remote areas in Cambodia and Myanmar, for example.
Children and adolescents living in poor urban areas	There is less poverty in urban than rural areas, but those who are poor in urban areas are among the children at risk of educational exclusion. The urban poor are similarly, if not more, disadvantaged as the rural poor in terms of access to primary education in Lao PDR, Myanmar, Thailand, Timor-Leste and Viet Nam. Although pre-primary provision is usually highest in urban areas, children from the poorest urban households are unlikely to attend school at all or attend low quality public schools or unregulated private institutions.
Young and adolescent girls	Girls are less likely to attend or complete schools than boys in some countries, although gender parity has increasingly been achieved across the region. Girls are more likely to be out of pre-primary school (Dimension 1) in Micronesia, F. S., Mongolia, Brunei Darussalam, Thailand and Marshall Islands. Disadvantages in primary and lower secondary are less common in the EAP region, but the disadvantage of being a girl can often be compounded with being poor or living in rural areas. For example, in Lao PDR and Myanmar, girls are disadvantaged relative to boys among the poorest families, but not among wealthier families.
Young and adolescent boys	The disadvantage for boys (relative to girls) can be observed across all education levels in different countries. For example, boys are less likely to attend pre-primary school in Palau, Nauru, Cook Islands and Malaysia or primary school in Marshall Islands, Timor-Leste, and the Philippines. The scale of the disadvantage tends to grow in lower secondary education. Boys are particularly likely to be over-age for their grade in several countries (including Cambodia, Lao PDR, Marshall Islands, Palau, the Philippines, and Timor-Leste), a risk factor for dropping out. In Cambodia and Viet Nam, boys are disadvantaged relative to girls among the poorest families, but not among wealthier families.

Children and adolescents from ethnic or linguistic minorities	These children and adolescents are over-represented in the out-of-school population across several countries including Cambodia, Lao PDR, Myanmar Thailand, Timor-Leste and Viet Nam. There are varying degrees of educational (and other) exclusions among different 'minority groups' in each country context.
Children and adolescents who work	In Lao PDR and Myanmar, there is a strong association between working and being out-of-school in primary and lower secondary school (Dimensions 2 and 3). In other countries, children who work often seem to be able to combine work and school to a certain extent, but children who work long hours or who live in challenging conditions may still have difficulty doing so and become out-of-school.
Children and adolescents who migrate or whose parents migrated	Across all education levels and out-of-school dimensions, rural-urban migrants are more likely to be out of school than non-migrants. This is the case in Viet Nam with internal migrations, as well as in Thailand, where children of international immigrants often drop out after completing primary education. Vulnerabilities associated with migration might also be related to non-economic factors such as climate change. In these cases, data are limited for most countries.
Children and adolescents with disabilities	Children and adolescents with disabilities are much more likely to be disproportionately out of school in all education levels and out-of-school dimensions than those without disabilities or with partial disabilities. Although data collection on children with disabilities is limited in most countries, reports in Viet Nam, Cambodia and Myanmar strongly confirm their disadvantage.

4. Barriers: Why Are These Children and Adolescents Out of School?

A variety of **demand-** and **supply-related barriers** keep children out-of-school in countries of the EAP region. Major barriers include the following:

Demand-side Barriers	
School-related fees and costs	The abolishment of school fees and other pro-poor targeted policies reduce the cost of school for all families. The provision of free meals (including breakfast), learning supplies and textbook provision, scholarships, stipends, cash transfers or other demand-side financing mechanisms are just some of the policies introduced to support children from the poorest families. Despite the tuition fee free policies however, schools continue to charge some sort of fees – formally or informally – to account for budget gaps. Tuition fees levied by teachers for extra lessons outside of normal class time are a common barrier in many countries. These hidden costs of schooling can be a disincentive for entering school on time or for completing school.
Child labour	Child and adolescent labour is overwhelmingly concentrated in rural areas and among the poorest households with most employed children working in agriculture alongside their families. Child work in the household, which is disproportionately done by girls, can affect schooling just as much as paid employment, while boys from poor families are also likely to face societal and family pressures to start working. A basic legal framework should be in place to protect children and adolescents who work so that child labourer's are able to benefit from non-formal and complementary education programmes which combine work and education.

National and international migration	Rural-urban migration can cause major disruptions in schooling as it is linked to absenteeism and being over-age due to repetition, which thereby increases the risk of dropping out. Migrants often settle in urban slums serviced by poor quality public services, with these gaps enabling the proliferation of unregulated, frequently low quality, private schools. Household registration systems present a formal bureaucratic barrier to education for rural-urban migrants. International migrants face a range of barriers to education in their host country, especially if they do not have permission to be there. Other barriers remain to further decrease access, including documentation, language, stigmatization and non-formal school fees. Countries may be reluctant to extend public services to migrants, especially to those who do not have permission.
Climate change	The physical geographies of many EAP countries make them particularly vulnerable to climate change, and children and adolescents are likely to be most impacted by the negative consequences of sea level rising, massive flooding, crop failures and other outcomes. Existing evidence shows that children are already impacted by climate change, in terms of their nutrition, health and livelihood, which in turn, has an impact on their ability to attend school and learn effectively.
Ethnicities, languages and social norms	Children and adolescents from minority groups, often in remote rural areas, are more likely to be over-age and have lower completion rates. Children whose primary language is not the language of instruction in school are more likely to drop out or fail in early grades. Cultural traditions in some ethnic minority communities also negatively impact the educational opportunities of children, in particular, those of girls. Early marriage, teenage pregnancy, household obligations and a negative education bias are factors that are perceived to reduce the duration of schooling for girls in the EAP region.
Disabilities	The identification and measurement of the incidence of disabilities among children and adolescents varies across countries and can be a limiting factor in developing adequate policies to address barriers to education. Implementing disability-inclusive education can be difficult in practice, because there is little evidence on the effectiveness of specific approaches, such as including children and adolescents with different disabilities in mainstream schools and classes; having separate classes within mainstream schools; and having separate schools altogether. Initiatives that are well-defined at the policy level may not be effectively implemented, because schools lack resources, teacher training and expertise is not sufficient, and because negative social attitudes and discrimination persist.

Supply-side Barriers	
Beginning of compulsory schooling	Many children from poorer households do not have access to early childhood education and learning opportunities. In most EAP countries, compulsory education starts only at primary level, but given the strong evidence on multiple benefits for subsequent education and learning outcomes, beginning and duration of compulsory schooling could be lowered.

Physical access	Insufficient availability of primary and lower secondary schools in rural areas is a key barrier in many countries. Long distance to schools (especially secondary) and lack of transportation in rural areas discourage many children and adolescents, particularly girls, to continue their schooling. Many schools in rural areas are incomplete and do not offer the full primary cycle or create multi-grade classrooms. Poor infrastructure and facilities, including lack of water and sanitation, are likely to deter children and adolescents from attending school, and remains a key barrier to those with disabilities.
Entry and registration requirements	Birth certificate requirements for enrolment in school are identified as a significant administrative barrier to the right to enrol in school. Often, the cost of obtaining a birth certificate can be prohibitive for those from the poorest families in rural areas. Also, children and adolescents from migrant groups and ethnic minorities tend to have lower birth registration rates than the national average. Other barriers for schooling, including progression and transition to the next level of education include, for example, age limit, requirement for test scores and result of high-stakes examinations etc.
Teachers and learning environment	Developing a qualified workforce does not match the rapid expansion of education. There is a need for more equitable deployment and allocation of teachers to the areas that need them, which usually are poorer, and more remote, rural areas. Teachers' attitudes, including gender-biased expectations, can also create disincentives and conditions for dropping out of school or lower performance for certain groups. School-related violence (sometimes gender-based) – including sexual and emotional violence and corporal punishment – create unsafe and often abusive learning environments for children and adolescents.
Curriculum relevance and learning	To address the irrelevant nature of certain curricula, efforts are being made to make them more competency-based, with other life skills (so-called 21st Century skills), and to introduce more child-centered and gender-responsive pedagogical methods. Several EAP countries supported mother tongue-based multilingual education by developing relevant teacher training, recruiting teachers from ethnic or indigenous communities, and developing learning materials; however, coverage still remains limited.
Education finance	Education expenditure in many EAP countries is below international recommendations (4–6 per cent of GDP or 15–20 per cent of public expenditure) and is often not focused on basic education. Fee free education tends to incur surges in household expenditure, as various levies are charged on parents to cover school's operational budget. One of the most effective ways to target poor populations is to channel funds to where they are most needed through a equitable block grant process and decentralized financing mechanism. Critical to this is an equity-based formula which favours small and disadvantaged schools, to offset their increasing households' costs. Also, there need to be more innovative financing mechanisms/modalities.

5. Policy Actions: How Can We Reach and Include All Out-of-School Children and Adolescents?

This report presents a set of 10 key policy actions to tackle the barriers most disadvantaged and excluded children and adolescents face in their education and learning in the EAP countries.

1) Expand public early childhood education provision and ensure smooth transition to primary education

Public investment in early childhood education should be increased to provide the most disadvantaged children with foundational skills, including cognitive, physical and socio-emotional skills, in preparation for life-long learning. As a result, the current trends of a heavy reliance on household expenditure for private service providers should decline. Early learning promotes school completion and increases the learning outcomes of children and adolescents later in primary and secondary education. Targeted resources and investments are needed to reach the most disadvantaged children, who would benefit the most from quality early learning opportunities, such as those provided in their mother tongue. Ensuring learning at this foundational level and smooth transition into primary education is a key gamechanger for the lives of children and adolescents in the region.

2) Facilitate on-time enrolment, progression and completion, particularly during grade transitions and emergencies

Grade repetition and dropouts are costly and counter-productive for ensuring equitable access and participation, as well as better learning outcomes. To motivate and support all children and adolescents in the EAP region, education systems need effective policies and strategies to facilitate on-time enrolment, promote smooth transition between education levels and to safeguard education during emergencies. To this end, it is essential tWo have a combination of improved teaching, relevant curriculum and inclusive pedagogies throughout education pathways. Also, effective use of Education Management Information System (EMIS) data with an early warning system can identify at-risk children and prevent dropouts. Ministries of Education should create an enabling environment for risk reduction and increase the resilience of education systems through risk-informed and conflict-sensitive planning, budgeting and programming in the face of emergencies, which include both natural disasters and conflicts.

3) Focus on learning, particularly to acquire the foundational skills and achieve better learning outcomes for all children and adolescents

Good learning environments and outcomes contribute to better participation and completion, not vice versa. Education systems thus need to strengthen the quality of teaching and learning so that all students meaningfully progress in the school system and acquire basic literacy and numeracy skills by the end of compulsory/basic education. Children and adolescents can then build on these foundational skills and obtain more complex knowledge and the transversal skills (also known as 21st Century skills). It is critical to establish strong national assessment systems to regularly monitor learning outcomes at various stages of education. Investing in such systems is cost-efficient, as data analytics can provide insights into critical policy questions around learning gaps and inefficiencies. Also, teachers should be trained and supported to carry out classroom-based formative assessments to improve teaching and learning, and by so doing, prevent grade repetition and dropouts. Key to this is pedagogic leadership and support by principals and supervisors to create effective and inclusive learning environments within schools.

4) Develop a truly inclusive education system with flexible strategies and pathways

The education system needs to become more inclusive by addressing the multiple challenges and barriers, such as those identified in this report. With strategic vision, political commitment and realistic planning and budgeting, various inclusive education strategies should be implemented. They are, for example, mother tongue-based and multilingual early literacy programmes, gender-sensitive teaching and learning materials, scholarships for the poorest children, and universal design and assistive technologies for children with disabilities etc. Also, the education systems should become adaptive and flexible, and embrace innovative ideas in the delivery of non-formal programmes, such as accelerated learning, flexible models, and catch-up programmes, with pathways to certification and accreditation. Such a national equivalency framework can facilitate children's and adolescents' movement across formal and nonformal education systems while promoting equity in education opportunities.

5) Promote decentralized accountability and provide comprehensive school support for local actions/ solutions

Effective school-based management is key to delivering improved education services in each locality, with decision-making authority, resources, associated responsibilities and accountability at the forefront. Well-managed decentralization can increase school autonomy, empower school communities and stakeholders, encourage their responsiveness to local needs, and ultimately improve educational participation and learning outcomes. Disadvantaged schools should be prioritized in the provision of resources and support by local and national authorities as they tend to lack internal capacity and resources to tackle various challenges. To have real impact, various forms of support (e.g. infrastructure, materials, teachers, funding etc.) need to be provided at the same time rather than in a fragmented and uncoordinated manner. These schools should also be assisted by regular, well-intended supervision and quality assurance (rather than fault-finding inspection) to support self-evaluation and improvement, enhanced school leadership and meaningful community participation.

6) Attract, develop and retain teachers and school leaders with the right set of skills, and deploy them in an equitable manner

The capacity of the education workforce in schools is the foundation to delivering successful policies which respond to children and adolescents' learning needs in an equitable manner. In other words, teachers and school leaders, who are well trained, qualified and motivated, are key drivers to transform low performing disadvantaged schools into well-functioning effective schools that promote equity and quality. Policies need to ensure the provision of pre-service training and in-service continuous professional development opportunities (including during the induction periods). To attract and retain a high-quality education workforce in these disadvantaged schools, the education systems should develop and provide supportive working conditions, including adequate financial and career incentives, as well as mentoring/ coaching support. Deployment and management of each education workforce needs to be driven by data and needs, rather than ad-hoc decisions, favouritism and urban-bias.

7) Collect, analyze and use data effectively for equity

Data is at the heart of efforts to tackle inequities in education. Therefore, the national statistics system – and EMIS in particular – needs to be strengthened to produce timely, relevant and reliable data with

variables related to vulnerable populations (e.g. ethnicity, disabilities, language). In the SDG 4 era, education monitoring activities must integrate different data sources (e.g. administrative, household surveys, learning assessments, financial data), so close links should be established with various data producers/owners within and beyond Ministries of Education (e.g. civil registry, health, social protection, labour etc.). As this report has demonstrated, profiles of out-of-school children and adolescents can and should be regularly monitored and updated in each EAP country so that relevant and innovative policies are developed and implemented further to reach and support those who are at risk of being left behind. Annex 5 further suggests specific recommendations for enhanced data production, analysis and use for equity in education.

8) Prioritize education in government budgets, and invest smartly and efficiently

Government budgets in the EAP region need to prioritize education to meet the internationally suggested benchmark of education expenditure towards 15 to 20 per cent of total government expenditure, and 4 to 6 per cent of GDP, with a large proportion allocated for pre-primary and basic education. Strengthening public finance management systems in education is one of the key game-changers to bring better results for children, particularly the most disadvantaged, through equitable resource allocation and targeted investment in priority areas/population groups etc. (e.g. school grants, capitation grants, scholarships, teachers and other support systems). With equity-focused financial monitoring, data analytics can facilitate better understanding of financial effectiveness and efficiencies, or wastages, as they relate to enrolment, progression and retention.

9) Enhance partnership and coordination among stakeholders who serve marginalized groups

In most countries, marginalized groups need a greater voice and participation in the development and implementation of policies at a national and local level. Tackling the complex and enormous challenges around out-of-school children and adolescents necessarily requires that various stakeholders join forces and bring their strengths and resources together. At the national level, effective advocacy and communication is fundamental to encourage more partners and service providers – including civil society, religious leaders, business/companies, youth groups etc. – to come together to support education for the excluded populations. Stronger coordination among education providers is needed to advocate against unregulated, low-quality private schools which target the vulnerable children of immigrants or rural-urban migrants, children with disabilities or children who need to work.

10) Promote cross-sectoral approaches and interventions to tackle barriers related to poverty and violence in and around schools

The diverse needs and challenges of the out-of-school population require a holistic approach to policies and programming, including the integration of health, nutrition, water, sanitation, child protection, social protection and gender-responsive interventions, as needed. For example, challenges of poverty require cross-sectoral solutions to reduce families' reliance on child labour and incentivize their support to their children's schooling and learning. Appropriately targeted social protection mechanisms, such as cash transfers or stipend programmes based on good attendance and performance, can have positive effects on reducing the impact of family poverty on school retention and learning. Also, barriers related to violence in and around school, including gender-based violence and attacks on schools in conflict-affected situations, require urgent policy interventions to ensure children's well-being, and effective and safe learning in the EAP region.

6. **The Way Forward:** What Should We Do Now, Together?

The issues around equity in education in general, and out-of-school children and adolescents in particular, are both complex and daunting. At a national level, they require strong commitment and leadership to realize the promise of SDG 4 and the CRC, with governments and key stakeholders – the 'duty bearers'. Identifying and supporting all out-of-school children and adolescents to survive and thrive, is also a strategic approach to accelerate social and economic development across low to middle income countries, and also ensure social cohesion in upper income countries. As highlighted in this report, it is essential to have a consistent, budgeted and long-term strategy led by government. Such strategy should be based on evidence, while also remaining flexible enough to adapt to the various needs of children and adolescents.

Responding to these challenges and needs also requires collective commitment and extra efforts by key partners and stakeholders. Indeed, there are opportunities in the EAP region where a number of regional mechanisms, platforms and initiatives exist. These can be strategically mobilized to further facilitate cross-national fertilization and intra- and inter-regional exchange and collaboration.

- In the context of the **Asia Pacific Regional Roadmap for the SDG 4-Education 2030 Agenda**, developed by the **Regional Thematic Working Group on Education 2030**, the **SDG 4 National Coordinators** from each government and key regional stakeholders, including the Southeast Asia Ministers of Education Organization (SEAMEO) and Asia South Pacific Association for Basic and Adult (APSBAE), could join force with UNICEF, UNESCO and other partners to address the barriers that many marginalized children and adolescents face in the EAP region.

- Financial and technical support needs to be mobilized to the implementation of the Association of Southeast Asian Nations (**ASEAN**) **Declaration on Strengthening Education for Out-of-School Children and Youth**[4]. The forthcoming **SDG 4 Progress Review** and the Asia Pacific Regional Education Conference (2020) could further highlight this and mobilize the political will and momentum around the issues of out-of-school children and adolescents in the region.

- A range of issues and recommendations could be followed up by various regional initiatives, such as the joint regional initiative by UNICEF EAPRO, UIS and UNESCO Bangkok on **'Enhancing Statistical Capacity for Education 2030-SDG 4'**. Data and statistics are key drivers to monitor and support out-of-school children and adolescents, and can contribute to the strengthening of capacity and systems.

- The national OOSC studies point to the need for **further research**. There is a strong call for more **evaluations of targeted policies** to reduce out-of-school children and adolescents at national and local levels so that policy changes and investment can be linked to more structured monitoring and evaluation tools and outcomes. Similarly, regarding the complexity of **multiple factors of disadvantage**, rigorously designed research should be able to provide a better understanding of which policy targets might be more effective to reach the most marginalized.

- Finally, the challenge in increasing access and retention for the out-of-school population lies **beyond the education sector**. Developing more adequate and effective social and labour market policies can engage various actors to provide marginalized students with greater learning opportunities. Furthermore, enabling links between the education sector and the labour market can provide additional reinforcement to developing life-long learning needs for economic growth and sustainable development.

Alignment among these and key efforts led by other partners such as the Global Partnership for Education, World Bank, Asian Development Bank, the Pacific Community, bilateral donors, among many others, will be key to accelerate results and achieve SDG 4 commitments for all children and adolescents out of school in the EAP region.

UNICEF stands ready to further promote such collective efforts and contribute to the realization of the right of every child to quality education and learning.

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4   The Declaration was adopted in September 2016 and accessible at: https://asean.org/storage/2016/09/ASEAN-Declaration-on-OOSCY_ADOPTED.pdf

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Acronyms

ANAR	Adjusted Net Attendance Ratio
ANER	Adjusted Net Enrolment Ratio
ASER	Annual Status of Education Report
BSM	Beasiswa Untuk Siswa Miskin (Indonesia)
CMF	Conceptual and Methodological Framework
CRC	Convention on the Rights of the Child
DHS	Demographic and Health Survey
DPR Korea	Democratic People's Republic of Korea
EAP	East Asia and Pacific (region)
ECD	Early Childhood Development
ECCE	Early Childhood Care and Education
ECE	Early Childhood Education
EMIS	Education Management Information System
F. S.	Federated States (of Micronesia)
GER	Gross Enrolment Ratio
GPI	Gender Parity Index
Is	Islands
ISCED	International Standard Classification of Education
Lao PDR	Lao People's Democratic Republic
MICS	Multiple Indicator Cluster Survey
OOSCI	Out-of-School Children Initiative (UNICEF and UNESCO UIS)
PISA	Programme for International Student Assessment (OECD)
PKH	Programme Keluarga Harapan (Indonesia)
PNG	Papua New Guinea
SDG	Sustainable Development Goal
SOA	School Operational Assistance (Indonesia)
TIMSS	Trends in International Mathematics and Science Study
UIS	UNESCO Institute for Statistics
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNPD	United Nations Population Division
USAID	United States Agency for International Development

Terminology and Definitions

Definitions from this section are derived from the UNESCO Institute for Statistics (UIS) glossary available on their website and the International Standard Classification of Education (ISCED) 2011 (UIS, 2012).

Adjusted net attendance/enrolment ratio (ANAR/ANER) for primary education identifies the total number of students of the official primary school level age group who are attending or enrolled at primary or secondary education, expressed as a percentage of the corresponding population. For the lower secondary level, students are included as attending or enrolled if in lower secondary or higher education levels.

Basic education includes 3 levels of education, usually pre-primary, primary and lower secondary education. In countries where pre-primary is not part of formal education, this term tends to exclude that level.

Compulsory education indicates the beginning of education which is mandated by law, through the national constitution or other legal means. Compulsory education usually begins in primary school around age 6 or 7, but it can start as early as at the pre-primary level.

Early Childhood Care and Education (ECCE) refers to care (e.g. health, nutrition, sanitation, hygiene, protection) and education (e.g. early stimulation, education, guidance, developmental activities) provided to young children aged 0 to 8. It takes place at home or in the community and is provided through organized services and programmes that target children directly or indirectly (i.e. targeting their parents and other primary caregivers in order to improve their care and education practices vis-à-vis their own children). This term, which indicates a holistic vision of young children's care, development and learning, is similar to 'Early Childhood Development (ECD)', 'Early Childhood Education and Care (ECEC)', 'Early Childhood Care and Development (ECCD)' etc. Programmes at this age group usually are known as 'Day Care Centre (DCC)', 'Child Care Centre (CCC)', Nursery school, Kindergarten, Pre-school and Pre-primary school.

Formal education is education which is delivered in an institutional environment and is intentional and planned through public organizations and recognized private bodies and, in their totality, make up the formal education system of a country.

Gross enrolment ratio (GER) measures the number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to that same level of education.

Primary school refers to the beginning of formal education in many countries, although in some cases preprimary education can also be compulsory.

'Parent(s)' is the generic term used to represent the person(s) with primary childrearing responsibility in the household. It reflects a variety of family organizations, including guardians, other primary caregivers, single heads of household, nonbiological parents, multigenerational and nontraditional family compositions.

Context
Why Is Caring About Out-of-School Children and Adolescents So Important?

1. **Context:** Why Is Caring About Out-of-School Children and Adolescents So Important?

1.1. **Purpose of the Report**

In 2010, UNICEF and the UNESCO Institute for Statistics (UIS) jointly launched **the Out-of-School Children Initiative (OOSCI)** globally to accelerate efforts toward the goal of universal basic education of high quality for every girl and boy, regardless of race, economic, political, civil, health or cultural status, in 2015.[5] The question of out-of-school children is a central concern for many countries in their efforts to achieve universal access and participation in basic education. The fundamental **right to education** is clearly acknowledged in **the United Nations Convention on the Rights of the Child (CRC)**, adopted by the United Nations General Assembly in 1989, and underlies the need for all children and adolescents to develop and acquire skills for their future learning and well-being.

Despite such global commitment, in 2017, approximately 262 million children and adolescents across the world – that is, 1 out of every 5 – were not in school (UIS, 2019). Of these, 64 million children are of primary school age (9 per cent of 6 to 11 year old's), 61 million are adolescents of lower secondary school age (16 per cent of 12 to 14 year-old's), and another 138 million are youth of upper secondary school age (36 per cent of 15 to 17 year old's).[6] About 60 per cent of these out-of-school children and adolescents live in conflict-affected countries and 85 per cent in low- and lower-middle income countries (UIS, 2018d, 2019).[7] Many children born in and growing up in vulnerable or disadvantaged circumstances – such as poverty, remote rural areas, ethnic minority communities, and/or with disabilities – are at the greatest risk of being denied their right to education.

With the adoption of the **Sustainable Development Goal on Education (SDG 4)**, which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all", the pressure mounts further for countries to reduce the number of out-of-school children. The SDG 4 is now also

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5   The initiative receives support from the Global Partnership for Education (GPE) and Understanding Children's Work, an interagency research initiative of the International Labour Organization, UNICEF and the World Bank.
6   Total is not equal to the sum of education system groups due to rounding.
7   In these countries, the out-of-school rate is 59 per cent for children of primary school age; for the lower secondary school age population, the rate is 63 per cent (UIS, 2019).

emphasizing its relevance to all the countries (not only the so-called 'developing world'), with widened scope from early childhood to lifelong learning, a focus on results and learning outcomes, as well as an uncompromised commitment to equity and the principle of **'leaving no one behind'**. Education is also a cross-cutting target across the SDGs, which can contribute to several other goals including those on poverty reduction (SDG 1), health and well-being (SDG 3), gender equality (SDG 5) and decent work and economic growth (SDG 8), among others.

In this context, the OOSCI offers a model to achieve the following 3 objectives:

1. **Profiles**: Examine various types and profiles of out-of-school children, in terms of both their characteristics and numbers, through improved collection and analysis of quality statistical data/ information.

2. **Barriers**: Identify and analyze barriers that contribute to exclusion from education.

3. **Policies**: Analyze the effectiveness of the existing policies and strategies related to enhanced school participation and propose evidence-based policy solutions to overcome the barriers.

This regional report presents an overview of the situation for out-of-school children in the East Asia and Pacific region. In 2017, about **35** million children and adolescents in the region were still not in school (UIS, 2019) (see Figure 1). Of these, **4 million** were of pre-primary school age (**13 per cent** of 1 year before the official primary entry age), **7 million** were of **primary** school age (**4 per cent** of 6 to 11 year old's), **8 million** were of **lower secondary** school age (**8 per cent** of 12 to 14 year old's), and another **16 million** were of **upper secondary** school age (**19 per cent** of 15 to 17 year old's). In terms of historical trends (see Figure 2), there has been significant reduction in the number of out-of-school adolescents at both lower and upper secondary education, particularly for girls. However, those at primary level have seen no improvement over the past two decades or more, indicating that the most vulnerable and excluded children are yet to be reached and included. Unless we take **bold actions** to change this situation, they will remain disadvantaged and left behind from rapid economic growth and social transformation processes in the region. It is in this context that this report aims to provide **up-to-date knowledge** and **evidence** on the **profiles** of out-of-school children, examine **barriers** that children and families face in accessing education, and proposes **policy responses** and **strategies** employed across the region.

▌ FIGURE 1. Overview of Out-of-School Children and Adolescents in East Asia and Pacific Region (by sex and level)
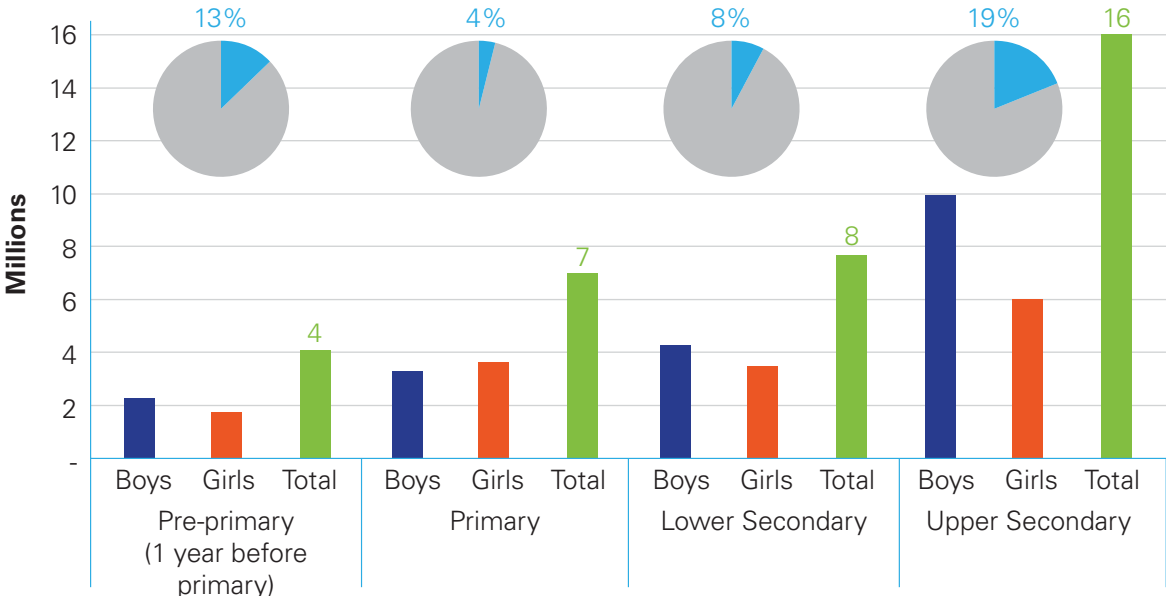
Source: UIS, 2019

FIGURE 2. Trends of Number of Out-of-School Children and Adolescents by Level in East Asia and Pacific Region (2000–2017) (by sex and level)
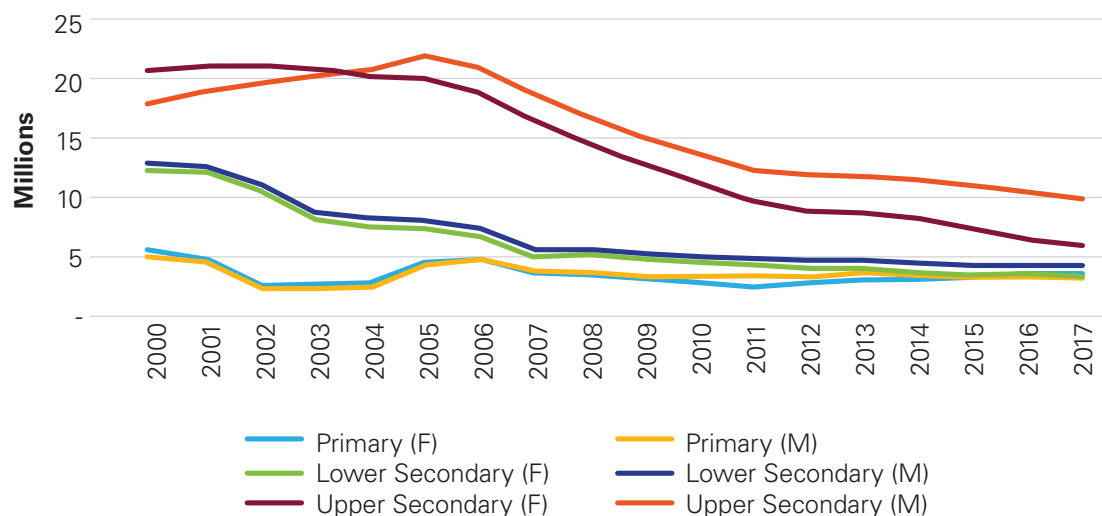
Source: UIS, 2019

1.2. Scope and Countries

The geographical area covered in this report is defined by UNICEF's East Asia and Pacific (EAP) region, which includes **28 countries,** of which 13 are in East Asia and 15 are Pacific island nations (see Table 1). The region stretches from Mongolia in the north to Tonga in the south, and from China to the west and the Pacific Islands to the east (Figure 3). The smallest countries are Niue and Tokelau with approximately 1,400 people, while the largest is China with 1.4 billion people (UIS, 2019). Most EAP countries are classified as lower-middle (13) or uppermiddle income (9) by the World Bank. Only 1 is low-income and 2 are high-income countries.

TABLE 1. East Asia and Pacific countries

East Asia	World Bank income classification (2018)	Pacific	World bank income classification (2018)
Brunei Darussalam	High	Cook Islands	n/a
Cambodia*	Lower middle	Fiji	Upper middle
China	Upper middle	Kiribati	Lower middle
DPR Korea	Low	Marshall Islands	Upper middle
Indonesia*	Lower middle	Micronesia, F. S.	Lower middle
Lao PDR*	Lower middle	Nauru	Upper middle
Malaysia*	Upper middle	Niue	n/a
Mongolia	Lower middle	Palau	High
Myanmar*	Lower middle	**Papua New Guinea***	Lower middle
Philippines*	Lower middle	Samoa	Upper middle
Thailand*	Upper middle	Solomon Islands	Lower middle
Timor-Leste*	Lower middle	Tokelau	n/a
Viet Nam*	Lower middle	Tonga	Upper middle
		Tuvalu	Upper middle
		Vanuatu	Lower middle

Note: * indicates countries which have prepared national OOSCI studies. n/a indicates income classification is not available.

Source: World Bank, 2018c

FIGURE 3. UNICEF East Asia and Pacific map

Source: UNICEF EAPRO, 2018

1.3. Data Sources

This review uses a combination of **quantitative** and **qualitative** data sources. Most of the internationally comparable data on population and education were extracted from the databases of the United Nations and the UIS (hereinafter referred to as the 'global database'). The report builds on the in-depth analysis in the **national OOSCI studies** conducted in **10 countries**: Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Papua New Guinea, the Philippines, Thailand, Timor-Leste and Viet Nam (see Annex 1). These national studies describe the out-of-school population, identify country-specific barriers to education participation and reveal gaps in data, policy and research in respective country contexts. They are a rich source of national research on out-of-school children, based on quantitative findings from national datasets (e.g. household surveys, population census, school administrative records) and qualitative data obtained from literature reviews of research, studies and evaluations related to education in each country. In a few countries, additional targeted research was carried out to fill critical information gaps for the national OOSCI studies (e.g. Lao PDR, Malaysia).

The review aims primarily to present an **overview** of the regional **situation** and **trends** with regard to the out-of-school situation, while recognizing the **diversity** of country-specific situations across the region. Specific country cases are highlighted throughout the report to illustrate examples and provide greater understanding of an issue. In many instances, these examples are based on the national studies or data which cannot be compared across countries, even though similar situations might exist elsewhere in the region.

With regard to the quantitative data, it is possible that there are inconsistencies or **differences** in seemingly similar indicators presented in this report. Differences among national and comparative international data are expected for a variety of reasons, including methodology and definitions used to calculate or estimate the values.[8] For each figure and table, care has been taken to make the data comparable, and explanatory notes provide additional detail as relevant. In each case, overall trends observed around out-of-school populations in the region remain the same. Section 2.3 will describe more details around data issues in counting/estimating out-of-school populations in the EAP region.

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8   See Section 2.3 and 3.5 for more information on data issues.

1.4. Development Context in the EAP region

The EAP countries are very **diverse** in terms of their demographic, socio-economic and geopolitical contexts. The region is undergoing enormous changes with high levels of economic growth accompanied by worsening inequality, rapid urbanization, accelerated migration and severe impact of climate change. All these factors can affect children's access to education and learning. This section summarizes some key aspects of the region's development contexts.

Demography

The region is home to more than 2 billion people, about 27 per cent of the world's population, and over 425 million children in 2015 (see Table 2).

TABLE 2. Total population of children and adolescents ages 0–14 (2015), by age group and country

	School age population			
	Total population	**Pre-primary**	**Primary**	**Lower secondary**
	0–14	**3–5**	**6–11**	**12–14**
Brunei Darussalam	98,818	18,947	38,427	20,695
Cambodia	4,903,908	1,052,269	1,910,731	882,577
China	247,072,789	50,956,606	97,358,079	46,994,029
DPR Korea	5,328,220	1,010,023	2,133,745	1,147,208
Fiji	256,443	54,058	103,014	47,330
Indonesia	71,920,631	14,341,029	28,424,699	14,159,879
Kiribati	39,280	9,053	15,235	6,322
Lao PDR	2,246,562	464,967	893,343	427,193
Malaysia	7,669,676	1,499,990	3,008,842	1,595,315
Micronesia, F. S.	35,579	6,794	14,160	7,591
Mongolia	856,745	196,587	307,706	127,785
Myanmar	14,608,721	2,767,374	5,994,890	3,125,199
Papua New Guinea	2,899,938	603,040	1,142,554	533,956
Philippines	32,782,349	6,722,907	12,892,307	6,236,845
Samoa	72,166	15,296	29,505	13,285
Solomon Is	232,354	49,119	91,812	41,645
Thailand	12,352,801	2,382,117	5,027,951	2,676,172
Timor-Leste	545,984	118,688	209,226	93,765
Tonga	39,058	7,928	15,883	7,580
Vanuatu	96,660	21,170	38,369	16,534
Viet Nam	21,609,156	4,585,944	8,414,434	3,935,446
EAP total (countries listed)	**425,667,838**	**86,883,906**	**168,064,912**	**82,096,351**

Notes: Population estimates by age groups are not available for Cook Islands, Marshall Islands, Nauru, Niue, Palau, Tokelau and Tuvalu. EAP total only includes those countries listed. School age population categories are those determined by UIS for general purposes and do not reflect individual education systems.

Source: UNICEF DESA, 2017

Table 3 shows that the region is undergoing significant shifts in population growth. Of the 21 countries with available data, 11 are experiencing **declining child and adolescent populations**. Population growth in the region is primarily dominated by 4 countries (China, Indonesia, the Philippines and Viet Nam) with rapid growth among the 15 to 64 year old's (see Annex 2). The **rise of youth populations** increases the importance of education and human capital development in order to enhance productivity and economic growth. Conversely, **ageing populations** can restrict economic growth, due to the potential of lower levels of productivity and increasing public health care costs, which, in turn, can weaken the flow of resources for national education budgets. Over the next 50 years, these demographic changes will require strengthening of the education systems and reducing access gaps (IMF, 2017; World Bank, 2018a).

TABLE 3. Total population change between 2000 and 2017, by age group and country

	Population change between 2000 and 2017			
	Total	**0-14**	**15-64**	**65+**
Brunei Darussalam	▲	▼	▲	▲
Cambodia	▲	▼	▲	▲
China	▲	▼	▲	▲
DPR Korea	▲	▼	▲	▲
Fiji	▲	▼	▲	▲
Indonesia	▲	▲	▲	▲
Kiribati	▲	▲	▲	▲
Lao PDR	▲	▼	▲	▲
Malaysia	▲	▼	▲	▲
Marshall Is	▲	..	..	..
Micronesia, F. S.	▼	▼	▲	▲
Mongolia	▲	▲	▲	▲
Myanmar	▲	▼	▲	▲
Nauru	▲	..	..	..
Palau	▲	..	..	..
Papua New Guinea	▲	▲	▲	▲
Philippines	▲	▲	▲	▲
Samoa	▲	▲	▲	▲
Solomon Is	▲	▲	▲	▲
Thailand	▲	▼	▲	▲
Timor-Leste	▲	▲	▲	▲
Tonga	▲	▲	▲	▲
Tuvalu	▲	..	..	..
Vanuatu	▲	▲	▲	▲
Viet Nam	▲	▼	▲	▲
East Asia & Pacific (excluding high income)	▲	▼	▲	▲
East Asia & Pacific	▲	▼	▲	▲

Notes: Population estimates are not available for Cook Islands, Niue and Tokelau. Total population is from World Development Indicators. East Asia & Pacific is the region defined by the World Bank (see Footnote 7). See Annex 2 for full data.

.. indicates data are not available by age group.

Source: World Bank, 2019a, 2019b

Migration has become an important phenomenon within the EAP region, as both a source of international migrants and of receiving "host" countries. Intraregional migration has increased considerably. Some 6.9 million people from Southeast Asia live in another country in the same region (IOM, 2018). Many Pacific Islanders have benefited from seasonal worker programmes with Australia providing remittances, new skills acquisition and knowledge transfer (World Bank, 2018a). Countries such as Malaysia and Thailand are important host countries for migrants from other countries in the region and beyond. A significant proportion of **international migration** in the region is "irregular", with many not registered as refugees by the government (UNESCAP, 2015). This has become an issue of concern in Malaysia, for example, as children of many migrants are **undocumented**, **stateless** or born to **illegal** immigrants.

Internal migration from rural to urban areas has produced policy challenges with regard to the provision of quality education in many countries, such as China, Mongolia and Viet Nam. Children of migrant parents are left behind in rural areas with older family members, or live in poor peri-urban settlements (e.g. ger areas of Ulaanbaatar, Mongolia). Rapid changes in the school-age population can lead to over- or under-supply of public education at local level. Migrant families may face difficulties enrolling their children in school with higher costs of education in urban areas, while rural school budgets may suffer due to decreasing enrolments (Batbaatar et al., 2005; Wang, 2008)"publisher":"Childhood Poverty Research and Policy Centre (CHIP. In Lao PDR, about 7 per cent of the population aged 10 years and older are migrants, with the majority moving across provinces or within provinces (Lao PDR National OOSCI study).

East Asia and Pacific has **urbanized** rapidly in recent decades, and the urban population of the Asia-Pacific region as a whole is expected to exceed 55 per cent by 2030 (ADB, 2014).[9] Although urban populations are becoming wealthier on average, more than 250 million people in the EAP region live in slums, characterized by socioeconomic deprivation and unequal access to public services (Baker and Gadgil, 2017).[10]

Poverty and Income Inequality[11]

Impressive gains in economic growth and human development goals have led to a significant **reduction in poverty** and greater access to basic services (e.g. education, health, sanitation, social protection) across Asia and Pacific. In Eastern Asia, the extreme poor – the population living on less than US$1.25 per day – fell from 61 per cent in 1990 to only 6 per cent in 2011 (United Nations, 2015). Using the new $3.20 poverty line for lower-middle income countries – which is how most of the countries in the region are now classified – poverty has fallen from nearly 40 per cent in 2008 to 12.5 per cent in 2015 (Figure 4). While these statistics may be dominated by China, there have been similarly dramatic falls in poverty in many of the countries of the region, including Indonesia and Viet Nam (Figure 5).

FIGURE 4. Poverty headcount ratio at $3.20 a day, by region, 2008–2015 (2011 PPP, share of population)
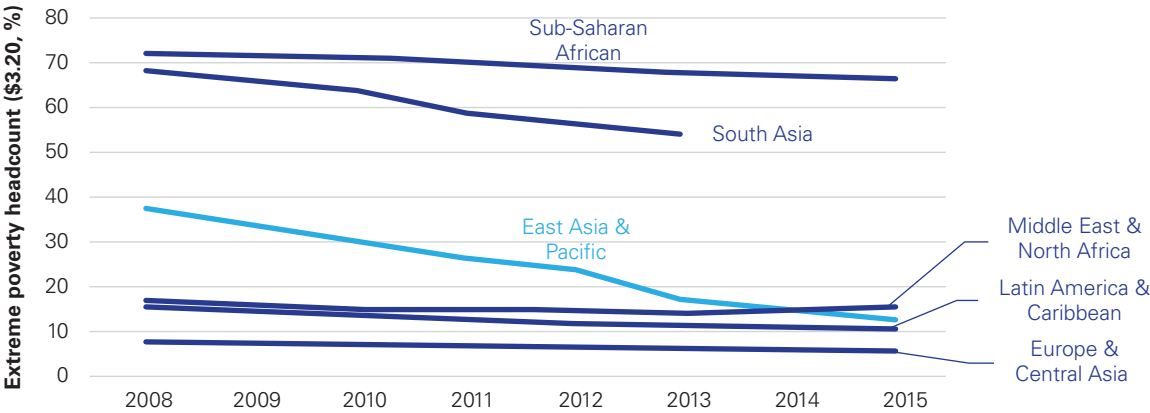
Source: World Bank, 2019b

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9   The Asia and Pacific region as defined by the Asian Development Bank (ADB) includes 48 countries from the region. This group includes all countries in the UNICEF-defined EAP region with the exception of DPR Korea, Niue, and Tokelau and an additional 19 countries.
10 The World Bank defines the EAP region like UNICEF, with an additional 13 countries.
11 UN geographic divisions are used in this paragraph. Eastern Asia includes China, Democratic People's Republic of Korea, Hong Kong (China), Macao (China), Mongolia and Republic of Korea*. South-eastern Asia includes Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam. Oceania corresponds to American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Niue, New Caledonia, Northern Mariana Island, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

FIGURE 5. Poverty headcount ratio at $3.20 a day, by country, 2008–2017 (2011 PPP, share of population)
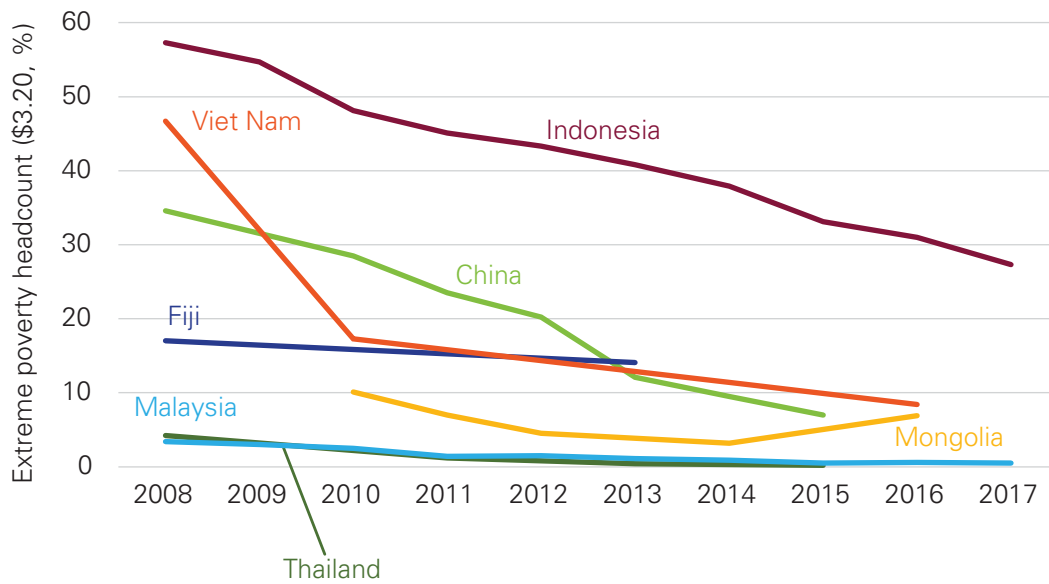
Source: World Bank, 2019b

Economic success in many countries of the region has been accompanied by the challenges of **income inequality**, with vulnerable and marginalized populations benefitting the least from the relative prosperity. Income inequality rose sharply in China during the 1990s (Figure 6). It appears recently to have plateaued and may be declining, but is still high (Kanbur et al., 2017; Xie and Zhou, 2014). In Indonesia, the Gini index increased from 0.3 in 2000 to 0.41 in 2014 (World Bank, 2016). In Viet Nam, broad-based growth has meant that rises in inequality were more modest, however there are massive gaps between ethnic groups, which make up 15 per cent of the country's population but account for 70 per cent of the extreme poor (World Bank, 2014).

FIGURE 6. Ratio of the income of the richest to the poorest in China, 1995–2015
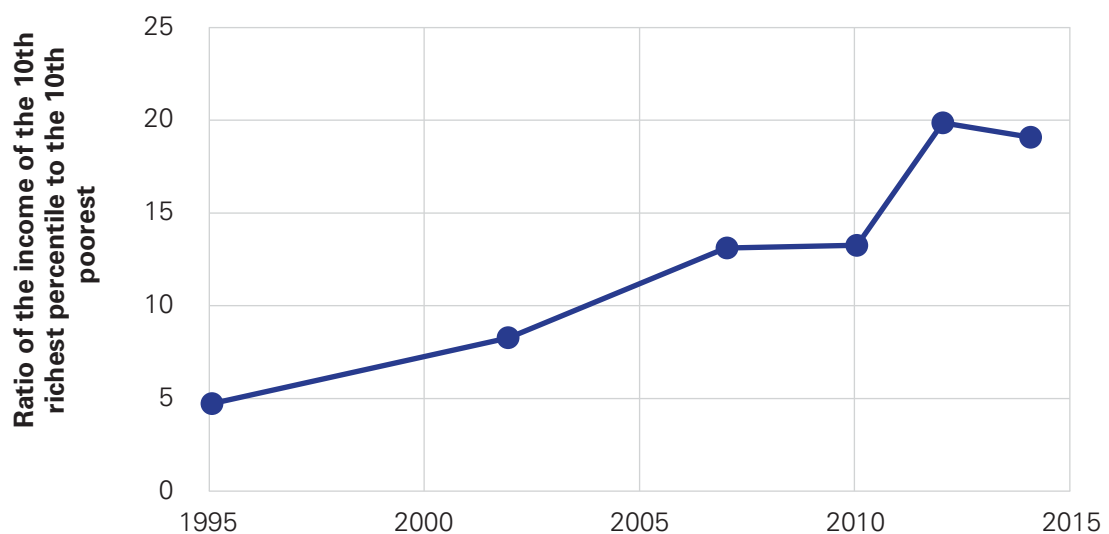
Source: Kanbur et al., 2017

Vulnerable Populations

Factors linked to income disadvantage – **gender, ethnicity, geographic location, disability** – can be compounded further by other factors such as discrimination, social isolation, economic marginalization and the impact of climate change. Box 1 lists those categories of children who face difficult day to day living conditions due to their vulnerability. Monitoring the status of some of these groups can be particularly difficult, as by definition, they are usually **excluded** in regular survey data collection methods (i.e. household surveys and national censuses). Special efforts during data collection design need to be made to **include** them. These issues will be further elaborated in the subsequent sections of the report, particularly in relation to the profiles and barriers of out-of-school children.

Several reports have linked the EAP region to specific vulnerabilities.

- The Asia-Pacific region includes 1,000 different **ethnic** groups who speak over 1,600 **languages** (Rao and Sun, 2010).
- **Violence** against children remains a prevalent form of abuse of children's rights in many parts of the EAP region, with higher incidence levels in low and lowermiddle income countries (UNGEI, 2014). School settings tend to be specific areas of insecurity for children and lead to children withdrawing from schools.
- A recent study found that **attacks** on and military use of schools are threats to teachers, students and school buildings, which can leave damaging long-term effects on educational opportunities. During the period 2009–2012, Indonesia, Myanmar, the Philippines and Thailand were affected by attacks on schools (GCPEA, 2014).

▍ BOX 1. Vulnerable and disadvantaged children in East Asia and Pacific

Vulnerable children face particularly challenging circumstances in their day-to-day existence. Fulfilling children's rights to education, health, justice, equity and participation, as defined by the **Convention on the Rights of the Child (CRC),** requires special attention. Having several factors of disadvantage in combination can create mutually-reinforcing inter-generational exclusion for those children. Examples of disadvantaged groups in the EAP region include:

- children from **poor** households;
- children living in extremely **rural/remote** areas;
- children living in **urban slums** or **street** children;
- children from **minority ethnic/language** groups;
- children living in **pastoralist/nomadic** communities;
- **orphans** and other vulnerable children;
- children living with a **disability**;
- children affected by **violence** (in the home, community, and/or school);
- children affected by **conflicts** (including refugees and internally displaced persons); and
- children affected by natural **disasters** or human-made **emergencies**.

Gender Equality

Although the Asia-Pacific region is characterized by comprehensive legislative frameworks enacted to protect women's rights, weak institutional structures and lack of implementation continue to hold back progress and greater opportunities for **women**. According to the OECD's multidimensional Social Institutions and Gender Index (SIGI), of the 10 countries included from the EAP region, only Cambodia, Mongolia and Thailand scored relatively

favourably in terms of gender equality (OECD, 2014).[12] Improving access to quality education and health for women, combined with fulfilling women's human rights across all societal spheres, has the potential to act as a catalyst for development (UNESCO, 2013). Women from poor or from marginalized populations are more likely to have restricted socio-economic opportunities. Studies show relatively consistent findings that children experience **school-related gender-based violence** in various countries in the region (EAP UNGEI, 2014; UNGEI, 2014).

Conflict, Natural Disasters and Climate Change

Achieving quality education for all children can be particularly challenging in countries that have been beset by armed conflicts, natural disasters or other forms of climate upheaval. **Conflicts** – including civil wars and political strife – can impact the state of economic growth, as well as the ability of governments to provide and finance education services to the affected populations. Government budgets have routinely been redirected to finance conflictrelated needs or, in more extreme situations, to reinforce existing national inequalities, for example, by directing more public funding to urban schools and universities than rural primary schools (UNESCO, 2011). Many countries in the region have been affected by conflicts in recent years. At some point since 1999, Indonesia, Myanmar, the Philippines, the Solomon Islands, Thailand and Timor-Leste have all experienced political unrest or armed conflict. Even minor shocks to education access may have long-lasting detrimental impact to the development of children's education attainment and labour market opportunities (Justino, 2010; UNESCO, 2011). Vulnerable children and adolescents are particularly likely to be negatively affected and suffer during conflict from the consequences of violence. For example, children with disabilities may lack access to medical treatment or medication (el Zein and Chehab, 2015).

The EAP region is also fragile due to its geographical characteristics, namely large amounts of coastal land and some of the world's most active seismic areas. **Natural disasters** and the adverse effects of **climate change** are additional elements that need to be factored into policymaking for sustainable development, especially for vulnerable Small Island Developing States (SIDS).[13] SIDS and coastal territories are regularly at greater risk of environmental calamities than landlocked countries. Poor people whose livelihood is dependent on fishing or on the cyclical nature of agriculture are particularly exposed to the risks of environmental degradation. Children and adolescents can be isolated from their schools due to landslides and flooding. The need to include climate emergency preparedness in education sector plans is therefore critical for a region where the frequency of natural calamities– droughts, typhoons, floods, earthquakes, landslides, storms, volcanic eruptions and tsunamis – has increased in the past 15 years (ADB, 2014).

1.5. Education Context in the EAP region

Enrolment Size

The region's educational context is highly **diverse and complex**, with a few common regional characteristics. The **size** of the school systems – across 4 education levels, from pre-primary to upper secondary – ranges from hundreds of students in Niue and Tokelau, to the world's largest education system in China with nearly 228 million students enrolled (see Table 4). Thailand, Viet Nam, the Philippines and Indonesia also include very large student populations, enrolling more than 10 million students each.

▌ TABLE 4. Total enrolment in EAP by education level, most recent year available

	Pre-primary	Primary	Lower secondary	Upper secondary	Total
Brunei Darussalam	13,888	39,610	14,122	30,342	97,962
Cambodia	228,637	2,111,631	609,026	..	2,949,294
China	44,138,630	100,321,027	43,697,309	39,710,616	227,867,582

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12 The five dimensions related to gender inequality are discriminatory family code; restricted physical integrity; son bias; restricted resources and assets; restricted civil liberties. Levels of inequality are "Very low" in Mongolia; "Low" in Cambodia and Thailand; "Medium" in China, Indonesia, Lao PDR, Philippines and Viet Nam; and "High" in Myanmar and Timor-Leste.

13 In this region, the SIDS include the Cook Islands, the Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Singapore, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu.

	Pre-primary	Primary	Lower secondary	Upper secondary	Total
Cook Is	528	1,858	1,095	590	4,071
DPR Korea	..	1,357,606	1,048,086	1,100,278	3,505,970
Fiji	..	110,127	64,564	..	174,691
Indonesia	5,888,529	29,351,817	13,443,111	10,875,151	59,558,608
Kiribati	..	16,695	5,782	..	22,477
Lao PDR	201,104	808,705	453,466	224,031	1,687,306
Malaysia	988,393	3,084,630	1,379,597	1,365,042	6,817,662
Marshall Is	1,162	7,941	4,256	1,244	14,603
Micronesia, F. S.	2,264	13,758	4,151	..	20,173
Mongolia	243,432	290,550	171,406	..	705,388
Myanmar	178,608	5,388,349	2,952,912	1,017,793	9,537,662
Nauru	675	1,808	607	385	3,475
Niue	31	201	99	..	331
Palau	518	1,639	487	1,117	3,761
Papua New Guinea	358,198	1,275,085	269,731	237,547	2,140,561
Philippines	2,119,579	14,293,635	5,790,807	1,606,483	23,810,504
Samoa	4,836	32,950	9,718	16,525	64,029
Solomon Is	55,163	108,396	33,582	..	197,141
Thailand	1,727,076	4,952,685	3,184,662	3,150,551	13,014,974
Timor-Leste	21,832	222,835	87,950	61,933	394,550
Tokelau	52	178	132	9	371
Tonga	2,254	16,982	12,868	2,932	35,036
Tuvalu	701	1,324	754	369	3,148
Vanuatu	14,301	45,931	15,232	5,336	80,800
Viet Nam	4,409,576	7,801,560	5,235,524	..	17,446,660
East Asia and Pacific	**65,992,452**	**184,354,836**	**67,022,420**	**152,262,837**	**469,632,545**

Notes: Data are for the latest year available between 2014 and 2017 for each country; same year is maintained across education levels within a country. EAP total is for 2017 and is for the UIS region, which differs slightly from the UNICEF region.[14]

.. indicates data are not available.

Source: UIS, 2019

A relatively balanced distribution of the student populations across education levels is a proxy measure for indicating a **steady progression** throughout schooling. The balance across the 4 education levels – from pre-primary to upper secondary education – is rare in the EAP countries. Figure 7 shows that at least 40 per cent of total student enrolment is in primary education in EAP countries.[15] A more even distribution across the first 3 education levels – where drop-off between levels is relatively flat – is observed in Mongolia, and to some extent, the Solomon Islands and Viet Nam. **Pre-school education** tends to be **underrepresented** in terms of available schooling in many countries.

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14 The UIS East Asia and Pacific includes 6 more countries/territories compared to the UNICEF countries in the EAP region (China Hong Kong, China Macao, Japan, Singapore, Australia and New Zealand).

15 A cohort effect, which refers to the different sizes of age groups and classes, might be more likely to affect this balance in countries with smaller student populations.

FIGURE 7. **FIGURE 7.** Distribution of enrolment in selected EAP countries by education level, most recent year available
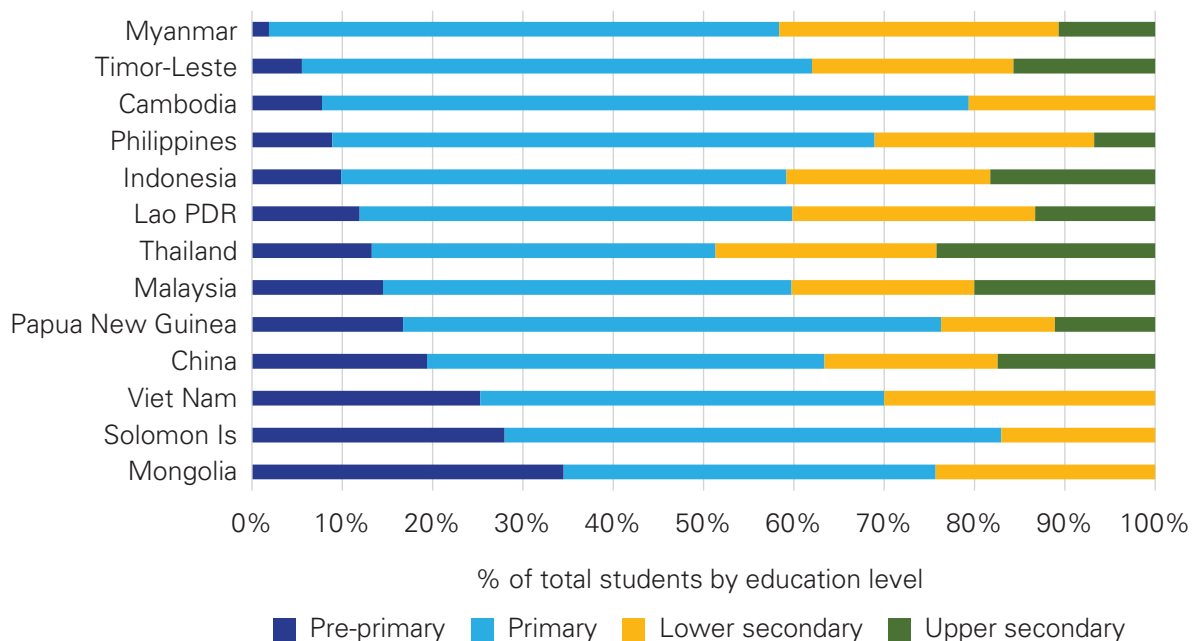
Note: Countries with more than 100,000 students were selected. Data are for the latest year available between 2014 and 2017, and the same year is maintained across education levels in a country.

Source: UIS, 2019

Compulsory Education

The political commitment to education in the region is marked by the length of **compulsory education**, which spans across primary and lower secondary in most countries. Six countries have also included pre-primary education as part of compulsory education, and some recently introduced such policies (e.g. Viet Nam in 2014). Some countries have extended the duration of pre-tertiary education, such as the Philippines which added 1 year of kindergarten and 2 years of schooling to upper secondary in 2012–13 (World Bank, 2015). An overview of the structure of education systems across the EAP region is provided in Table 5.

❚ TABLE 5. The structure of education systems in EAP, 2017

	Structure of education		Free education		
	Age		Pre-primary	Primary	Secondary
	3–19 (colored age-band chart)		(years)		
Brunei Darussalam			..	..	..
Cambodia			..	6	3
China			..	6	3
Cook Is			2	6	7
DPR Korea			1	5	6
Fiji			..	..	..
Indonesia			..	6	6
Kiribati			..	6	3
Lao PDR			..	5	..
Malaysia			..	6	5
Marshall Is			1	6	6
Micronesia, F. S.			..	6	8
Mongolia			..	5	7
Myanmar			..	5	..
Nauru			2	6	6
Niue			1	6	6
Palau			..	6	6
Papua New Guinea			..	..	..
Philippines			1	6	4
Samoa			..	6	2
Solomon Is			..	..	..
Thailand			..	6	6
Timor-Leste			..	6	3
Tokelau			..	..	..
Tonga			..	6	2
Tuvalu			..	..	..
Vanuatu			..	..	..
Viet Nam			1	5	..

Notes: Pre-primary begins at age 2 in Mongolia. Countries without 'compulsory education' box are those without verifiable information in the UIS Database.

.. indicates data are not available.

Source: UIS, 2019

Learning-adjusted years of schooling in the population – an estimate of the average years that people spend in education, adjusted for the quality of learning outcomes relative to international averages – vary from under 5 years in Papua New Guinea to over 10 years in Viet Nam. China and Viet Nam have notably above-average performing education systems in terms of learning outcomes (World Bank, 2018b). This clearly reflects a challenge of **learning crises** in the EAP region where more than 70 million children and adolescents are not achieving minimum learning proficiency in reading and mathematics (UIS, 2017b). **Human capital** in the form of health outcomes (e.g. stunting, mortality) also varies greatly in the region, with human capital indexes ranging from 0.4 in Papua New Guinea to almost 0.7 in China and Viet Nam (see Figure 8).

FIGURE 8. **FIGURE 8.** Human capital index and learning-adjusted years of schooling, 2017
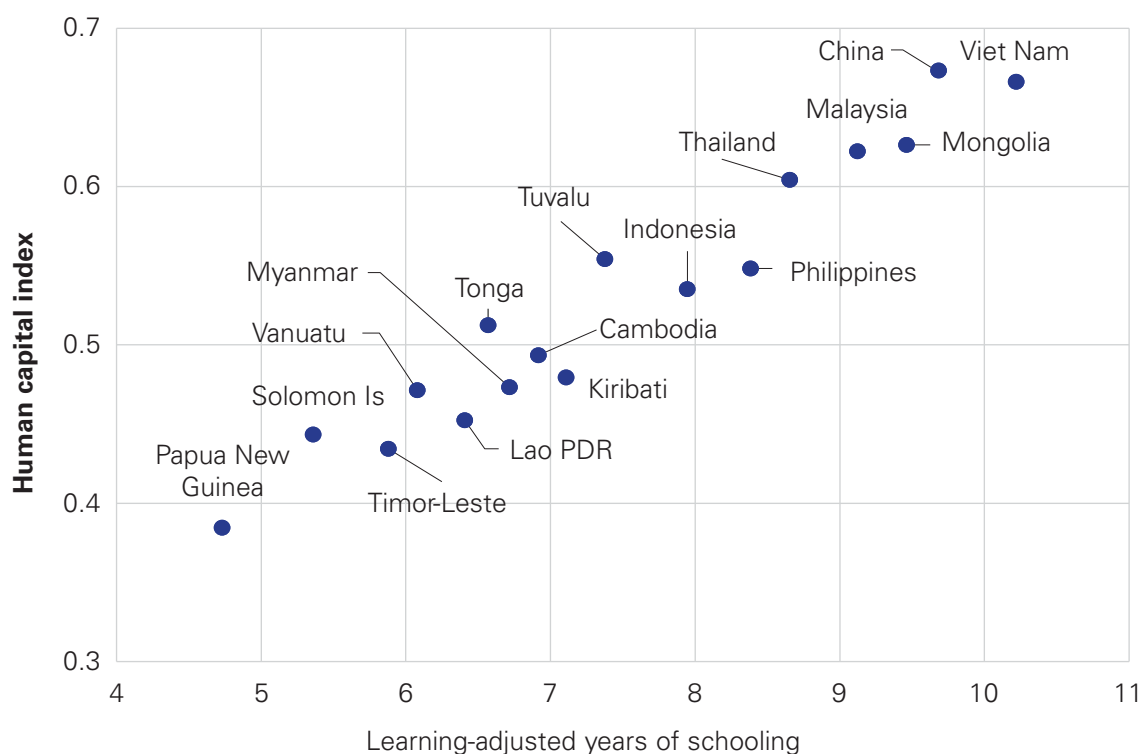
Note: The human capital index is a measure of a country's human capital that can vary from 0 to 1 and is based on learning-adjusted years of schooling, under-5 survival, adult survival, and infant stunting (Kraay, 2018).

Source: World Bank, 2018b

Free Education

Political and financial commitment to the provision of **free education** is required to attain universal education. Some of the poorest countries have challenges to translate political goals into sufficient resources for public education. For example, Papua New Guinea has struggled to introduce universal primary education as a goal and does not yet have legal provisions regarding free or compulsory education. The age of entry into compulsory education varies from age 4 in Nauru and Tonga, to age 7 in Indonesia and Tuvalu. The age of entry into pre-primary is 3 years in most countries, and the cycle lasts on average 2.6 years in the EAP region. Primary education can begin as early as age 5 in Cook Islands, Myanmar, Niue, Samoa and Tokelau and lasts an average of 5.8 years in the region. The total years of compulsory education vary from 5 in Myanmar (primary only) to 12 or more in Cook Islands, DPR Korea, Marshall Islands, Nauru, Palau and Tonga. Compulsory primary and secondary education lasts on average 9.6 years, which is aligned with the minimum international standard (9 years for primary and secondary) set out in SDG 4 and the Education 2030 Framework for Action (UIS, 2017a; UNESCO, 2015a, 2016b).

Public Expenditure on Education

Sufficient **government expenditure** on education, and particularly on pre-primary and primary education, is needed to ensure all children can have access to quality education to achieve SDG 4 and beyond. Several recent proposals for a minimum investment in education have gained ground in light of the SDG 4 – Education 2030. The Education Commission estimates that total education expenditures (from pre-primary to post-secondary) should reach **8.5 per cent** of gross domestic product (GDP) in low and middle-income countries (Education Commission, 2016). UNESCO provided an estimate of **6 per cent** of gross national product (GNP) (UNESCO, 2014) Financing early childhood care and education (ECCE) is more challenging to define in terms of benchmarks, given the diversity of sectoral governance possible for the public ECCE

service provision and is usually limited to pre-primary education.[16] Other estimates for the 0 to 6 age group suggest that countries need to spend around **1 per cent** of GDP on early childhood education and care (UNESCO, 2006).

Government expenditure in education **as a share of GDP** varies greatly across the region, but most EAP countries are well below those recommended levels (see Figure 9). In 2017, Malaysia, Vanuatu, and Viet Nam spent around 5 to 6 per cent of GDP on education, with around 3 to 3.5 per cent of GDP going specifically to primary and lower secondary education. By contrast, Cambodia and Myanmar only spent around 2 per cent of GDP on education and under 1.5 per cent on basic education. Despite the importance of ECCE on lifelong learning, pre-primary education generally receives a negligible proportion of the GDP, exceptions being Mongolia (1.1 per cent) and Viet Nam (0.9 per cent).

FIGURE 9. Education expenditure as a share of GDP, by country and level of education, 2017
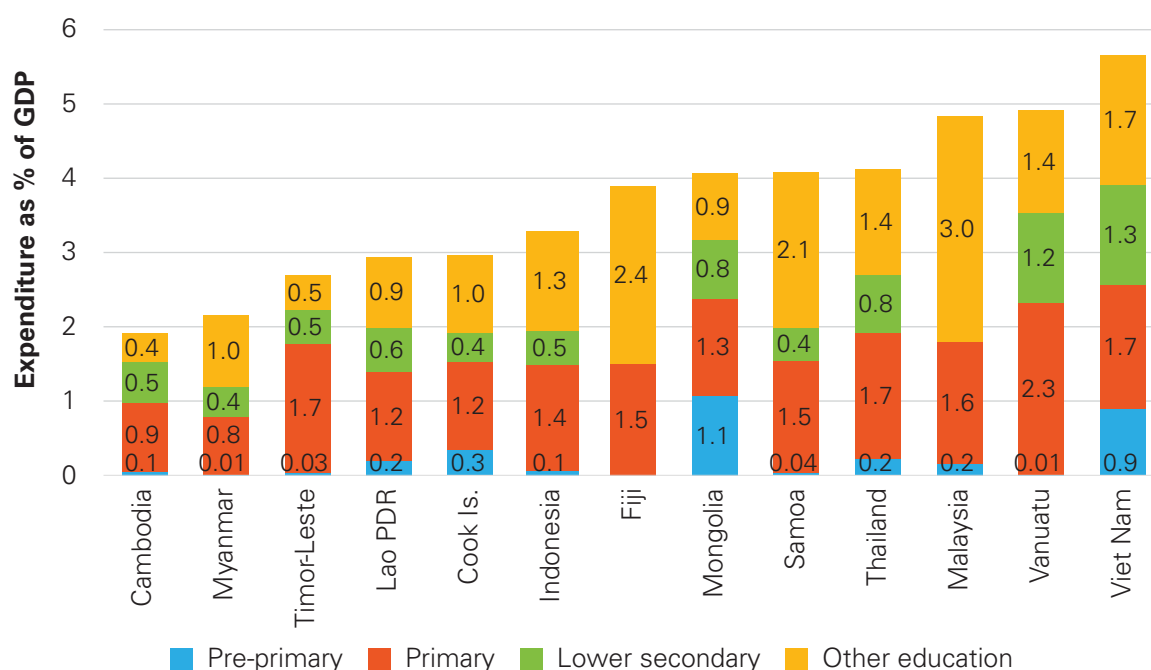
Note: Data are not available on pre-primary or lower secondary expenditure in Fiji, or for lower secondary expenditure in Malaysia.
Source: UIS, 2019

Education expenditure **as a percentage of total government expenditure** gives a sense of the priority that is given to education compared to other areas of public spending. Low education expenditure can be caused by low total public expenditure, perhaps because the country has limited revenue mobilization (e.g. a limited tax base from which to gather domestic revenue). Or, education can be given a low priority with regard to overall government spending. Based on the Addis Ababa Action Agenda, Education 2030 recommends that countries spend **15 to 20 per cent** of total public expenditure on education (UNESCO, 2015a). The Education Commission estimated a **19 per cent** share would be necessary to achieve SDG 4 by 2030 (Education Commission, 2016). Of the EAP countries for which data are available, only Indonesia, Viet Nam, Thailand and Malaysia spent over 15 per cent of total public expenditures on education in 2017, while Timor-Leste, Cook Islands and Cambodia spent under 10 per cent (see Figure 10).

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16 Governments often split the ECCE responsibility by specific age groups into various ministries (and therefore budget lines).

FIGURE 10. Government education expenditure as a share of total government expenditure, by country and level of education, 2017
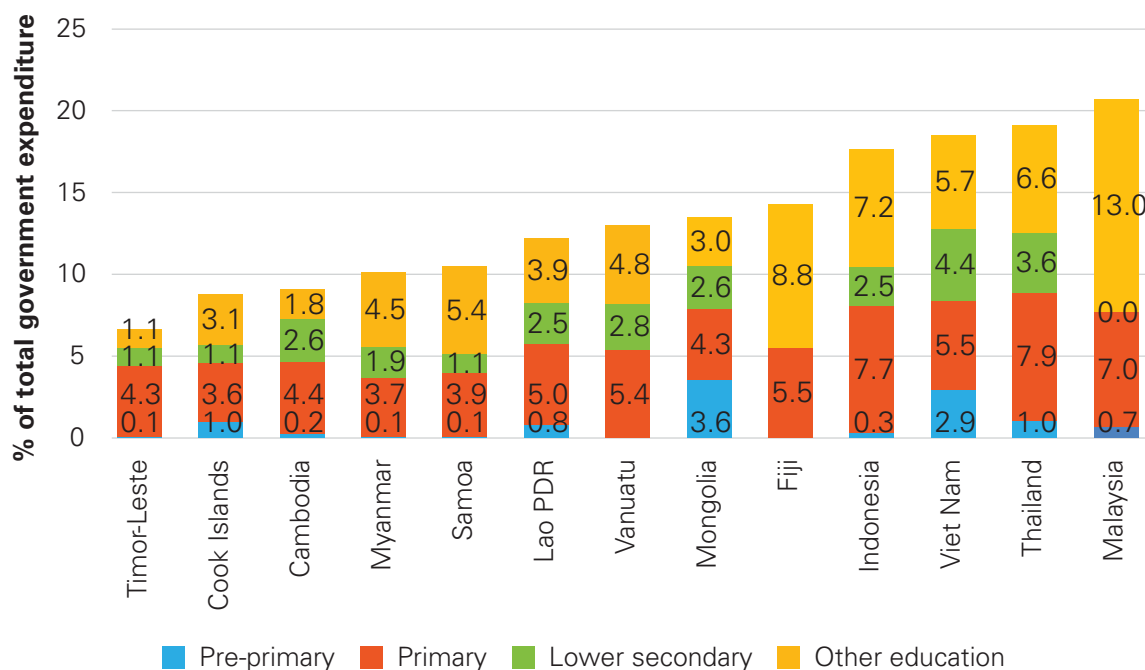
Note: Data are not available on pre-primary or lower secondary expenditure in Fiji, or for lower secondary expenditure in Malaysia.
Source: UIS, 2019

Finally, another means of identifying education priorities and equity in education is the **distribution** of education spending across education levels. Pre-primary education has been generally underfunded by governments, despite the international recommendation that a minimum of **10 per cent** of the total public education expenditure be devoted to this level (UNESCO, 2014; Zubairi and Rose, 2017). In low-income countries, pre-primary education is estimated to need to reach 10 per cent of all education expenditures by 2030 in order to cover the cost of 2 years of free pre-primary education (Education Commission, 2016). In the EAP, countries with available data show that education expenditure can be concentrated at education levels beyond pre-primary and primary education (see Figure 11). Samoa and Brunei Darussalam, for example, spend 30 and 45 per cent, respectively, of their education budgets on upper secondary education alone.

FIGURE 11. Government expenditure by education level as a share of total government education expenditure, latest year available

Pre-primary ■ Primary ■ Lower secondary ■ Upper secondary ■ Tertiary ■ not specifed ■ unknown
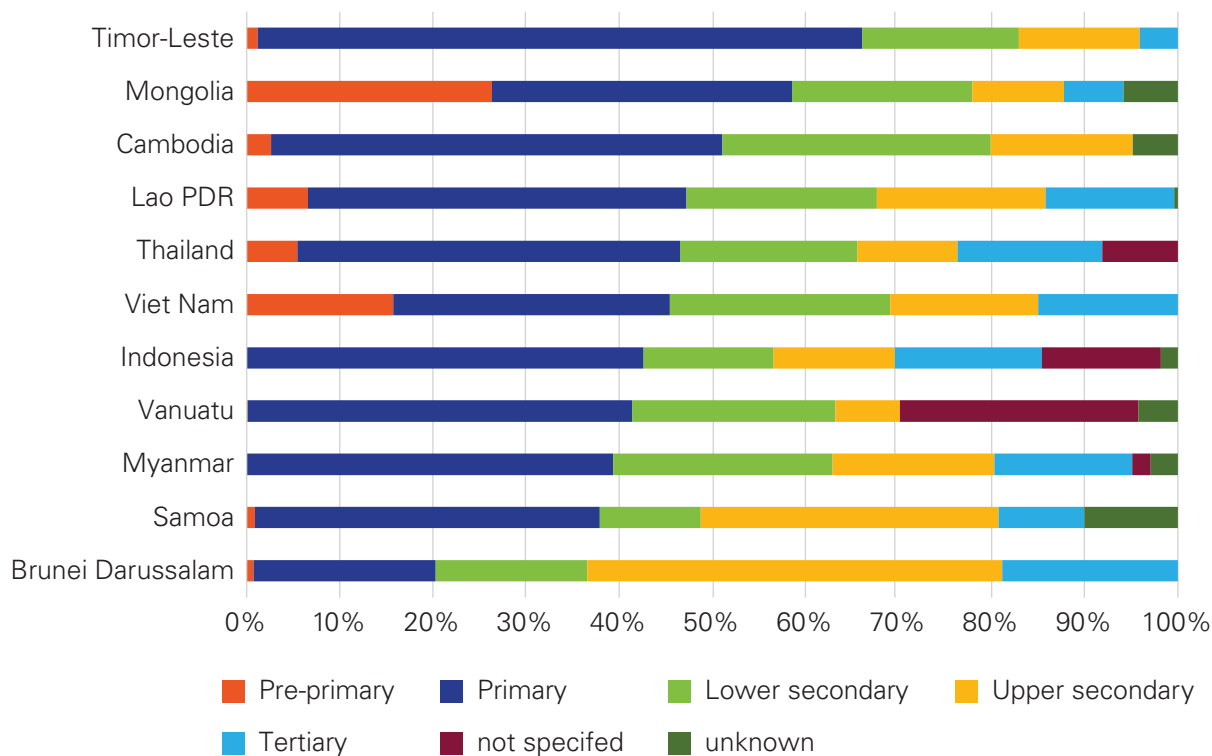
Notes: Years of data are as follows: 2018 (Myanmar), 2017 (Mongolia), 2016 (Brunei Darussalam, Samoa), 2015 (Vanuatu, Indonesia), 2014 (Lao PDR, Cambodia, Timor-Leste), 2013 (Viet Nam, Thailand), Data category 'unknown' was calculated for any gaps in data.

Source: UIS, 2019

Data

How Can We Count and Find the Out-of-School Children and Adolescents?

2. Data: How Can We Count and Find the Out-of-School Children and Adolescents?

2.1. The Five Dimensions of Exclusion Model[17]

This regional report is based on the Conceptual and Methodological Framework (CMF) which defines the Global Initiative on Out-of-School Children (OOSCI) and standardizes data and policy analysis across national studies. The approach to modelling the OOSCI analysis is through the **Five Dimensions of Exclusion model**, which presents 5 target groups of children and adolescents defined by the official age of their school level and school participation status (see Figure 12). School levels are determined by the International Standard Classification of Education (ISCED), so that levels are uniform and comparable across diverse national education planning decisions (UIS, 2012). This report **identifies** out-of-school populations and **profiles** for children of pre-school age to secondary school age, based on the official school-age population within each country. That is, the age ranges of children and adolescents within each school level vary according to national definitions.

The Five Dimensions of Exclusion are:

Dimension 1	Children of **pre-primary school age** who are **not** in pre-primary (ISCED 02) or primary education (ISCED 1).
Dimension 2	Children of **primary school age** who are **not** in primary (ISCED 1), lower secondary (ISCED 2) or upper secondary education (ISCED 3).
Dimension 3	Children and adolescents of **lower secondary school age** who are **not** in primary or secondary education (ISCED 1, 2 or 3).
Dimension 4	Children and adolescents, irrespective of their age, in **primary school** who are **at risk** of dropping out.
Dimension 5	Children and adolescents, irrespective of their age, in **lower secondary school** who are **at risk** of dropping out.

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17 This section is based on the Global OOSCI Conceptual and Methodological Framework and Operational Manual (UNICEF and UIS, 2011, 2015).

Adolescents in this age group are not a dimension per se in the Global OOSC Initiative, as compulsory education ends at age 15 or below in half of the countries with available data in the EAP region, and thus, many are no longer required to attend school. However, given the critical importance of this level of education and learning, particularly in the fast-growing economies of the EAP region, this Report pays attention to the upper secondary education when and as relevant.

In Dimensions 1, 2 and 3, the out-of-school population is defined by its **non-enrolment** in age-appropriate or other levels of formal education. Children and adolescents who are of pre-primary, primary and lower secondary school age, and are out of school are categorized in Dimensions 1, 2 and 3, respectively[18]. Dimensions 4 and 5 include those children who **are enrolled in school**, irrespective of their age groups (i.e. including under- and over-aged students for each level) but are **at risk of dropping out**.

FIGURE 12. The Five Dimensions of Exclusion Model

DIMENSION 1	DIMENSION 2			DIMENSION 3			
Not in pre-primary or primary school	Attended but dropped out	Will enter later	Will never enter	Attended but dropped out	Will enter later	Will never enter	OUT OF SCHOOL
Pre-primary age children	**Primary age children**			**Lower secondary age children**			

	DIMENSION 4	DIMENSION 5	
	At risk of dropping out of primary school	At risk of dropping out of lower secondary school	IN SCHOOL
	Primary school students	**Lower secondary students**	

Source: UNICEF and UIS, 2015

As shown in Figure 12, children and adolescents in Dimension 2 or 3 can be **further characterized** according to whether they (i) attended in the past but dropped out; (ii) have not yet attended but will enter later; or (iii) have not yet attended and will never enter.

In this model, some children and adolescents enrolled in learning-related programmes can be **considered out of school** and would be categorized in Dimensions 2 or 3, depending on the age of the child. The **first group** is composed of children of primary school age who are enrolled in pre-primary education centres, where the educational properties, staff qualifications and curriculum standards are not considered aligned with expectations set by ISCED for primary school age children. The **second group** is composed of children of primary age and adolescents who attend non-formal education programmes which are not recognized by education authorities as equivalent to formal education. Specifically, those non-formal programmes do not issue qualifications equivalent to formal primary or lower secondary education, or which enable bridging back in to the formal system. Generally, children and adolescents in non-formal education programmes are considered out-of-school with some exceptions (UNICEF and UIS, 2015). The framework for OOSCI recognizes that these 2 groups might require additional analysis if the numbers are significant in certain country contexts. Such recognition is particularly important given that a significant number of children and adolescents in the EAP region are denied their rights to formal education due to illegal migrant status, lack of documentations, etc.

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18 Given the critical importance of adolescents' education in the EAP region, this report also refers to out-of-school adolescents who are of upper secondary school age when relevant, though they are not analysed through the model of Five Dimensions of Exclusion as per the global OOSC initiative.

2.2. Monitoring Equity

The backdrop of an extraordinary record of educational growth in the region overshadows the difficulties in reaching all children and adolescents who are out of school. Since the 1960s, robust economic growth led to – and has been accompanied by – the demand for educated workers. Education has been at the forefront of national policies, promoting education opportunities for all and increasing schooling for all (World Bank, 2018b). Yet the complexities and challenges of reaching those children and adolescents who are missing, begin with understanding **who is out of school** and **how to identify/find them**. The OOSCI framework was developed with the rationale to provide "adequate tools and methodologies to identify out-of-school children and adolescents, to measure the scope and describe the complexity of exclusion and disparities, to assess the reasons for exclusion, and to inform policy and planning" (UNICEF and UIS, 2011, p. 7).

Equity is at the core of the SDGs in general and the education agenda in particular, and thus, measuring equity in educational access and learning necessarily requires taking into consideration **children and adolescents both in and out of school**. Filling the gaps in education exclusion requires **reaching out** to the most deprived children and adolescents who are not attending school or at risk of dropping out. These children and adolescents, by definition, are not those who are usually connected with public social service networks, or are transient in their relationship with such services. In fact, they are **most often not included and measured** in administrative school surveys but are **excluded** and counted as a negative image of enrolment or attendance. The expanded vision of access per the OOSCI framework (see Section 2.1), however, addresses this data deficiency by capturing those children and adolescents who are fluctuating in and out of the education system and who are also at risk of dropping out and never completing their schooling. Measuring those children and adolescents included in Dimensions 4 and 5 can originate from administrative or household survey data (see also Section 3.3).

Specific groups of out-of-school children and adolescents face the greatest education and other disadvantages before they even enter school. Identifying those groups – which are **specific to each country** and its education system – is critical to being able to develop appropriate and successful policies for **inclusive education**. For example, specific risk factors to school exclusion can be obtained from studying older populations of out-of-school children and adolescents and then applied to identifying the younger children of pre-school age.

The UIS has recently produced a handbook for national statistical systems which provides a conceptual framework for measuring equity in learning. The production of **quality data** is at the forefront of reaching the marginalized in education.

> Data collection must be improved to allow identification of excluded groups and more precise calculation of indicators that can serve as evidence for the design of targeted policy interventions. […] high-quality data fit for disaggregation are an essential prerequisite for analysing equity (UIS, 2018b).

The **disaggregation of education data** has evolved over recent years from including only **gender** to other dimensions of vulnerability, such as **ethnicity**, **language**, **poverty**, **geographic location** (i.e. urban/rural, by sub-national level), **religion**, **mother's education level** and **disability**. In many cases, these factors of exclusion are compounded and interact thereby worsening access and participation in education, as well as learning outcomes.

2.3. Data Issues in Estimating Out-of-School Children and Adolescents

Data Availability

The qualitative and quantitative wealth of data required for identifying out-of-school children can appear overwhelming for those systems which struggle to produce reliable education data. In most countries, the Education Management Information System (EMIS) is able to record enrolment by gender, and generally by region or between rural and urban areas. Very little information is usually available on **student characteristics**[19] such as socioeconomic status, language, ethnicity, or disability; and accurate measurement of disability is often challenging. Two main sources provide education-related data on children, each with their own strengths and limitations:

- **Administrative data** provides information on student enrolment and progression in schools based on a national school census, usually collected on a yearly basis at the school level. Each country has distinctive mechanisms for collecting data and aggregating it across sub-national administrative levels.

- **Household survey data** refer to a set of data collected at the household level, usually as part of a randomized and representative sample, and report on children's school attendance with a range of background information including their characteristics.

Administrative Data Sources: Strengths and Limitations

Administrative data on national education systems are collected using school registers, annual school surveys or censuses by the Ministry of Education and other authorities (e.g. national statistical offices). With regard to out-of-school children, administrative data can identify only those children who are **enrolled** in primary and lower secondary school but at-risk of dropping out (Dimensions 4 and 5).

Limitations to administrative education data include:

- Schools may have an incentive to report inaccurately the number of enrolled children. For example, if school budgets are allocated based on the number of students (per-student financing), schools might report higher number of enrolled children to receive more funding.

- Data accuracy can be a concern in many schools, where governance is irregular and monitoring records are not well maintained with minimum supervision/support.

- When definitions for determining dropouts are inconsistent across school administrative areas or too vague or vary over time, chances increase that total numbers of students are under- or over-reported.

- Administrative data do not usually provide significant coverage of private, non-formal or unrecognized education programmes which are not within the authority of the Ministry of Education.[20]

- Administrative data may not collect information on children's' families or socio-economic characteristics for enrolled or not enrolled children.

- The quality of out-of-school estimates is related to the accuracy of population records (i.e. monitoring births, deaths, migration) which are used to calculate enrolment ratios.[21]

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19 However, an increasing number of countries in the EAP region and elsewhere have started making efforts to capture detailed individual student information in their administrative data system (EMIS), and some countries such as Malaysia are initiating innovative interventions to prevent dropout of children by utilizing such information (UNICEF EAPRO, 2019).

20 Non-formal education includes a diverse group of education providers. Only those programmes issuing qualifications recognized by education authorities as equivalent to formal education are considered as school for enrolment purposes. As mentioned earlier, children in non-formal education programmes are considered out-of-school with some exceptions (UNICEF and UIS, 2015).

21 More detail on barriers to accurate data is available from UNICEF and UIS (2016).

In many low-and middle-income countries, the **availability** and **quality** of administrative data is a challenge for monitoring education progress per SDG 4 on education.[22] The UIS routinely provides technical assistance and capacity building to improve the quality and cross-national comparability of administrative education data to address some of the challenges. For example, they review the national data to ensure complete coverage of the education system and compliance with international standards and definitions, as well as undergoing routine validation processes before data release.

National and international education statistics – such as those produced by national statistical offices or education ministries and by the UIS, respectively – can **differ** due to differences in the underlying data and calculation methodologies. Calculating enrolment indicators – including those for out-of-school children – requires administrative data usually obtained from school surveys or other data collection methods, as well as population estimates, often needed by single year of age and disaggregated by gender. **Population estimates** at the national level are usually derived from the national census, conducted only around every decade or so in many developing countries. To ensure methodological consistency and cross-country comparability in education statistics, the UIS uses population estimates produced by the United Nations Population Division (UNPD) which are based on a common, reliable methodology that is internationally accepted (UNICEF and UIS, 2016).[23] These population estimates, which are updated every 2 years, often differ from national ones, so that the out-of-school rate and numbers can be different from national governments' estimates.[24]

Household Survey Data Sources: Strengths and Limitations

Household-based surveys and **national censuses,** which provide demand-side information on education, focus on participation or non-participation in schooling, as well as completion and duration of education. Two large international household survey programmes – the Demographic and Health Survey (DHS) and the Multiple Indicator Cluster Survey (MICS), supported by the United States Agency for International Development (USAID) and UNICEF, respectively – are the broadest source of school **attendance** records in low- and middle-income countries.[25] Compared to administrative data, these household surveys provide a broad source of **contextual socio-economic information on the household** relevant to education outcomes, such as income, ethnicity, geography, child labour, disability, health and parental education levels.

Household surveys and other types of survey data can provide **rich sources** of information on early childhood development (ECD), as well as on school-aged children. The MICS, for example, has a specific questionnaire to measure early childhood development of children under age 5, and records information on early developmental domains (i.e. language/cognitive, physical, social-emotional, approaches to learning), parental care and developmental opportunities available to children. The latest **MICS** questionnaire also collects data on children's early learning outcomes in foundational knowledge domains of reading and mathematics, as well as parental engagement in education.

Given that household surveys are based around sampling individuals, rather than structure-based administrative data, they collect **data on out-of-school children** who are not covered in the administrative data systems, which captures only those children who are enrolled in schools. Moreover, household surveys can include attendance in day care, religious or other types of **non-formal education** programmes not usually captured in administrative data. As such, for the purpose of identifying out-of-school children, household surveys tend to provide a **more accurate** image of actual ECD programmes or education-related attendance in countries. Education data from household surveys is often used to **complement** national administrative data and is found in national education sector planning documents and regional and global reports on education.

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22 Of 121 respondent countries, fewer than one-half had sufficient data to monitor the 11 global indicators in SDG 4 , and when the data are available, they do not often meet SDG 4 expectations (UIS, 2017c).

23 The UNPD does not publish single-year of age data for countries with a total population under 100,000 inhabitants and does not endorse their use since these data are highly subject to fluctuations in migration and other factors. As a result, indicator should be interpreted with caution for the following group of countries: Cook Islands, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tokelau and Tuvalu (UIS, 2019).

24 The UIS is planning to use national population estimates instead of those provided by UNPD estimates, and has done so in a handful of countries.

25 Since the initiation of the MICS programme in 1995, nearly 300 surveys have been implemented through 6 rounds of surveys in 108 low- and middle-income countries (http://mics.unicef.org/about). The DHS programme has provided technical assistance in more than 90 countries for more than 300 surveys (https://dhsprogram.com/data/).

Limitations to household survey data include:

- Some at-risk populations are still excluded by not being sampled, including homeless households, nomadic populations, children with disabilities[26] and children in state institutions (e.g. orphanages, hospitals, detention centres, prisons, juvenile facilities). Specific surveys can, but do not always, include households in refugee camps.

- It is difficult to link children to the schools they attend, and thus household survey data cannot be compared analytically with administrative data or service-based surveys.

- The quality of household surveys is based on the precision of the sampling and data collection techniques. Levels of disaggregation can be limited in cases of small samples as well as due to the lack of variables for disaggregation. Usually, household samples maintain comparability across time, but questionnaires might vary across surveys. Some household surveys rely on censuses for their sampling frame, which can be out of date or omit marginalized populations (Carr-Hill, 2012). The DHS and the MICS update their household listing before data collection.

- Household surveys are conducted with less frequency than annual administrative data collection processes.

Comparative Issues Regarding Administrative and Household Data

Data **quality** and **precision** are as strong as the methods and procedures of data collection and processing within the country. The production of high-quality national data and indicators is highly dependent on data quality at the national level. Many national statistical offices of low- and middle-income countries strive to produce and improve data in a cross-nationally comparative data which is required for regional and global level monitoring of education data.

In some countries, administrative data on school enrolment and household data on school attendance are **not always aligned**, causing varying results across the data sources. To a certain extent, these different results are **expected** due to the distinct methodologies used for data collection, population estimates, projections and sample survey estimations between administrative and household data. Depending on the causes, however, these differences in out-of-school estimates can be quite large and statistically significant. In addition to the collection issues identified in the previous section with regard to each data source, the following reasons can partially explain these discrepancies:

- *Accuracy of reporting*: In household surveys, some parents or caretakers might report that children attend school more regularly than is actually the case. Similarly, as stated earlier, schools could over-report the number of enrolled students, an indicator often linked to budget allowances.

- *Timing of data collection*: When administrative and household data are collected at 2 points in time during the school year, the specific period can cause shifts in reporting presence or absence in school. For example, in Cambodia, administrative and household data sources are collected at a specific date or during the period covering a school year and 2 additional months of another school year, respectively (MOEYS et al., 2017).

- *Age discrepancies:* One of the resulting issues with different data collection dates is that it can introduce errors into the age data used to calculate those education indicators, which rely on comparisons with the official age. For example, children who are of primary age at the survey time, but still in pre-primary programmes, are counted as out-of-school even though they might have been of the appropriate age for their grade at the start of the year (see Barakat, 2016).

Table 14 in Section 3 compares estimates from national OOSCI studies – mostly derived from household surveys – to those in the administrative data in the global database. There are often substantial differences, pointing to a need for more careful description of the basis on which different statistics are calculated.

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26 Children with disabilities are sometimes excluded by their families in household surveys, or otherwise cannot be identified because the survey does not disaggregate by disability status.

Profiles
How Many, Where and Who Are the Out-of-School Children and Adolescents?

3. Profiles: How Many, Where and Who Are the Out-of-School Children and Adolescents?

This section presents the **profiles of out-of-school children and adolescents** in the EAP region according to the Five Dimensions of Exclusion model presented in Section 2. The analysis on educational exclusion builds upon the work of the 10 national OOSCI studies by adding in the comparative regional dimension from other references and data sources. The overview of each Dimension is based on cross-comparable data available from the UIS global database of education indicators. Further details on specific population groups who are at risk of exclusion are presented based on data made available in national OOSCI studies. Hence, the analysis attempts to identify comparable groups both across the region and within countries.

This and the next sections attempt to answer the following **key questions**:

- *How many children are **excluded** from education (Dimensions 1, 2 and 3)?*
- *How many children are **at risk of exclusion** from education (Dimensions 4 and 5)?*
- *What **patterns of educational exclusion** exist among the EAP countries, if any?*
- *Which **groups of children** are particularly excluded or what **factors of disadvantage** led to the utmost risk of educational exclusion?*
- *How can we best utilize **various data sources** for profiling out-of-school children and adolescents?*

3.1. Dimension 1: Pre-Primary Age Children Not in School

Young children grow and develop more rapidly than in any other period in their lives. A vast body of evidence demonstrates that quality early childhood education is one of the most powerful equalizers for school access and learning. There is evidence that it has a long-lasting positive impact on children's academic outcomes throughout life, for example, children who have attended quality early learning programmes are more likely to be better prepared to succeed in school, with lower drop-out rates and higher secondary completion rates (Heckman, 2006; Neuman and Hatipoglu, 2015). Early education services can give a significant head start to children from poor and disadvantaged families to build their socio-emotional, cognitive, language and motor development skills, and ultimately transform their lives. The global community's commitment to early childhood education was underscored with the inclusion

of Target 4.2 in the SDG 4.[27] In this context, countries across the globe and those in the EAP region have committed to providing inclusive and equitable quality education – from early childhood onwards – for all children (UN, 2015). In brief, early childhood education is widely considered to be among the most cost-effective ways for countries to promote equity in education and build human capital.

Dimension 1 refers to **children who are out of school at pre-primary education age**. Pre-primary education refers to programmes that, as well as providing care, offer a "structured and purposeful set of learning activities, either in a formal institution or a non-formal setting" (UNESCO, 2007, p. 20) and usually target children below the age of entry into primary education and from age 3 onwards. In some countries, however, pre-primary education is not considered to be part of compulsory education.[28] For measurement purposes, the OOSCI studies focus on children who are **1 year below the official school starting age** and who are **not attending formal pre-primary or primary programmes**.

▌ **BOX 2.** Estimating the number of out-of-school children in Dimension 1

In this methodology, the term "children of pre-primary school age" refers to those children who are 1 year below the official age of entry into primary education. Dimension 1 estimates the number of children from that age group who are not attending a formal pre-primary or primary programme and are thus considered out of school. Some children might be attending early learning programmes that are of a non-formal nature, but these are not considered equivalent in their preparation for primary education.

Calculating estimates for Dimension 1:

OOS rate for pre-primary
= 100 – per cent of children of pre-primary age who are in pre-primary or primary education

$$= 100 - \frac{\text{(number of children of pre-primary age enrolled in pre-primary or primary education)}}{\text{number of children of pre-primary age}}$$

The data for calculating Dimension 1 are obtained from the adjusted net enrolment rate (ANER), or adjusted net attendance rate (ANAR), which takes into consideration that pre-primary school age children can be enrolled in either pre-primary or primary school. The UIS indicator is the rate of out-of-school children, 1 year before the official primary entry age.

Underestimation of Dimension 1 is likely to occur in countries where civil registration of births and deaths are not recorded accurately across all population groups. In the EAP region, an estimated 16 per cent of children under age 5 do not have birth registrations, with high degrees of variability by and within countries (see Section 4.2).

Within the ECD sector, understanding the data quality at a country level is critical for estimating children who are out of school per Dimension 1. Administrative data at this education level is more likely to under-report enrolment in early learning programmes due to the strict definition employed by ISCED for inclusion of formal education programmes. Those children enrolled in some form of private or non-formal programme – of varying quality and objectives – are not likely to be counted as in a learning programme. For example, in Cambodia, in 2015, the gross enrolment rate was 18 per cent for pre-primary education and in 2014, the DHS reported 15 per cent attendance for 3 and 4 year old's. Yet, in both cases, the high out-of-school rate is likely due to the low coverage of state schools across the country, as well as the non-inclusion in the data of children attending community pre-schools and home-based programmes.

Source: UNICEF and UIS, 2011, 2015; Cambodia OOSCI study

Estimating the number and proportion of children not enrolled in pre-primary education in the year before primary school entry is relatively straightforward, but requires robust and reliable centre-based enrolment and population data (Box 2). In 2017, about **4 million children** (or **13** per cent of the corresponding age

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27 SDG target 4.2 states "By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education" (United Nations, 2017).

28 Some countries may not consider that education is compulsory or necessary the year before primary education, and therefore the state does not provide learning opportunities for these children. However, this attitude is changing across most countries in the region (Annex 3), following global trends to increase public attention to early childhood development for improving children's outcomes in school and their opportunities age in life.

group) were excluded from pre-primary education across the EAP region (see Table 6). The share of out-of-school children of pre-primary school age ranges from less than 5 per cent in Brunei Darussalam, the Cook Islands, Indonesia, Malaysia, Mongolia, Thailand, Tuvalu and Viet Nam to more than 60 per cent in Samoa and Timor-Leste. Nearly one-fifth of the region's out-of-school children of pre-primary school age live in 3 countries – the Philippines, Cambodia and Indonesia, but some countries without data (e.g. China, Myanmar) may also have excluded children. The rate of out-of-school children is slightly lower for girls than for **boys** in most countries, with the exception of Brunei Darussalam, the Marshall Islands, the Federated States of Micronesia, Mongolia, Palau, Papua New Guinea, Thailand and Viet Nam.

TABLE 6. Number and share of out-of-school children, Dimension 1, by country and sex, 2017

| | Dimension 1 Pre-primary school-age children | | | | |
| | Number of OOSC | | Rate of OOSC | | |
	Total	% female	Total (%)	female (%)	male (%)
Brunei Darussalam	321	51.4	4.9	5.2	4.7
Cambodia	175,636	48.8	57.0	56.4	57.5
China	..	..	..	..	..
Cook Is	2	n	0.9	n	1.7
DPR Korea	..	..	..	..	..
Fiji	..	..	..	..	..
Indonesia	152,526	n	3.2	n	6.3
Kiribati	..	..	..	..	..
Lao PDR	57,012	48.2	36.9	36.4	37.4
Malaysia	6,969	25.9	1.4	0.7	2.0
Marshall Is	509	49.7	34.4	35.2	33.6
Micronesia, F. S.	541	55.6	23.6	27.2	20.2
Mongolia	2,606	56.1	4.0	4.5	3.4
Myanmar	..	..	..	..	..
Nauru	88	27.3	25.2	15.7	32.7
Niue	12	n	44.3	n	76.8
Palau	21	..	9.6	19.6	n
Papua New Guinea	52,598	49.1	26.5	26.9	26.1
Philippines	451,655	46.4	20.4	19.3	21.4
Samoa	3,063	46.4	63.1	60.9	65.1
Solomon Is	5,613	48.0	34.6	34.3	34.9
Thailand	24,053	51.2	3.0	3.2	2.9
Timor-Leste	26,799	48.8	66.9	66.5	67.2
Tokelau	2	n	11.6	n	22.1
Tonga	..	..	..	..	..
Tuvalu	7	n	3.0	n	5.8

	Dimension 1 Pre-primary school-age children				
	Number of OOSC		Rate of OOSC		
	Total	% female	Total (%)	female (%)	male (%)
Vanuatu	..	..	..	..	..
Viet Nam	10,613	..	0.7	1.5	n
East Asia and Pacific	**4,020,976**	**43.9**	**13.0**	**12.1**	**13.9**

Notes: The year is 2017 except for Cambodia (2012), Palau (2014); Malaysia, Micronesia, Niue, Solomon Islands (2015) and Cook Islands, Marshall Islands, Nauru, Papua New Guinea, the Philippines, Tokelau and Tuvalu (2016). The indicator is the number and rate of out-of-school children, 1 year before the official primary entry age. EAP is for the UIS region, which differs slightly from the UNICEF region (see footnote 11). Countries without data between 2010–2017 are indicated as not available.

n: nil or negligible

.. : data are not available

Source: UIS, 2019

Between 2000 and 2017, 8 countries experienced **declines** in the rate of out-of-school children 1 year before the official primary entry age (see Figure 13).[29] There were dramatic declines in some East Asian countries initially with very high rates of out-of-school children at this education level – in the Philippines, the rate decreased from 76 per cent in 2001 to 15 per cent in 2015 and in Viet Nam from 22 per cent in 2006 to less than 1 per cent in 2017. Between 2012 and 2017, some countries with relatively low initial rates of out-of-school children, such as Nauru and Thailand, appeared to face **set-backs**. The share of out-of-school children more than doubled in Nauru (from 11 per cent in 2007 to 25 per cent in 2016).[30] The reasons for this trend are unclear and require further exploration.

❙ FIGURE 13. Trends of pre-primary age children who are out-of-school, by country, 2000–2017
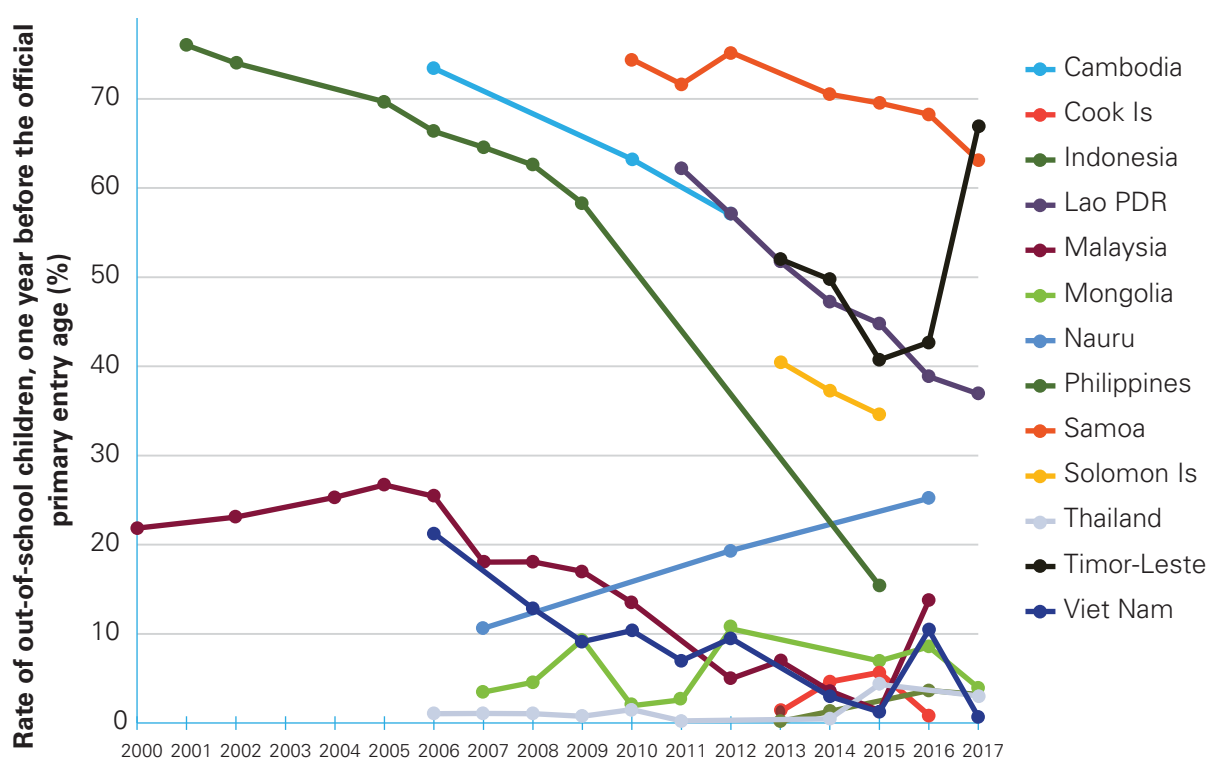
Notes: Only countries with 3 or more data points were included in the figure.

Source: UIS, 2019

Enrolment at the pre-primary level has shown **improving trends** throughout the region since 2000. The growing importance and prioritization of early childhood education (ECE) policies implemented in various countries seems to have contributed to this tremendous growth and progress in pre-primary gross

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29 Cambodia, Cook Islands, Lao PDR, Malaysia, Philippines, Samoa, Solomon Islands and Viet Nam.

30 Population sizes are small and population estimates are rather sensitive to change in Nauru.

enrolment ratios, as in Mongolia, the Solomon Islands, Papua New Guinea and Tokelau (see Figure 14). An **additional 29.8 million children** were enrolled in pre-primary education in the EAP region between 1999 and 2017 (UIS, 2019). The region experienced particularly fast growth relative to other sub-regions in Asia and globally. The total GER for the EAP increased from **38 per cent** in 1999 to **71 per cent** in 2013 (UNESCO Bangkok and UNESCO, 2016).[31]

▌**FIGURE 14.** Change in participation in pre-primary participation, 2000 to most recent year available
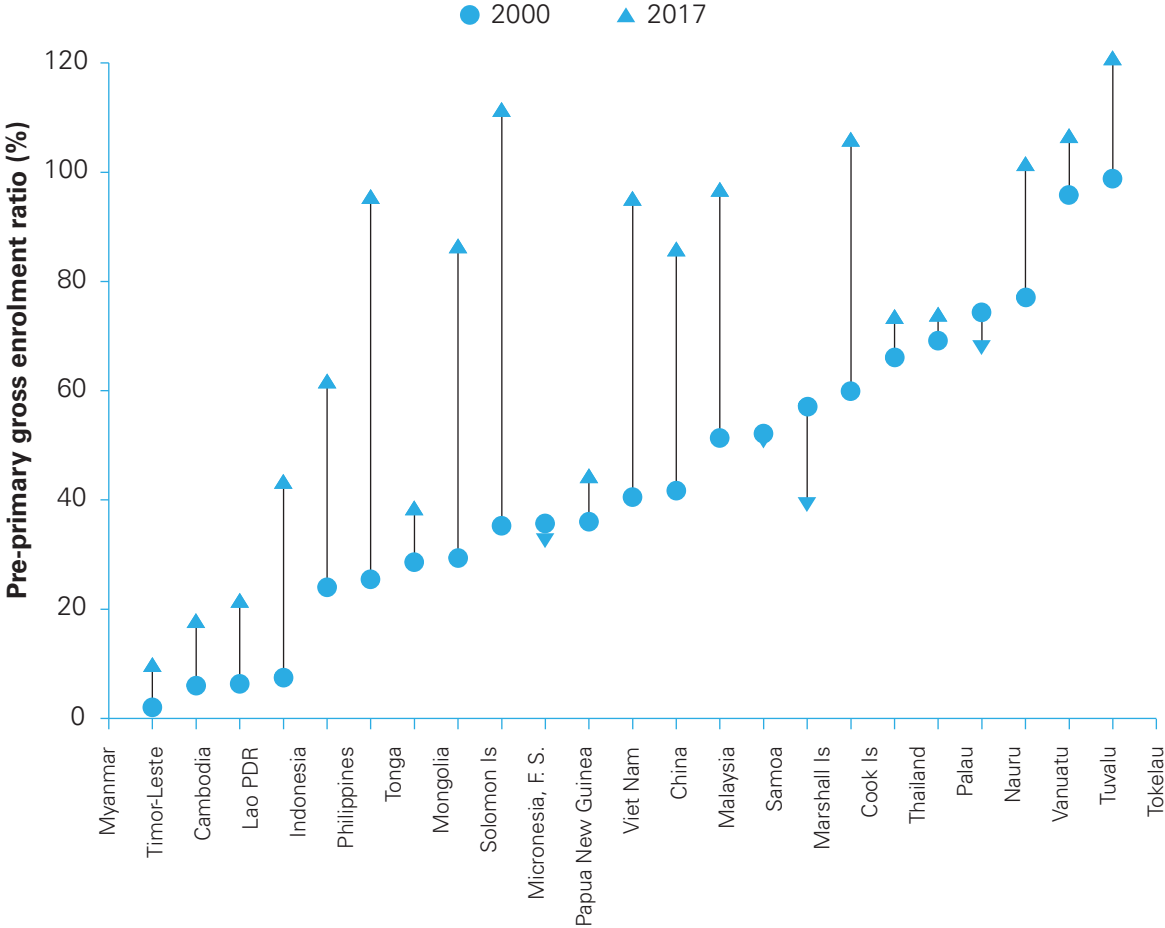
Notes: Data for Marshall Is, Micronesia, F. S., Myanmar, Niue, Tonga and Vanuatu are from 1999; for Tuvalu from 2001; for Kiribati, Palau and Timor-Leste from 2002. Most recent year available for Tonga and Palau is 2014; for Micronesia, F. S. and Vanuatu is 2015; for Philippines, Papua New Guinea, Marshall Islands, Cook Islands, Nauru, Tuvalu, Tokelau is 2016.

Source: UIS, 2019

Gender Parity

Rapid growth in the supply of pre-primary education can translate into more equitable distribution of opportunities for all. In 2017, **13 countries** achieved gender parity in the gross enrolment of children in pre-primary education (see Figure 15). Improvements in the **gender parity index (GPI)** (see Box 3) at the pre-primary level occurred in various countries, and not necessarily those with large growths in enrolment. For example, while Palau slightly increased enrolment in pre-primary programmes to 74 per cent in 2014, it was at the expense of no longer maintaining gender parity in enrolment. By 2014, a much larger share of girls relative to boys were enrolled, with a GPI of nearly 1.09, up from 1.00 in 2000. One necessary precaution when examining gender parity is the low levels of enrolment on which the calculation is based. Very small changes in cohort compositions could move the GPI in one direction or another, not reflecting a valid change in equitable opportunities.

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31 The classifications for UNESCO's EAP region differ from the UNICEF definition. The former relative to the UNICEF definition includes an additional 6 countries (Australia, Brunei Darussalam, Japan, Macao (China), New Zealand, Republic of Korea, Singapore) and excludes Mongolia.

BOX 3. Gender parity index

Gender parity index (GPI) is the ratio of the female to male values of a given indicator. For example, the GPI of the pre-primary gross enrolment ratio is:

GPI = GER for girls
      GER for boys

By UIS standards, values in the shaded area (between 0.97 and 1.03) are considered as attaining gender parity. GPI values less than 0.97 indicate a disadvantage for girls, while values greater than 1.03 indicate a disadvantage for boys.

FIGURE 15. Change in Gender Parity Index for pre-primary GER, 2000 to 2017
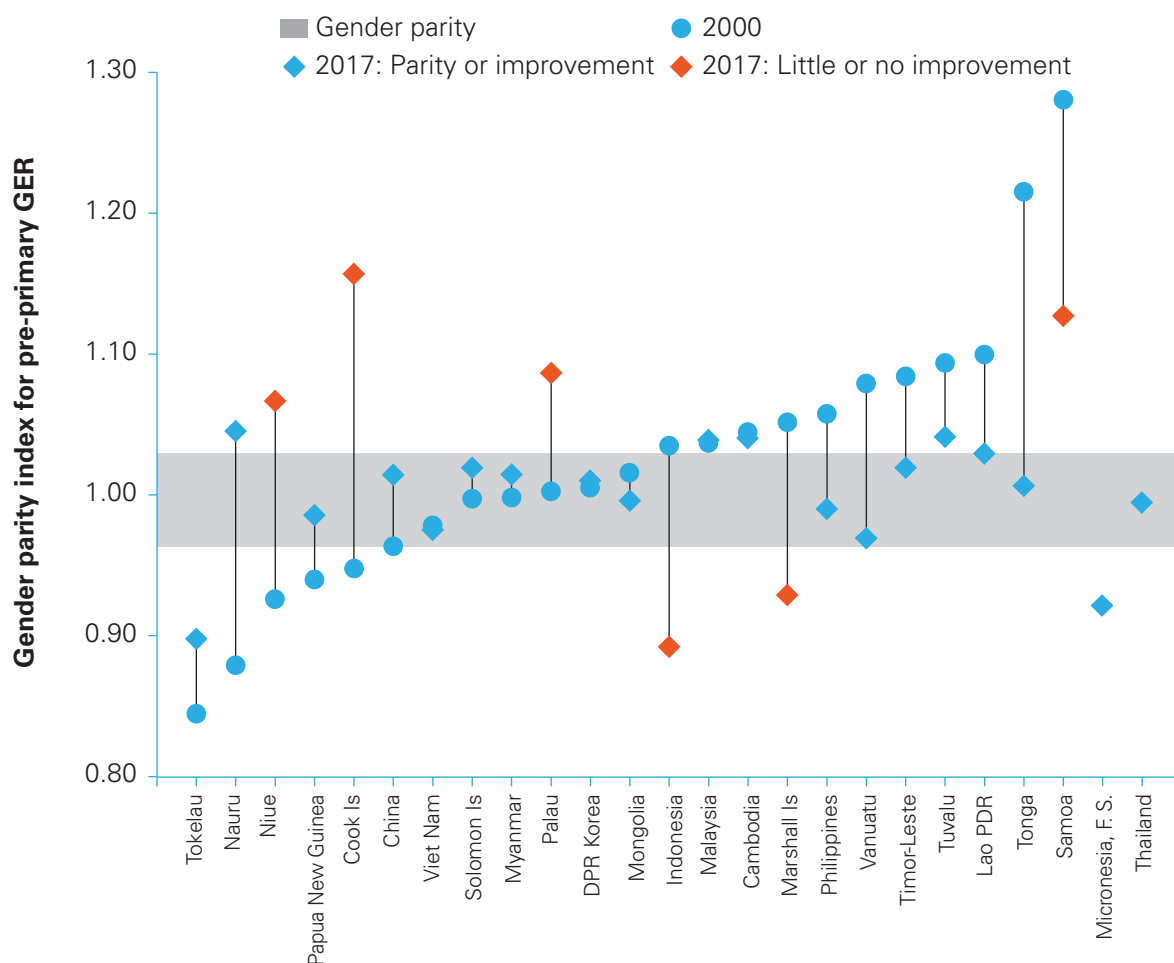
Notes: The GPI indicates the gender-based disparity in the participation rate. "Improvement" identifies those countries which have reached parity or are closer than in the previous time period. "Little or no improvement" indicates that the gender gap has not changed or increased during the period.

Data for the initial year are from 1998 for Papua New Guinea; from 1999 for Malaysia, Marshall Islands, Niue, Philippines, Tonga and Vanuatu; from 2001 for Tuvalu; from 2003 for Palau; from 2005 for Timor-Leste; from 2006 for Myanmar and from 2009 for DPR Korea.

Most recent year available for Palau is 2014; for Cook Islands, DPR Korea, Vanuatu and Micronesia, F. S. is 2015; for Tokelau, Nauru, Niue, Papua New Guinea, Marshall Islands, Philippines and Tuvalu is 2016.

Source: UIS, 2019

The gender bias in pre-primary enrolment tends to **disfavour both boys and girls**, depending on the country. Among 14 countries with available data, 5 have reached gender parity where both boys and girls are equally likely to be out-of-school (see Figure 16). Girls are more likely to be out of school in Micronesia, F. S. Mongolia, Brunei Darussalam, Thailand and Marshall Islands, while this is the case for boys in Samoa, the Philippines, Nauru and Malaysia.

FIGURE 16. Share of pre-primary age children who are not in pre-primary, by sex, 2017
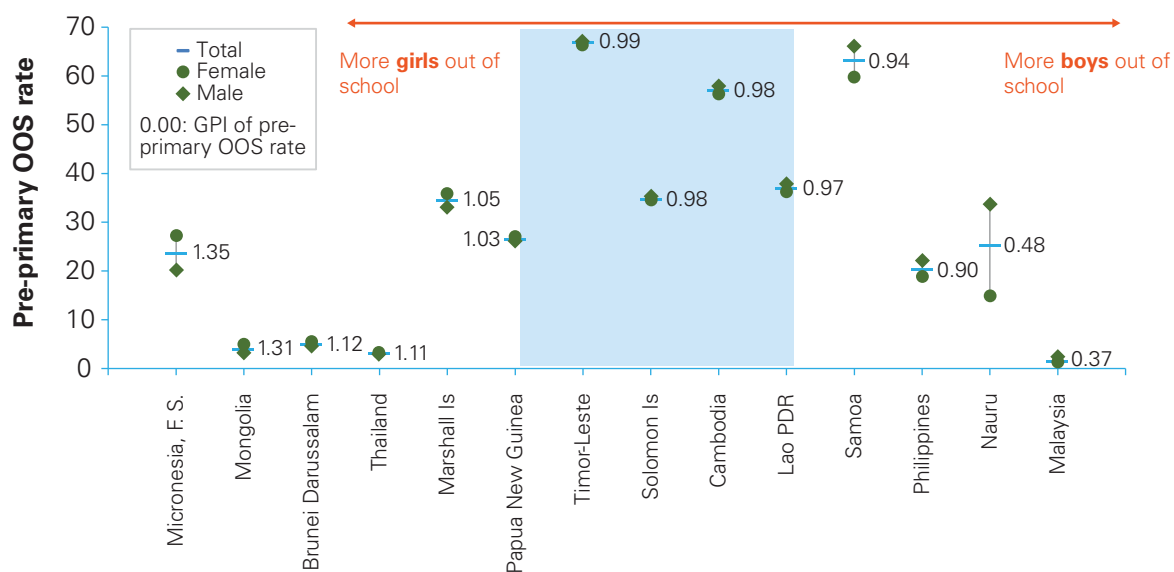
Notes: The pre-primary OOS rate is the rate of children who are out-of-school children, 1 year before the official primary entry age. The GPI indicates the gender-based disparity in the OOS rate. By UIS standards, values in the shaded area (between 0.97 and 1.03) are considered as attaining gender parity. GPI values of the OOS rate less than 0.97 indicate a disadvantage for boys, while values greater than 1.03 indicate a disadvantage for girls (more girls out of school). Most recent year available is 2017, except in Cambodia (2012); Micronesia, F. S., Solomon Islands and Malaysia (2015); Marshall Islands, Papua New Guinea, the Philippines and Nauru (2016). Only countries with 3 rates (total, female, male) in the same given year are shown.

Source: UIS, 2019

Factors of Disadvantage

Household survey data enable the differentiation of early childhood education programme attendance by sex and wealth quintile. Figure 17 shows that the **wealth gap** in attendance rates is usually much **larger than gender bias**. Countries with high attendance rates can experience wealth disparities, such as in Viet Nam where the gap is 32 percentage points. The difference in attendance by wealth is highest in Lao PDR and Mongolia. In the former, while 73 per cent of children from the wealthiest 20 per cent of households attend early learning programmes, only 5 per cent of children from the poorest 20 per cent of households have that same opportunity.

FIGURE 17. Share of children of pre-primary age who attend early learning programmes, by sex and wealth quintile, most recent year available
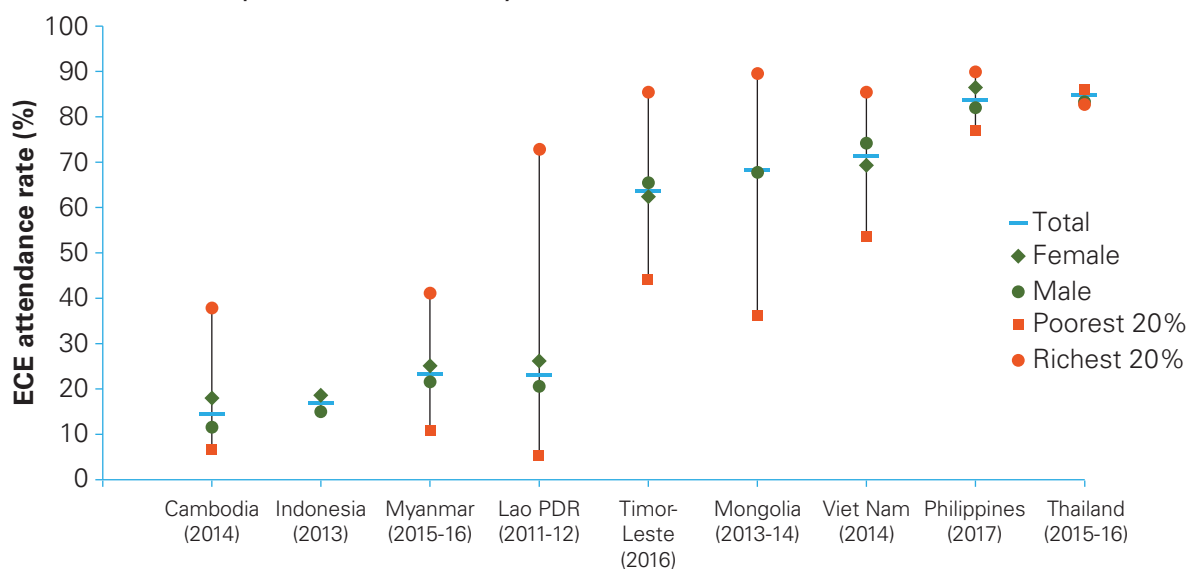
Note: Attendance rate in early learning programmes is the percentage of children aged 36 to 59 months who attend some form of ECE programme. Data years are indicated in parentheses and sources are household surveys.

Source: UIS, 2019; UNICEF, 2017c

The **combination of factors of disadvantage** tend to lead to **worse risk of exclusion** from school. In Cambodia, for example, over 80 per cent of poor rural girls are out-of-school at pre-primary age, whereas wealthy boys in rural areas have a much lower out-of-school rate (36.4 per cent). This gap can be explained in part by the dearth of public pre-primary classes in rural areas, cost associated to sending children to pre-primary schools, and cultural norms to education influencing the decision to send children (selectively by age and gender, in some cases) to school (see Figure 18). Among children in the poorest wealth quintile in urban areas, none are in pre-primary education, although the sample size is likely to be small for this group and it is not clear whether it is representative.

FIGURE 18. Out-of-school rate for pre-primary age children in Cambodia, 2012
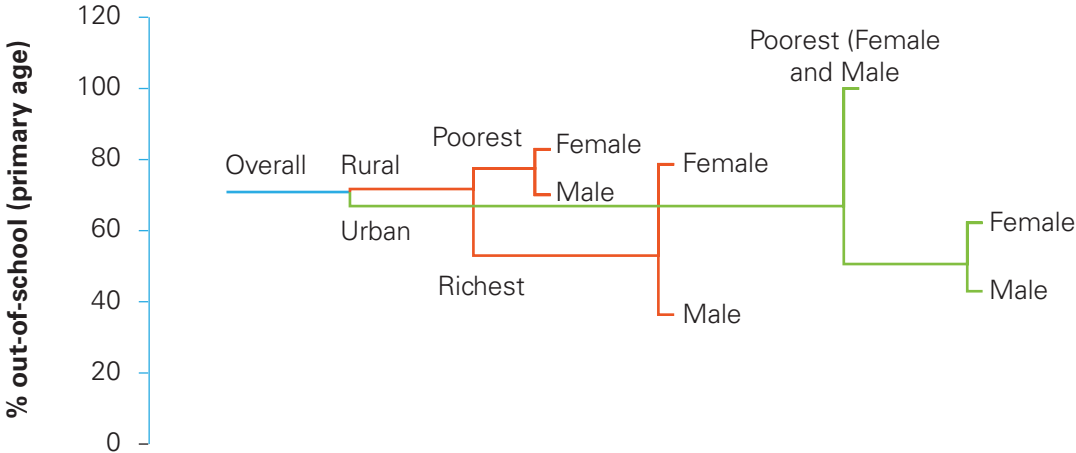
Note: Indicator is for 5-year-old children who are not attending school as reported in the 2012 Cambodia Socio-economic Survey (CSES).

Source: Cambodia OOSCI study

The **combination of gender and location** can be responsible for further exclusion from pre-primary education. Remoteness and urban/rural divisions create conditions with differential effects for girls and boys in terms of access to school. In Papua New Guinea, boys are less likely than girls to attend pre-primary education in urban areas, while for rural areas as a whole, there is little gender gap (see Figure 19). There are different gender gaps in some types of areas, however, girls are more likely than boys to be out of school in remote and moderately accessible areas. In the most remote areas, 100 per cent of both boys and girls are out of school. Poor communication in remote areas hamper the ability for parents to receive adequate information about the cost and value of pre-primary education (PNG OOSCI study).

FIGURE 19. Access to pre-primary education in Papua New Guinea, by remoteness and gender, 2015
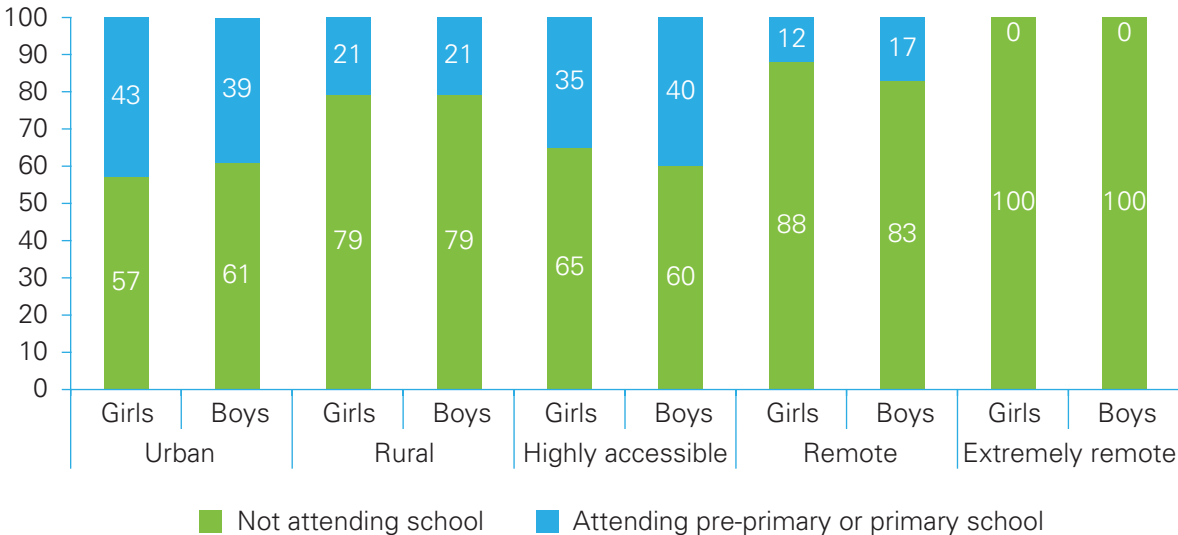
Note: Children of the pre-primary age group are 6 years old.

Source: Papua New Guinea OOSCI study

3.2. Dimension 2 and 3: Out-of-School Children and Adolescents of Primary and Lower Secondary Age

Dimensions 2 and 3 identify **children and adolescents who are out of school** according to their age and expected school level, that is, of **primary** and **lower secondary school age**, respectively. Estimating the number of out-of-school children and adolescents is based on enrolment or attendance data, as for Dimension 1, and on national population statistics (Box 4).

▌ **BOX 4.** Estimating the number of out-of-school children and adolescents in Dimensions 2 and 3

The share of out-of-school children and adolescents at the primary and lower secondary school levels is calculated based on the difference between universal enrolment or attendance (100 per cent of all children in school) and the adjusted net enrolment rate (ANER) or adjusted net attendance rate (ANAR). The former is derived from administrative records and, takes into consideration that children and adolescents can be enrolled in levels other than that for their official school age (see Terminology and Definitions). The attendance rate is derived from household survey data and reflects whether children and adolescents have attended school recently relative to the period of data collection.

Calculating estimates for Dimension 2

OOS rate for primary school age children = 100% – (primary ANER)

Primary ANER = (population of children of primary school age enrolled in primary or secondary schools) / (total population of children of the official age for primary education)*100.

Primary ANAR (using attendance data) can replace Primary ANER.

Calculating estimates for Dimension 3

OOS rate for lower secondary school age children
=100%- (lower secondary ANER)
– (Percentage of children of lower secondary school age enrolled in primary education)

Lower secondary ANER = (population of children and adolescents of lower secondary school age enrolled in secondary or post-secondary schools) / (total population of children of the official age for lower secondary education) *100.

Lower secondary ANAR (using attendance data) can replace lower secondary ANER.

Source: UNICEF and UIS, 2011, 2015

In the EAP region, about **31 million** children, adolescents and youth in the region are not in primary and secondary schools in 2017 (UIS, 2019).[32] Of these, **7 million** children are of **primary** school age (**4 per cent** of 6 to 11 year old's), **8 million** are adolescents of **lower secondary** school age (**8 per cent of** 12 to 14 year old's), and another **16 million** are adolescents of **upper secondary** school age (**19 per cent** of 15 to 17 year old's). Although some countries struggle more than others in keeping children and adolescents in school, the challenge appears generally greater at the secondary education level.

These figures do **not include all countries** in the region: 5 countries do not have data for primary and 9 for lower secondary school. Data are missing for China, in particular. The gross enrolment ratio for China in 2015 was 104 per cent at the primary level and 99 per cent at the lower secondary level, which would suggest the proportion of children and adolescents out-of-school seems relatively low. The discrepancy between the Papua New Guinea country study and the UIS data are significant. The former finds that there are some 118,000 children and adolescents out-of-school of lower secondary age (ages 15 and

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32 This regional total reflects the UIS region for EAP.

16), which is equivalent to a 34 per cent out of school rate in 2015 (PNG OOSCI study). Comparatively, the UIS data find onethird that level, equivalent to a 12 per cent out of school rate in 2016 (see Table 7).

The **gender gap** across out-of-school children and adolescents varies across both Dimensions 2 and 3 and all countries. The share of females among the out-of-school population at the primary school age (in the Dimension 2 category) ranges from 41 per cent in Samoa to 73 per cent in Mongolia. At the lower secondary school age level, the share of out-of-school children and adolescents who are female ranges from 33 per cent in the Philippines to 70 per cent in Palau (see below for more details).

TABLE 7. Number and share of out-of-school children, Dimensions 2 and 3, by country and sex, 2017

	Dimension 2 Primary-age children					Dimension 3 Lower secondary-age children				
	Number of OOSC		Rate of OOSC			Number of OOSC		Rate of OOSC		
	Total	% female	Total	% female	% male	Total	% female	Total	% female	% male
Brunei Darussalam	1,355	51.3	3.6	3.8	3.4	329	..	2.4	..	..
Cambodia	184,824	49.9	9.4	9.7	9.2	119,327	52.6	13.3	14.1	12.5
China	..	..	..	..	..	..	..	..	..	..
Cook Is	72	..	4.2	..	..	4	..	0.3	..	..
DPR Korea	..	..	..	..	..	91,731	46.7	8.0	7.6	8.4
Fiji	71	..	0.1	..	..	2,468	..	4.0	..	..
Indonesia	2,061,360	66.5	7.3	9.9	4.8	1,610,314	40.9	11.8	9.9	13.5
Kiribati	577	..	3.5	..	..	..	..	..	..	..
Lao PDR	50,332	52.8	6.7	7.2	6.2	124,443	50.3	21.7	22.3	21.2
Malaysia	41,794	43.0	1.4	1.2	1.6	186,422	44.1	12.1	10.9	13.1
Marshall Is	1,909	42.5	21.5	18.8	23.9	1,210	47.7	22.9	22.7	23.1
Micronesia, F. S.	2,303	44.0	16.0	14.6	17.3	937	41.7	18.1	15.6	20.4
Mongolia	3,169	73.2	1.1	1.7	0.6	..	..	..	..	..
Myanmar	109,055	..	2.3	..	..	992,076	47.5	24.0	23.0	25.1
Nauru	263	43.7	15.6	14.2	16.8	152	40.8	17.6	14.3	21.0
Niue	..	..	..	..	..	..	..	..	..	..
Palau	8	..	0.6	..	..	..	..	..	..	..
Papua New Guinea	254,607	54.6	22.3	25.2	19.6	43,022	69.7	12.0	17.3	7.1
Philippines	586,284	43.6	4.5	4.1	5.0	456,438	32.9	7.3	5.0	9.5
Samoa	1,154	40.8	3.8	3.2	4.3	166	50.0	1.8	1.8	1.7
Solomon Is	28,887	48.0	30.5	30.2	30.7	..	..	..	..	..
Thailand	..	..	..	..	..	289,999	48.0	11.1	10.9	11.2
Timor-Leste	42,619	45.1	19.2	17.7	20.7	12,323	46.4	12.9	12.2	13.6
Tokelau	14	..	8.2	..	..	1	..	0.8	..	..
Tonga	10	..	0.1	..	..	1,418	38.7	11.5	9.4	13.4
Tuvalu	31	..	2.5	..	..	83	..	11.3	..	..
Vanuatu	5,103	43.2	13.3	12.0	14.5	180	38.3	0.8	0.7	1.0
Viet Nam	127,071	..	1.9	..	..	..	..	..	..	..
East Asia and Pacific	**6,978,891**	**..**	**3.9**	**4.3**	**3.5**	**7,690,148**	**..**	**8.4**	**8.0**	**8.9**

Notes: For Dimension 2, the year is 2017 except for Viet Nam (2013), Palau (2014); Cook Islands, Micronesia, F. S., Tonga and Vanuatu (2015) and Fiji, Marshall Islands, Nauru, Papua New Guinea, the Philippines, Tokelau and Tuvalu (2016). For Dimension 3, the year is 2017 except for Fiji (2012), Brunei Darussalam, Indonesia, and Micronesia, F. S. (2014); Cambodia, DPR Korea, Tonga and Vanuatu (2015) and Cook Islands, Marshall Islands, Nauru, Papua New Guinea, the Philippines, Samoa, Tokelau, Tuvalu (2016). Countries without data between 2010–2017 are indicated as not available. EAP is for the UIS region, which includes 6 additional countries to the UNICEF EAP region (see Footnote 10).

n: nil or negligible

.. : data are not available

Source: UIS, 2019

Of the 16 million adolescents of **upper secondary** school age (15 to 17 years old), many are **no longer required to attend**[33] school, as compulsory education ends at age 15 or below in half of the countries with available data in EAP (see Table 5). For example, compulsory education ends at age 16 in Indonesia, which accounts for nearly 13 per cent of the region's out-of-school youth (see Table 8). At the same time, however, countries such as the Philippines have made upper secondary compulsory. Women are less likely to be out-of-school in this upper secondary age group, and only 3 countries of the 18 with recently available data show a slight advantage for males (Lao PDR, Papua New Guinea, Tokelau). While many of these adolescents may be working or accessing informal education or training opportunities, it is important to understand the equity gaps in their access to education and learning.

TABLE 8. Number and share of out-of-school children of upper secondary age, by country and sex, 2017

| | Upper secondary-age children | | | | |
| | Number of OOSC | | Rate of OOSC | | |
	Total	% female	Total	% female	% male
Brunei Darussalam	6417	43.2	18.3	16.4	20.2
Cambodia	..	..	..	..	..
China	..	..	..	..	..
Cook Is	274	41.6	33.8	30.0	37.2
DPR Korea	130,907	48.1	11.2	11.1	11.4
Fiji	12,485	41.7	26.2	22.5	29.8
Indonesia	2,029,282	41.5	14.9	12.8	17.0
Kiribati	..	..	..	..	..
Lao PDR	162284	53.1	38.1	41.1	35.23
Malaysia	598,280	42.5	36.5	31.9	40.8
Marshall Is	771	39.6	34.3	28.5	39.7
Micronesia, F. S.	..	..	..	..	..
Mongolia	..	..	..	..	..
Myanmar	958,985	45.7	46.4	42.6	50.2
Nauru	238	50.0	57.6	60.1	55.3
Niue	..	..	..	..	..
Palau	19	..	1.9	..	..
Papua New Guinea	301,548	54.9	44.3	50.1	38.8
Philippines	416,918	40.0	20.2	16.7	23.5
Samoa	4,115	36.6	19.2	14.6	23.4
Solomon Is	..	..	..	..	..
Thailand	603,129	49.0	20.9	21.0	20.9
Timor-Leste	26,114	45.4	28.0	25.9	29.9
Tokelau	69	53.6	70.4	80.4	61.5
Tonga	1,948	42.1	43.0	38.0	47.6
Tuvalu	303	42.6	52.5	46.4	58.2
Vanuatu	6,922	49.5	44.3	45.8	43.0
Viet Nam	..	..	..	..	..
East Asia and Pacific	**15,981,519**	**..**	**19.3**	**15.3**	**23.0**

Notes: The year is 2017 except Fiji (2012), Palau (2013), DPR Korea, the Philippines, Thailand, Tonga and Vanuatu (2015) and Cook Islands, Marshall Islands, Nauru, Papua New Guinea, Samoa, Tokelau and Tuvalu (2016). Countries without data between 2010–2017 are indicated as not available. EAP is for the UIS region, which includes 6 additional countries to the UNICEF EAP region (see Footnote 10).

n: nil or negligible

.. : data are not available

Source: UIS, 2019

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33 It is for this is the reason the Global OOSC Initiative has not included upper secondary education in its analytical framework of the Five Dimensions of Exclusion. However, given the critical importance of this level of education and learning, particularly in the fast-growing economies of the EAP region, this Report pays attention to upper secondary education when and as relevant.

During the past 15 years, most countries in the region have succeeded in **reducing the proportion** of out-of-school children at **primary** level (see Figure 20). Three of the 4 countries with the largest proportions of primary-age out-of-school children in 2000 – Timor-Leste, Nauru and Lao PDR – reduced the out-of-school children rate significantly by 2017. Six countries in the EAP region – Vanuatu, Kiribati, Marshall Islands, Indonesia, Cambodia, Papua New Guinea and the Solomon Islands – faced setbacks of varying degrees, with higher rates of out-of-school children at the primary level in 2017 relative to 2000. Particularly high out-of-school children rates were observed in the Marshall and Solomon Islands, with 22 and 29 per cent of children not attending, respectively.

FIGURE 20. Change in the primary out-of-school rate by country, 2000–2017
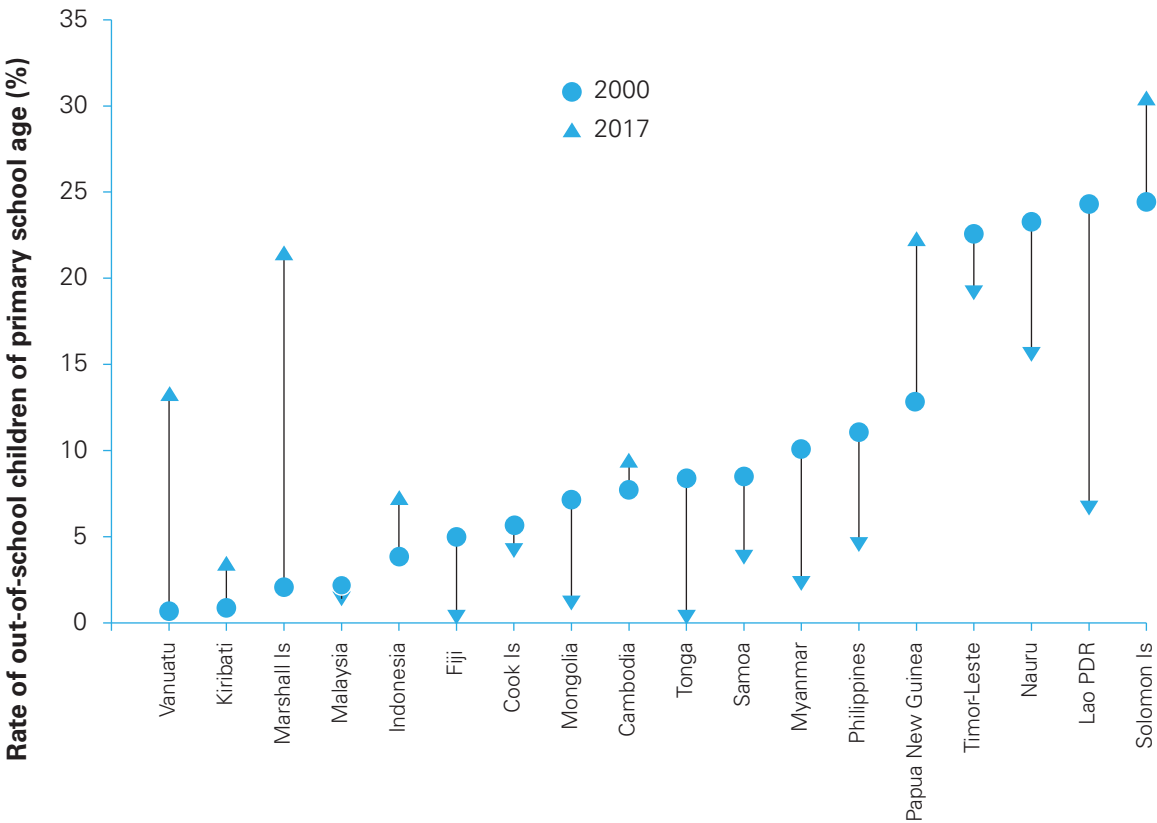
Notes: Triangles are inverted when values are equal or lower in 2017 compared to 2000. Data are for 2000 unless otherwise noted: Kiribati from 1997; the Philippines and Tonga from 1999; Indonesia from 2001; Marshall Islands from 2002; Solomon Islands from 2005, Thailand from 2006, Timor-Leste from 2008 and Nauru from 2012. For data years for 2017, refer to Dimension 2 in Table 7. Data earlier than 2014 for the most recent year available are not included.

Source: UIS, 2019

Enrolment of adolescents of **lower secondary** school age has gained momentum in the region, leading to **significant falls (i.e. improvement)** in the out-of-school rate since 2000 (see Figure 21). In Cambodia, the rate of out-of-school adolescents reduced spectacularly from 85 per cent in 2000 to only 13 per cent in 2017. The rates in the Philippines and Vanuatu fell to less than 10 per cent, from 24 and 18 per cent, respectively. Remarkable reductions of out-of-school rates have also been observed in Indonesia, Timor-Leste, and Myanmar too.

FIGURE 21. Change in the lower secondary out-of-school rate by country, 2000–2017
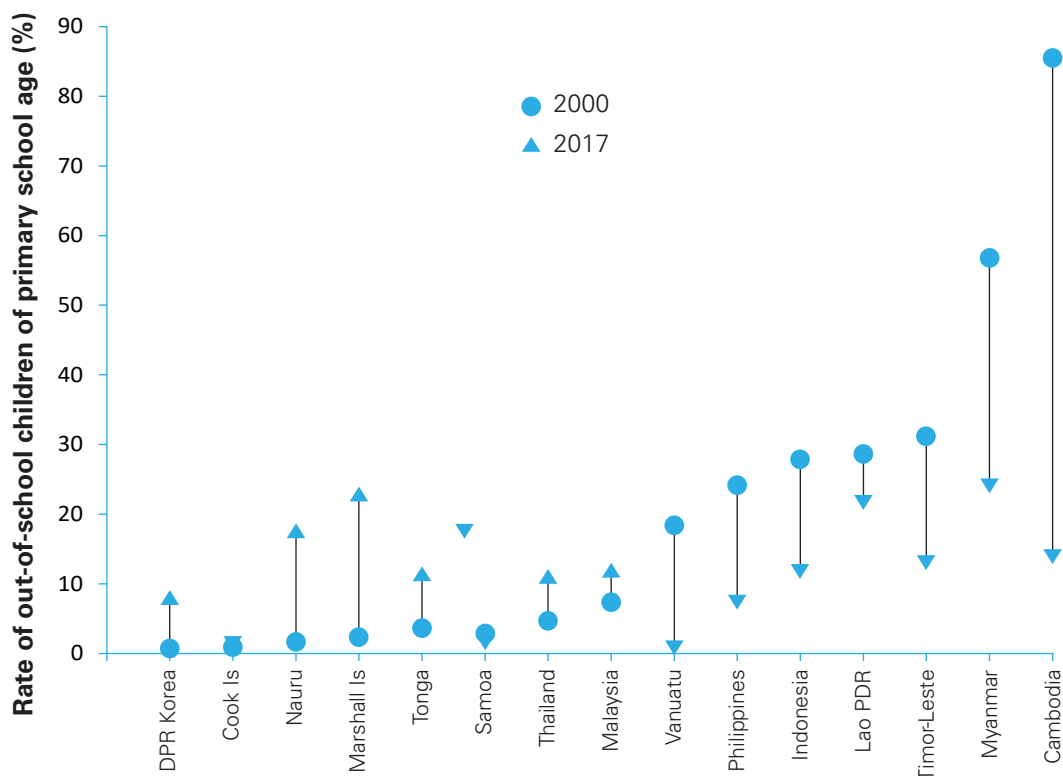
Notes: Data are for 2000 unless otherwise noted: Cook Islands, the Philippines and Tonga from 1999; Indonesia from 2001; Marshall Islands from 2002; Thailand from 2006; Timor-Leste from 2008; DPR Korea from 2009 and Nauru from 2012. Latest year available is 2015 unless otherwise noted: Mongolia from 2008; Fiji from 2012; the Philippines from 2013 and Myanmar, Nauru, and Tonga from 2014. For data years for 2017, refer to Dimension 3 in Table 7. Data earlier than 2014 for the most recent year available are not included.

Source: UIS, 2019

Within these Dimensions, the **profiles** of the children are quite varied with regard to **their past and expected future exposure to schooling**. Some children have never attended school and will most likely never attend, while others have been to school for only some months, leaving to never return again, i.e. dropped out. Other children have not yet enrolled but are expected to enrol at a later stage. These **3 sub-categories – (i) unlikely to ever enter school, (ii) already left school and (iii) likely to enter school in the future** – are important classifications for developing appropriate and targeted policy measures to reduce barriers to participation in school.

Figure 22 and Figure 23 show the distribution of out-of-school children with regard to their **school exposure** in 7 countries in the region where recent data are available, for Dimensions 2 and 3, respectively. The relative shares across the 3 categories vary widely by country, and by school level. Nonetheless, several findings emerge:

• Across the 7 countries, Cambodia, Lao PDR, Timor-Leste and Viet Nam have the largest share of children of primary school age unlikely to ever enter school, ranging from 15 to 21 per cent.

• Some countries have very large differences between the primary and lower secondary school age children who are unlikely to ever enter school. In Lao PDR, these out-of-school rates are 17 per cent and 24 per cent, respectively. In Timor-Leste, while 15 per cent of out-of-school children are unlikely to ever enter primary school, that same rate in lower secondary jumps to 78 per cent. This may require further investigation.

• Children who are expected to enter school in the future – as late entrants – represent a significant proportion of out-of-school children in nearly all 7 countries in primary education, ranging from nearly 50 per cent in Indonesia and Viet Nam to more than 85 per cent in the Philippines and Thailand.[34] This may have a problematic consequence as late entry and being over-age can be risk

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34 This might also relate to the difference between the age at the time of the data collection and the official entry age for primary education. See Section 2.3.

factors for premature dropout (see next section on Dimensions 4 and 5). Out-of-school children of primary school age have a higher likelihood of entering school late in Cambodia, Philippines and Thailand than in Indonesia and Viet Nam.

- In some countries, such as Indonesia and the Philippines, there is little difference in school exposure among girls and boys at the primary and lower secondary school levels. The gender gap is larger in Thailand and Timor-Leste, for example, where out-of-school girls are more likely than boys to never enter primary school (though more boys are out-ot-school in both countries overall). At the lower secondary level, the gender gap is largest in Lao PDR and Timor-Leste where out-of-school girls are less likely to even enter school.

FIGURE 22. School exposure of out-of-school children of primary school age

- Unlikley to ever enter school
- Likely to enter school in the future / by age 17
- Dropped out / Left school
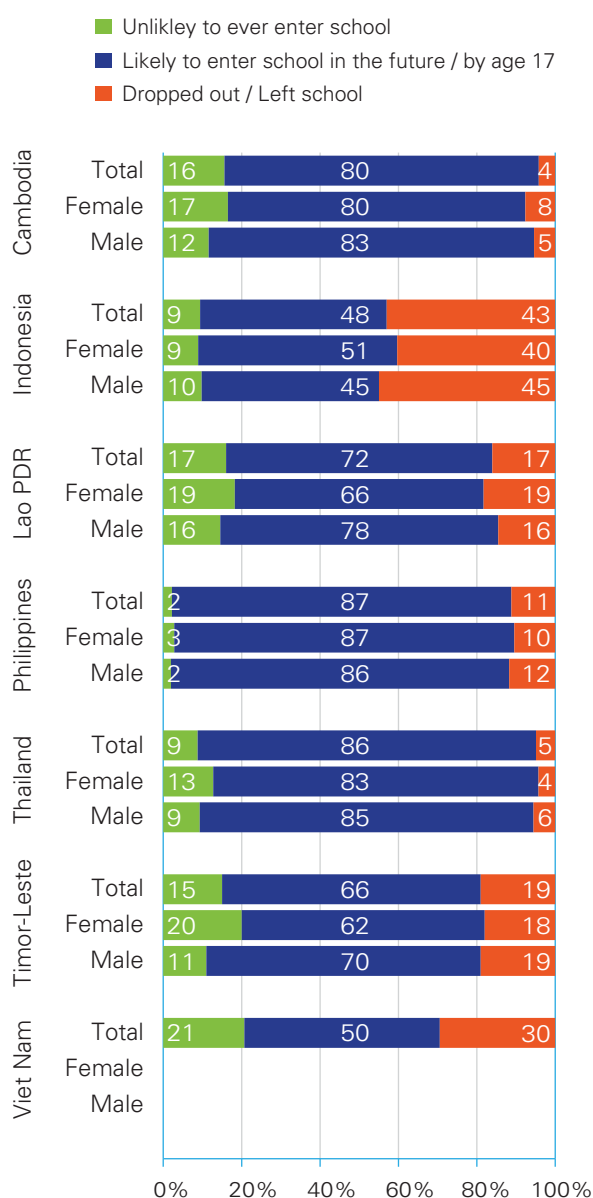
FIGURE 23. School exposure of out-of-school children of lower secondary school age

- Unlikley to ever enter school
- Likely to enter school in the future / by age 17
- Dropped out / Left school
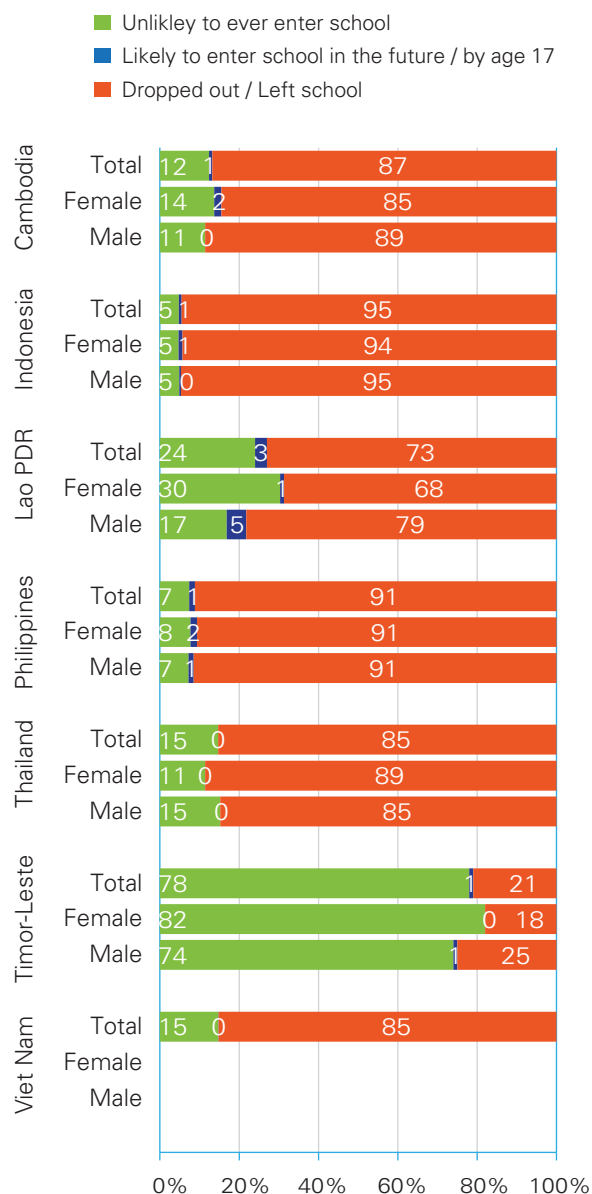
Notes: Data are all from most recent years available from each country. For Viet Nam, only the total figure is available.

Source: National OOSCI studies

Gender Parity

The period since 2000 has been marked by the **tremendous increase in girls' enrolment** in primary and lower secondary education in the EAP region. This surge has translated into attaining gender parity in adjusted net enrolment ratio at the **primary level** for an additional 4 countries with data available: Cambodia, Lao PDR, Samoa and Solomon Islands (see Figure 24). Gender parity in enrolment seemed to worsen against girls in Indonesia between 2006 and 2017, although household survey analysis (2009–2012) still finds girls slightly less likely to be out-of-school than boys (OOSCI study). In the Marshall Islands and Timor-Leste, boys in 2017 are disfavoured in enrolment in primary education, when this was not the case previously.

FIGURE 24. Change in the gender parity index in primary education, 2000–2017
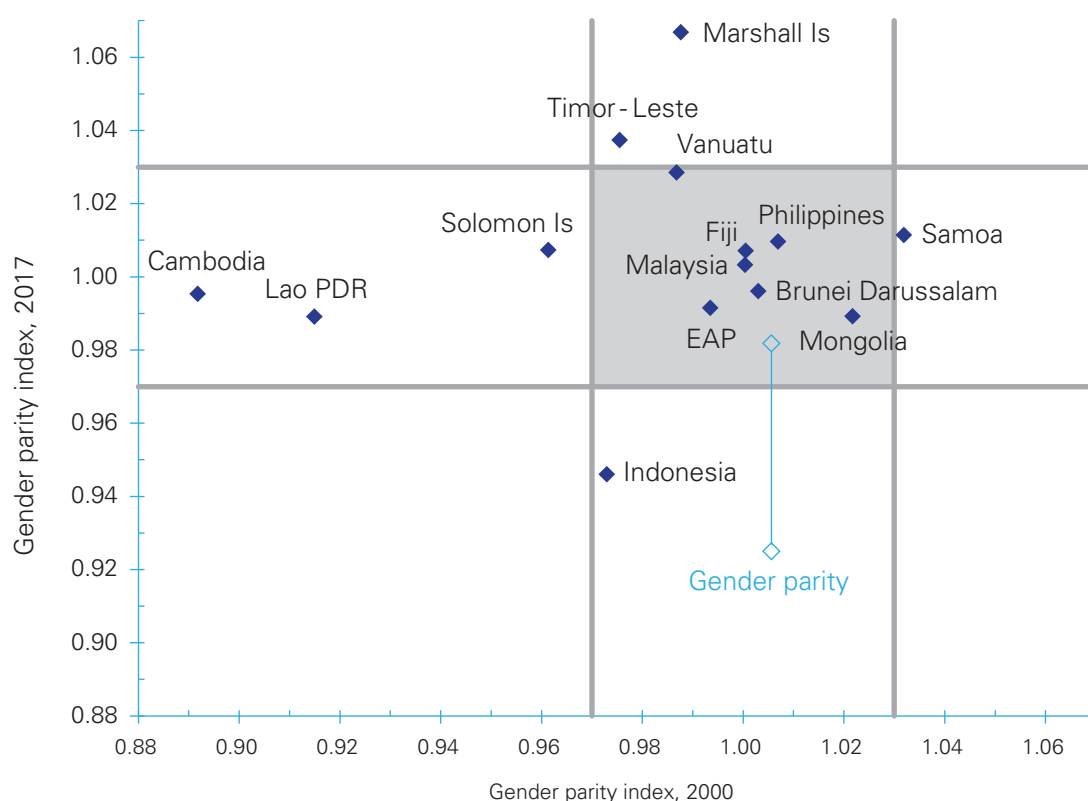
Notes: Gender parity index of the adjusted net enrolment rate (ANER) in primary education. Data are for 2000 except for Brunei Darussalam (1995) and Marshall Islands (2002). Data are for 2017 except for Fiji and Vanuatu (2015) and Marshall Islands and Philippines (2016). Countries with data earlier than 2014 in lieu of 2017 for the most recent year available are not included.

Source: UIS, 2019

At the **lower secondary level**, the gender gap in adjusted net enrolment continues in most countries, whereby **girls are more likely to be enrolled than boys** (GPI greater than 1.03) in 2017 (see Figure 25). In 2017, boys face disadvantage in lower secondary enrolment in nearly all countries in the region with data available. Only 3 countries – Brunei Darussalam, Cook Islands and Malaysia – attained gender parity between 2000 and 2017 at this education level. Girls' disadvantage in access to basic education has largely been eradicated in the region, although girls may still face numerous barriers in terms of learning outcomes and access to later education and work opportunities. Girls who are still out-of-school may also be so for different reasons than boys, and it is important to understand these differences in designing appropriate policies.

FIGURE 25. **FIGURE 25.** Change in the gender parity index in lower secondary education, 2000–2017

Notes: Gender Parity Index of the adjusted net enrolment rate (ANER) in lower secondary education. Data are for 2000 except for Niue, the Philippines and Tonga (1999); Indonesia (2001); Marshall Islands (2002); Brunei Darussalam (2005); and Thailand (2006). Data are for 2017 except for Cambodia, Niue, Indonesia, Tonga and Vanuatu (2015); and the Philippines, Marshall Islands, Cook Islands and Samoa (2016). Countries with data earlier than 2014 in lieu of 2017 for the most recent year available are not included.
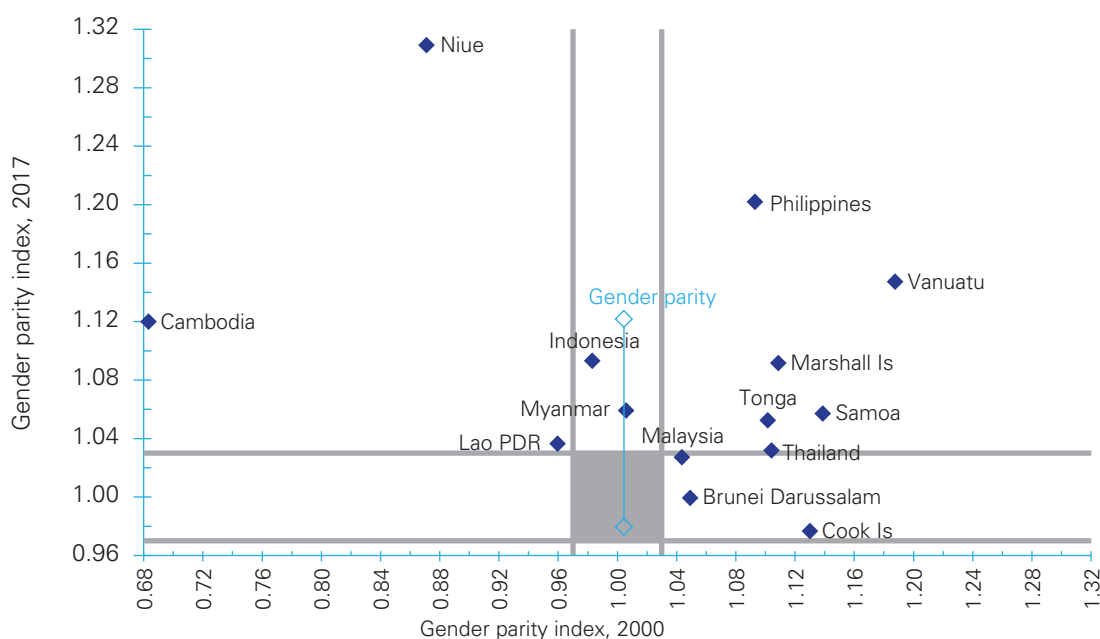
Source: UIS, 2019

Factors of Disadvantage

Disadvantages in attending schools vary significantly depending on **various factors** such as where children live, their wealth, mother's education, **ethnolinguistic** association, as well as by sex. Figure 26 shows the variation in out-of-school rates for lower secondary school-age children in Lao PDR. There is a large difference between the rates of out-of-school adolescents in urban and **rural** areas while ethnolinguistic backgrounds also seem to affect the schooling status significantly. Moreover, stark gaps are evident between richest and **poorest**, as well as different **mother's education** attainments.

FIGURE 26. Proportion of children out-of-school at lower secondary age in Lao PDR 2017
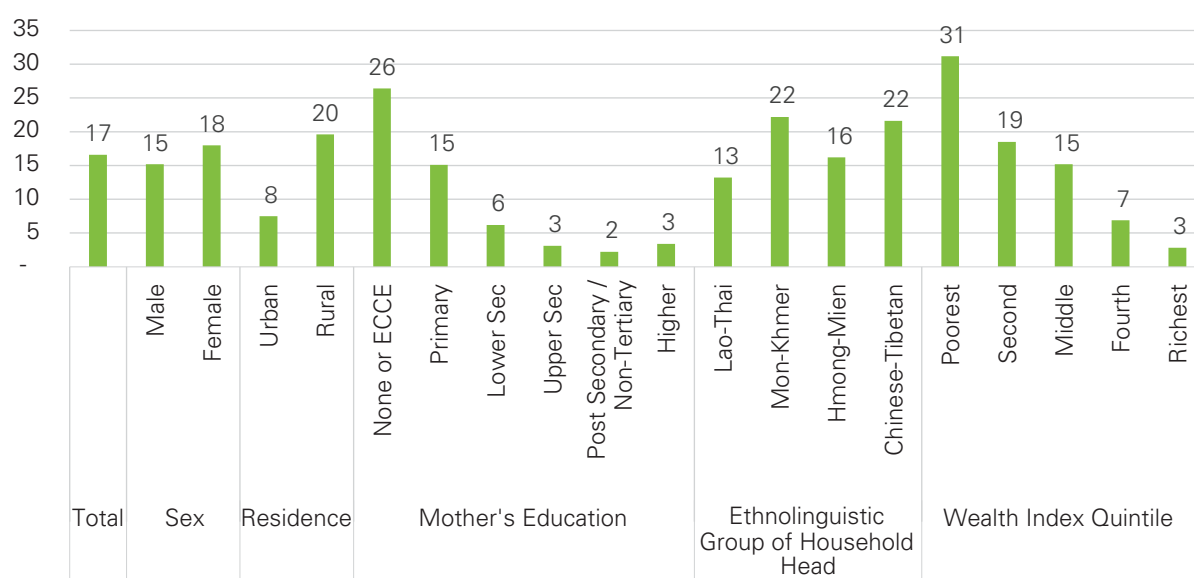
Note: The out-of-school children rates are based on the adjusted net attendance rate accounts for children of the official lower secondary school age attending either primary or secondary education at any time during the reference academic year.

Source: Lao Social Indicator Survey II, 2018

The factors of disadvantage often interact with each other in a **complex** manner, however. Figure 27 illustrates such example of the variation in out-of-school rates for primary school-age children in Myanmar.[35] Being born female and poor in an urban area faces the highest exclusion rate from attending school, with 26 per cent out-of-school. This is a stark contrast compared to boys in the same urban poor family, with a mere 5 per cent out-of-school rate. Differences in wealth might have less importance for boys than for girls. While poor and rich boys living in urban areas have out-of-school rates of 5 and 1 per cent, respectively, the difference between poor and rich girls living in urban areas is over 20 percentage points. Although Myanmar is near gender parity overall, there are large gender gaps against girls among the poorest in both rural and urban areas. Among wealthier parts of the population, there are very small gender gaps. Average urban and rural differences are significant, with the out-of-school children rate at 3 per cent and 8 per cent, respectively. In urban areas, there are relatively few but those households who belong to the poorest quintile have out-of-school rates of around 15 per cent regardless of whether they live in rural or urban areas.

▌**FIGURE 27.** Primary school attendance in Myanmar by wealth, geographic location and sex, 2016

Source: UIS, 2019

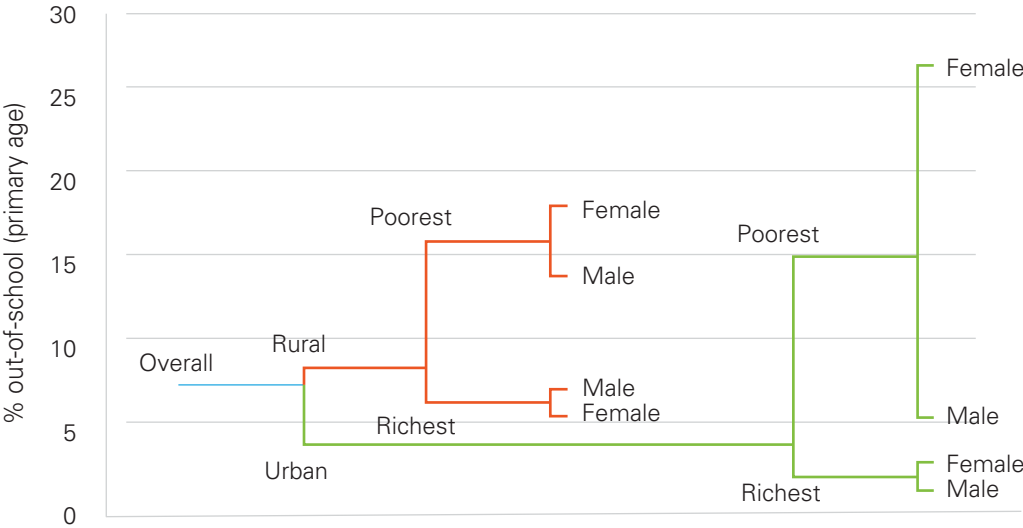**Other factors,** such as child labour, ethnicity, disability and migrant status, are often linked to children's exclusion from school in the EAP countries. Although the scarcity of qualitative and quantitative data on these groups can make it difficult to provide a regional perspective on these out-of-school profiles, several countries disaggregate enrolment and attendance data according to national definitions.

Child labour

Child labour has a legal definition that is distinct from child employment. It refers to children aged 5–11 who work at least 1 hour a week in economic activity or at least 28 hours of household chores; children aged 12–14 who worked at least 14 hours in economic activity or at least 28 hours of household chores; children aged 15–17 who worked at least 43 hours in economic activity or household chores, and any children aged 5–17 who work in hazardous activities. In several countries of the region, substantial proportions of children are involved in child labour (see Figure 28). Almost 1 in 5 children in Cambodia, Viet Nam and Mongolia, and nearly half of children in the Solomon Islands, are involved in child labour.

Gender differences in child labour are not large, but in the Philippines and Mongolia, more **boys** than girls are involved in child labour, while in Solomon Islands and Lao PDR, slightly more girls are involved.

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35 Country 3 figures are available for Cambodia, Indonesia, Lao PDR, Thailand, Timor-Leste and Viet Nam in Annex 4.

Note: The figure shows percentage of children 5 to 17 year old's involved in child labour at the moment of the survey.

Sources: UNICEF, 2017a, drawing on DHS 2015 (Solomon Is); DHS 2013 (Vanuatu); MICS 2013 (Mongolia); MICS 2014 (Viet Nam); CSES 2014 (Cambodia); National Child Labour Survey 2010 (Lao PDR); LF-CL-SWTS 2015 (Myanmar); Survey on Children (prelim) 2011 (Philippines).

In most countries, child labour is overwhelmingly concentrated in **rural** areas and among the **poorest** households (see Figure 29). Most children in the region who are employed work in agriculture for their families. Many children combine work and school. Nonetheless, school attendance is lower among children who work than among children who do not, especially at lower secondary age (Aldobrandini and Panisperna, 2015).

FIGURE 29. Percentage of boys and girls aged 5–17 who are involved in child labour, by rural/urban residence and wealth quintile, 2010–2015
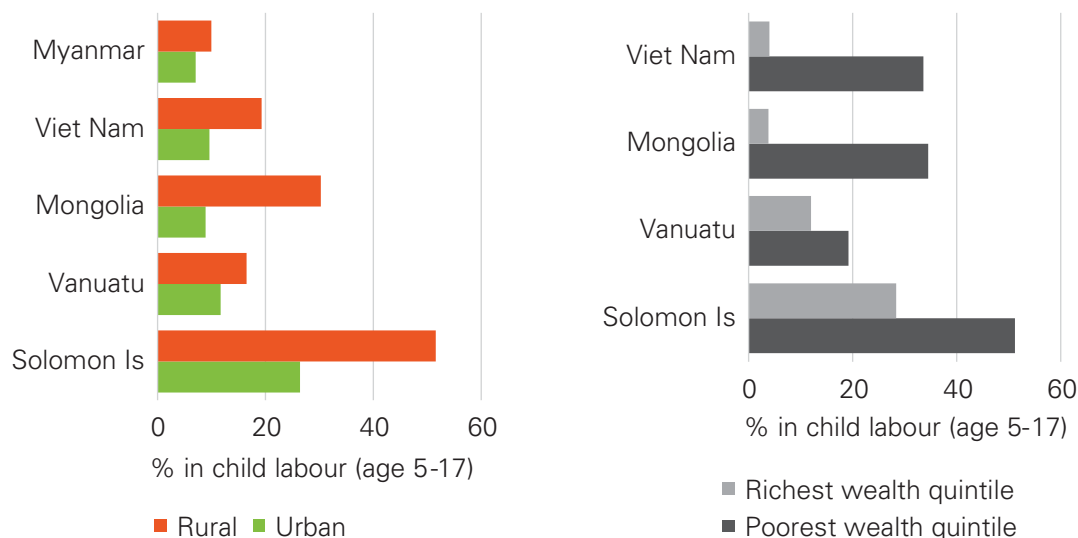
Source: UNICEF (see note to Figure 26).

Note: countries shown are those for which disaggregated data are available.

The degree to which child employment keeps children out of school varies widely between countries. It is likely to depend on the nature of the employment and the time spent in it. The Lao PDR country study finds that the vast majority of children who engage in child labour are out of school, while the Cambodia and Indonesia studies found relatively high proportions of child labourer's attending school. Some children may be out of school for other reasons and enter employment because they have few other options. But in other cases, the need to work does seem to be among the main reason's children drop out. In Viet Nam, having to work to support one's family was the main reason given by out-of-school children who had dropped out of school or never attended. In Myanmar, children's employment is again strongly associated with being out-of-school. Of the working children interviewed in one study in Myanmar, only 12 per cent of the girls and 24 per cent of the boys were attending government school in the current year; however, a majority attended school in the past. Of the child labourer's who do not attend school, only 45 per cent said that they would like to return to school. This suggests that some children may find work more rewarding or useful and that a return to school is not necessarily a desired solution to their predicament (ILO, 2015). It may also suggest that alternative forms of education, which provide opportunities to learn and obtain more relevant and practical skills, may be more appropriate, particularly for out-of-school adolescents.

Disability

Disability is difficult to measure in administrative data collection, household surveys and censuses, and is not available for many countries. However, from the limited data available, it is observed that a disproportionally large number of children with disabilities are out-of-school across the countries, and they remain one of the most excluded and vulnerable populations. In Viet Nam, the 2009 Census asked respondents at the household level for a self-evaluation of disability among its members, including children, based on 4 factors (vision, hearing, walking and cognition). A person was considered having disabilities if unable to do 1 or more of the 4 functions, and having partial disabilities if reporting at least a little difficulty with any of the 4 functions (Viet Nam OOSCI study). The vast majority (87 per cent) of children with disabilities at primary school age were out-of-school and they are 22 times more likely to be out of school than children with no disability (see Figure 30). Even among children with partial disabilities, 1 in 4 were out-of-school, a much higher rate than among children with no disability. In Cambodia, 57 per cent of children with disabilities ages 15 to 19 never attended or completed primary school (Cambodia OOSCI study). In Myanmar, 47 per cent of children with disabilities are out-of-school at primary age and 39 per cent at lower secondary age, more than 3 times the incidence among children who do not have disabilities.

FIGURE 30. Out-of-school rate in Viet Nam, by disability, 2009

% out-of-school (primary age)
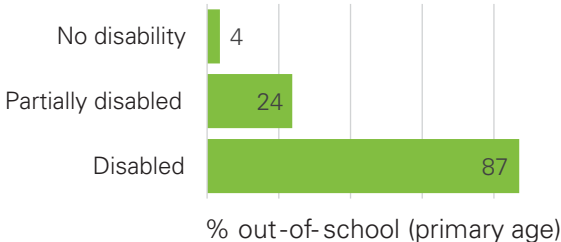
Source: Viet Nam OOSCI study

Ethnicity and language group

Group associations with ethnicity and language are not always measured in household surveys, let alone in administrative data, but in some cases reveal stark disparities (see example from Lao PDR in Figure 26 above). In Viet Nam, out-of-school rates are much higher among the minority Khmer and Mong ethnic groups than among the majority Kinh (see Figure 31). Large disparities by ethnic group are found in Thailand – where the country study found that 26 per cent of children with non-Thai citizenship were out-of-school compared to 5 per cent of Thai children. In Timor-Leste, children who cannot speak Tetum, the official language, are more than 3 times as likely to be out-of-school as those who can (Timor-Leste OOSCI). In Myanmar, border states with a high proportion of ethnic minorities, such as Kayin, Chin, Sagaing, Mon and Rakhine, are among those with the highest out-of-school rates.

FIGURE 31. Out-of-school rate in Viet Nam, by ethnicity and sex, 2014
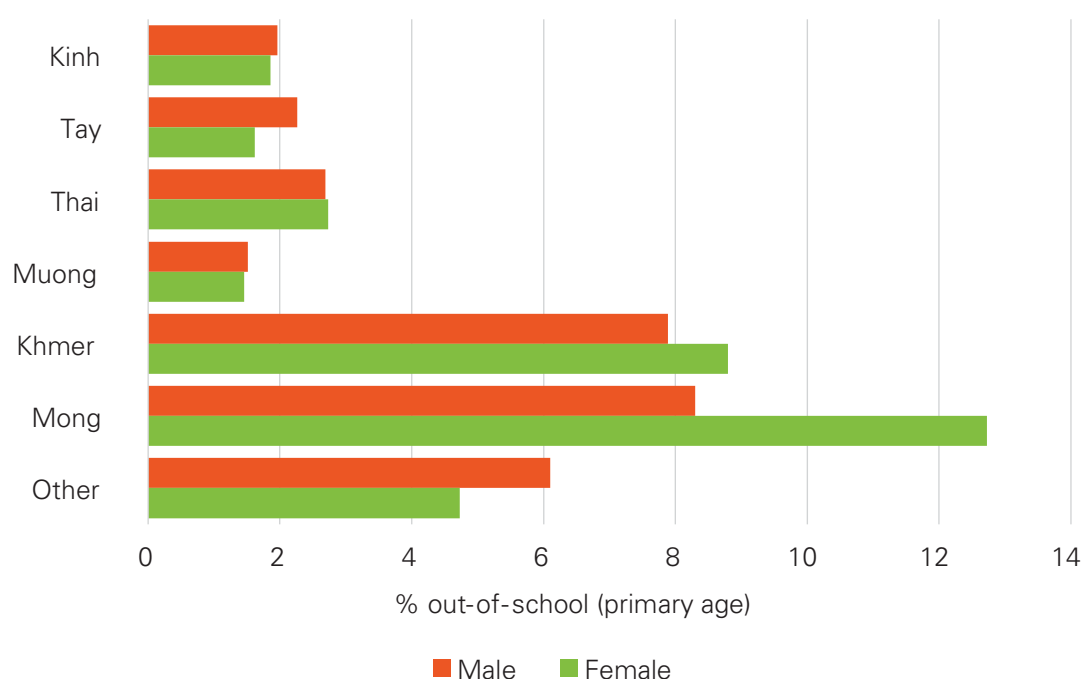
Source: Viet Nam OOSCI study, 2017

Rural-urban and international migration

In Viet Nam, migrant children are more likely than non-migrant children to be out-of-school at primary and especially at lower secondary age, although the gaps seem to have declined between 2009 and 2014. Children who move with their families for work (e.g. transporters, vendors on rivers) have higher drop-out rates than other families in the same province. In Cambodia, rural-urban migration is linked to absenteeism in school as well as being over-age due to repetition, creating marginalized groups of children who are more at risk of dropping out. In Thailand, children of migrants from other countries are often thought to drop out after completing primary education (Austin, 2012). In Malaysia, differential fees and requirement for birth certificates have contributed to excluding the children of international migrants out of school. Malaysia is host to thousands of stateless people, particularly in the state of Sabah. Many of these are refugee children or are undocumented (UNESCO, 2017). Only 1 per cent of children in Sabah who have citizenship are out-of-school at primary age, compared to almost half of non-Malaysian citizen children (Malaysia OOSCI study on non-Malaysians).

3.3. Dimensions 4 and 5: Children and Adolescents at Risk of Dropping Out

Dimensions 4 and 5 focus on identifying those **children who are in school, but who are at risk of dropping out of primary and lower secondary school**, respectively. Estimating this number and rate of out-of-school children is less straightforward and requires some methodological decisions based on the country's data availability and reliability (Box 5). It also requires making complex predictive assessments of future education opportunities and barriers.

Estimates for Dimensions 4 and 5 can be based on 2 different approaches:

1) Look at the survival and drop-out rates among children who are currently in the system or who have dropped out of it.

2) Look at the proportion and profile of children who have key risk factors known to be associated with drop-out: limited participation in pre-primary education, being over-age for grade, and repeating a grade.

Using the first approach, calculations are based on the *survival rate* to the last grade of primary or lower secondary education, the most widely used indicator to assess progress and completion of an education level. The survival rate to the last grade of primary is defined as: [36]

<u>Number of children who entered Grade 1 of primary education and reached the last grade</u>
Number of children who entered Grade 1 of primary education

The straightforward use of the survival rate estimates the drop-out rate of children who enter Grade 1 and who are expected to leave school before reaching the last grade:

=100%-survival rate to the last grade of primary education (or lower secondary)

In the second approach, countries study the risk factors of those children who have already dropped out of primary or lower secondary education by identifying their characteristics derived from household survey data. From that information, the population of children at risk of non-completion of primary or lower secondary education can be estimated based on the country-specific or group-specific risk factors, such as being over-age in one's grade, lack of early childhood education, and low learning achievement.

Source: UNICEF and UIS, 2015

Using the first approach to examining drop-out (see Box 5), administrative data for the region as a whole, and its sub-regions, suggest that **drop-out from primary education** has varied greatly during the 2000s, with an overall decline from 10 per cent in 2000 to **6** per cent in 2016 (see Figure 32). Oceania – which includes the Pacific Islands and Papua New Guinea – has seen persistently high drop-out rates, rising to nearly 40 per cent in 2016. Comparable region-level data are not available for lower secondary education.

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36 The survival rate is usually calculated as the number of children who entered grade 1 and reached the last grade, divided by the number of children who entered grade 1. Ideally, an expanded version of the survival rate would be calculated which would estimate the survival probability for students in all grades, not just in grade 1. However, the expanded survival rate was not calculated for the country reports and nor is it available in the UIS database.

FIGURE 32. Drop out from primary education over time, by regional grouping, 2000–2016
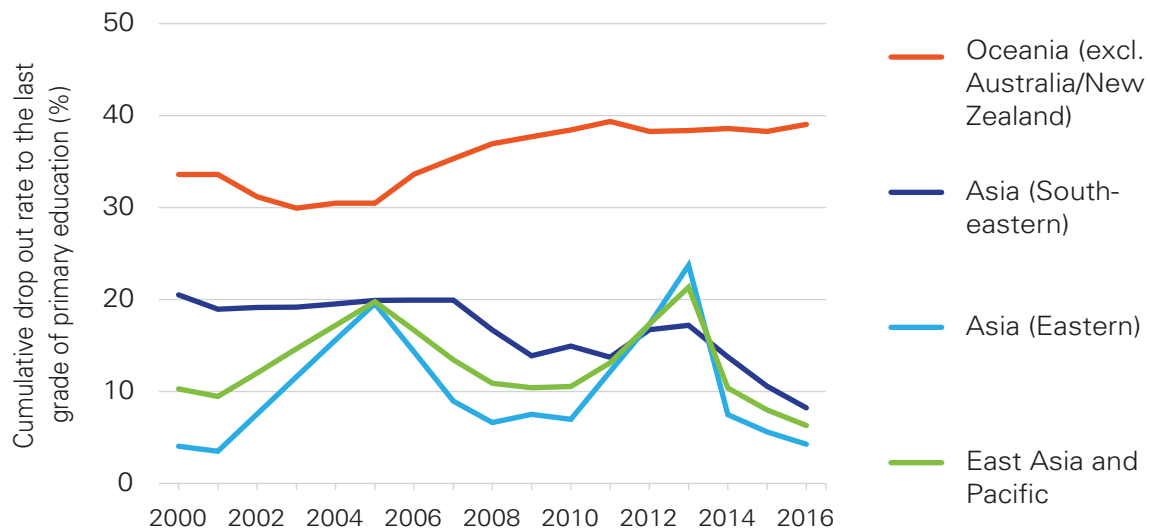
Notes: The cumulative dropout rate in primary education is calculated by subtracting the survival rate from 100 at the last grade of primary education. Regional groupings here differ from those used by UNICEF for the EAP region and data were not recalculated to adjust. "Asia (Eastern)", "Asia (South-Eastern)" and "Oceania (excl. Australia / New Zealand)" refer to SDG country groups. East Asia and Pacific is for the UIS region, which differs slightly from the UNICEF region (see Footnote 10).

Source UIS, 2019

A small group of countries in the EAP region have data available for the calculation of **drop-out rates** (17 and 18 in primary and lower secondary, respectively). Table 9 shows that the problem of children leaving school early before completion at both levels is quite **acute** in countries with available data. In 7 countries, at least 15 per cent of children leave school before the last grade of primary education.[37] The drop-out rate for females is sometimes lower (11 countries) or higher (6 countries) relative to the rate for the total population in primary education. Girls' drop-out rate is higher by 4 percentage points in Samoa, and less than 1 percentage point in Brunei Darussalam and Thailand. The general situation is quite similar in lower secondary education, where drop-out rates range from 1.6 per cent in Brunei Darussalam to 32 per cent in Cambodia, with 6 countries above the 15 per cent mark. At this education level, drop-out rates for females are higher than the national average in 7 countries. When examining gender parity in drop-out rates, the situation is more unfavourable to boys in lower secondary education than for girls in primary education.[38]

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37 Countries are Cambodia, the Cook Islands, Lao PDR, Myanmar, Solomon Islands, Timor-Leste and Tuvalu.
38 Calculations show that the average GPI in the drop-out rates for those countries with GPIs above 1.03 (i.e. disadvantage for boys) are higher in lower secondary education (1.8 for 6 countries) than in primary education (1.3 for 5 countries).

	Dimension 4 Cumulative drop-out rate before last grade of primary			Dimension 5 Cumulative drop-out rate before last grade of lower secondary		
	Total (%)	Female (%)	Male (%)	Total (%)	Female (%)	Male (%)
Brunei Darussalam	6.8	7.7	6.0	1.6	0.6	2.5
Cambodia	23.8	21.2	26.1	31.7	29.8	33.8
China	..	..	..	8.0	6.8	9.0
Cook Is	23.4	26.0	21.0	9.8	15.4	4.1
DPR Korea	..	..	..	..	..	..
Fiji	8.8	7.5	10.0	13.8	8.1	19.0
Indonesia	2.4	1.0	3.7	6.5	3.9	8.9
Kiribati	..	..	..	5.7	7.1	4.1
Lao PDR	18.9	17.4	20.3	25.3	25.1	25.5
Malaysia	3.6	2.7	4.5	5.8	4.2	7.3
Marshall Is	..	..	..	..	..	..
Micronesia, F. S.	..	..	..	..	..	..
Mongolia	2.7	2.3	3.1	..	..	..
Myanmar	24.6	25.9	23.5	16.1	12.7	19.6
Nauru	..	..	..	..	..	..
Niue	..	..	..	28.8	33.3	16.5
Palau	..	..	..	..	..	..
Papua New Guinea	..	..	..	..	..	..
Philippines	12.5	9.4	15.2	11.5	8.3	14.5
Samoa	13.2	17.3	9.3	2.6	2.9	2.3
Solomon Is	30.1	27.9	32.3	15.5	15.8	15.2
Thailand	7.8	7.9	7.7	10.1	6.9	13.2
Timor-Leste	19.5	17.6	21.2	4.3	3.5	5.0
Tokelau	..	..	..	..	..	..
Tonga	..	..	..	..	..	..
Tuvalu	48.2	50.8	45.6	26.2	27.5	24.4
Vanuatu	..	..	..	..	..	..
Viet Nam	4.0	1.9	6.0	9.2	9.3	9.1
East Asia and Pacific	**6.3**	**5.9**	**6.7**	**..**	**..**	**..**

Notes: The cumulative dropout rate at a given level of education is calculated by subtracting the survival rate from 100 at the last grade of that education level. EAP is for the UIS region, which differs slightly from the UNICEF region (see Footnote 11). The year is 2016 except for China (2012); Cook Islands (2012 and 2015, respectively for primary and lower secondary); Fiji, Kiribati, the Philippines, Timor-Leste and Tuvalu (2015); Niue (2014); Solomon Islands (2011 for lower secondary); and Viet Nam (2014 and 2015, respectively for primary and lower secondary). Countries without data between 2010–2016 are indicated as not available.

.. : data are not available

Source: UIS, 2019

Gender Parity

Boys are more likely to **drop out** from **primary** and **lower secondary** education than girls, as observed in the majority of countries with data available. The average cumulative drop-out rate for primary education in EAP is relatively low, at **6 per cent**, although 12 countries in the region have higher rates at that education level (Figure 33). In Indonesia and Viet Nam, boys are 3 times more likely to drop out than girls during primary education, although the cumulative drop-out rate is low (below 5 per cent). In Tuvalu, however, where nearly half of the primary school population drop out by the last grade of primary education, girls are more likely to drop out than boys (rate is 5 percentage points higher). At lower secondary level (see Figure 34), some countries face significant challenges in maintaining girls in school to complete. In Niue and the Cook Islands, girls are 2 and 3 times as likely, respectively, to not complete lower secondary education compared to their male counterparts.

FIGURE 33. Cumulative drop-out rate in primary education, by sex, 2016
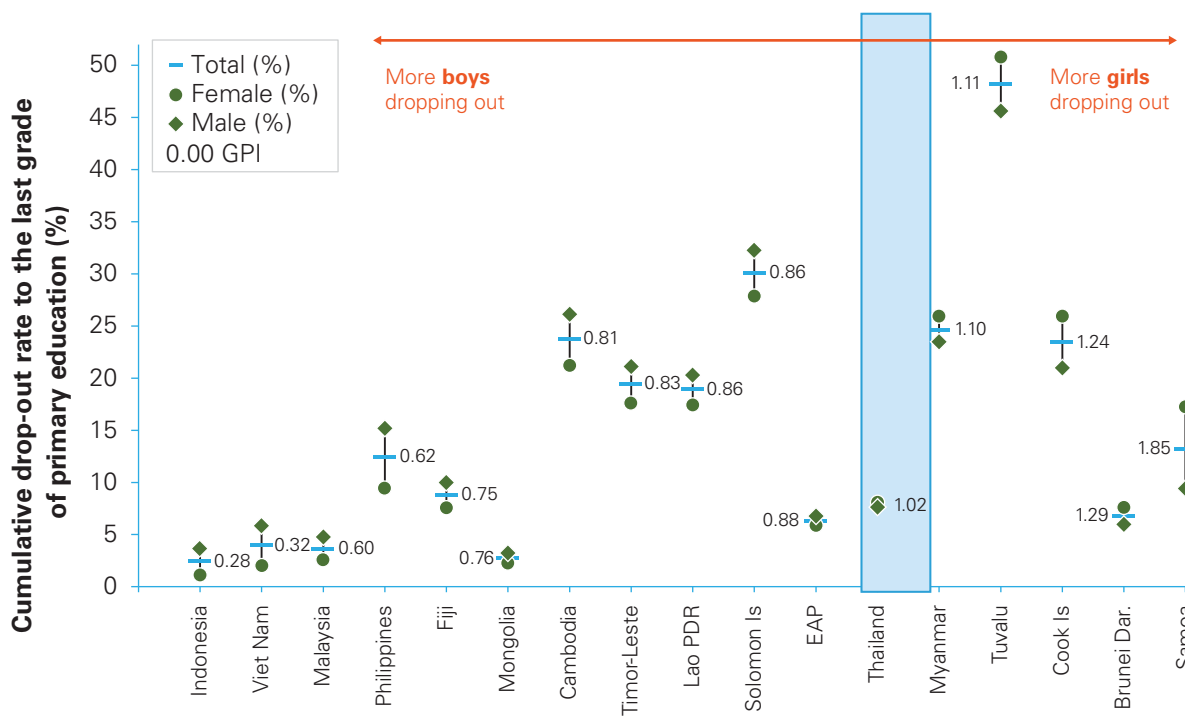
Notes: The cumulative drop-out rate at a given level of education is calculated by subtracting the survival rate from 100 at the last grade of that education level. EAP is for the UIS region, which differs slightly from the UNICEF region (see Footnote 11). The GPI indicates the gender-based disparity in the drop-out rate. By UIS standards, values in the shaded area (between 0.97 and 1.03) are considered as attaining gender parity. Here, the GPI values less than 0.97 indicate a disadvantage for boys (more boys dropping out), while values greater than 1.03 indicate a disadvantage for girls (more girls dropping out). The year is 2016 except for the Cook Islands (2012); Viet Nam (2014); and Fiji, the Philippines, Timor-Leste and Tuvalu (2015). Countries without data between 2010–2016 are not included.

Source: UIS, 2019

FIGURE 34. Cumulative drop-out rate in lower secondary education, by sex, 2016
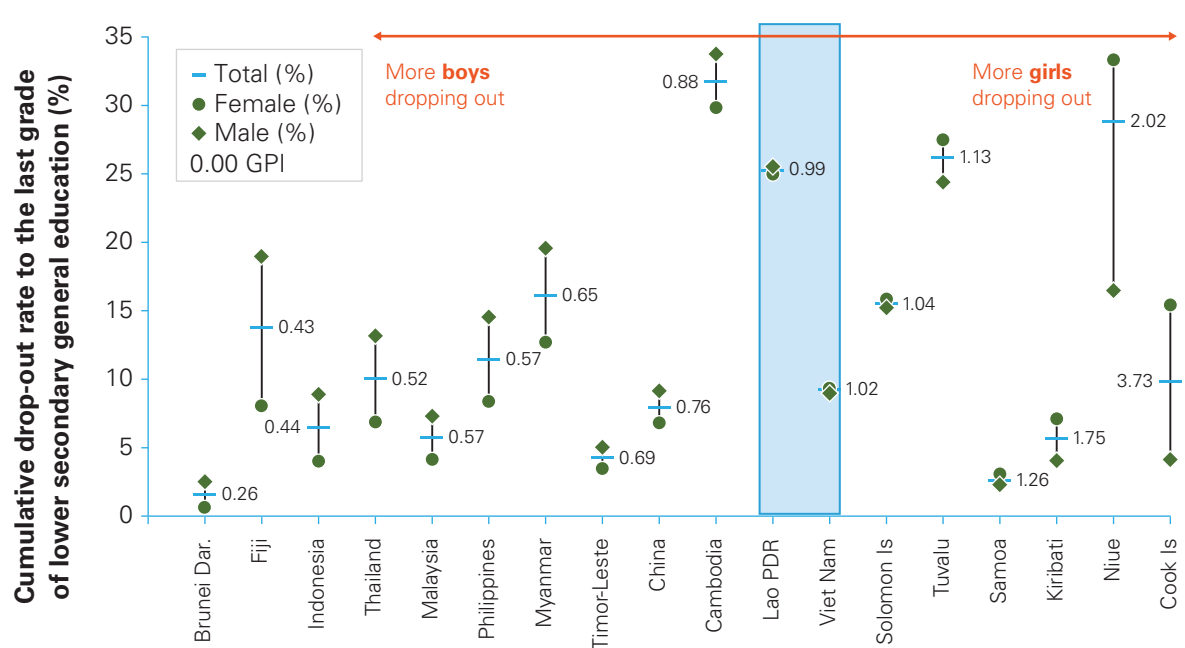
Notes: The cumulative drop-out rate at a given level of education is calculated by subtracting the survival rate from 100 at the last grade of that education level. The GPI indicates the gender-based disparity in the drop-out rate. By UIS standards, values in the shaded area (between 0.97 and 1.03) are considered as attaining gender parity. Here, the GPI values less than 0.97 indicate a disadvantage for boys (more boys dropping out), while values greater than 1.03 indicate a disadvantage for girls (more girls dropping out). The year is 2016 except for Solomon Islands (2011); China (2012); Niue (2014); Cook Islands, Fiji, Kiribati, the Philippines, Timor-Leste, Tuvalu and Viet Nam (2015). Countries without data between 2010–2016 are not included.

Source: UIS, 2019

The EAP national OOSCI studies provided several insights on **patterns of drop-out** with respect to age, grade and gender:

- In Cambodia, children who were more than 2 or more years over-age for their grade were reported in urban and rural areas, as well as by sex, for 2012. The rate of over-age children as a share of total enrolment from Grades 3 to 8 hovers around 40 per cent, with a peak of 51 per cent in Grade 4. Girls are less likely to be at risk, with the exception of Grade 5, where 54 per cent of girls are over-age. Rural areas present a much higher risk factor for being over-age than urban areas across all grades. The penultimate year of primary education (Grade 5) has a particularly high level of over-age students in both rural and urban areas (43.7 and 51.8 per cent, respectively).

- Survival and drop-out rates to the last grade of lower secondary school (Secondary 3 – Grade 9) were reported in Thailand for 2010 and 2011. Girls have a higher chance of finishing secondary than boys and the drop-out rate for boys is twice that of girls (9.25 and 5.47 per cent, respectively).

- In Viet Nam, drop-out rates were estimated based on the 2009 Census: children who had previously attended school and were not attending school at the time of the Census were considered to be drop-outs. The drop-out rate increases with the age of the child: 27 per cent of 15 year old's (theoretical age at the end of lower secondary) had dropped out of school, compared to about 4 per cent of 11 year old's (end of primary education).

Some risk factors for dropping out of school have been identified in the literature and can be used as potential proxy measures for estimating Dimensions 4 and 5 (Berlinski et al., 2009; UNICEF and UIS, 2011). Some of these challenges to education inclusion involve exposure to early childhood care and education programmes, age at entry to compulsory education and low student achievement.

Exposure to Early Childhood Care and Education

The benefits of early childhood education can have long-lasting effects into children's later school performance and retention, as noted in Section 3.1. **Lack of exposure** to early childhood care and education can be used as a proxy for estimating Dimensions 4 and 5. Figure 35 shows the diversity of ECE experiences before entry into primary school in the region, with less than 5 per cent not having participated in early childhood education (Brunei Darussalam, China Niue, Nauru and Thailand), compared to nearly 80 per cent of children in Cambodia and Myanmar. Boys are more likely to not have attended any ECE, as observed in 14 of the 19 countries with recent data. In Kiribati, more than 1 in 3 boys (35 per cent) have not attended any ECE, compared to 1 in 4 girls (25 per cent).

FIGURE 35. Share of new entrants to primary education without exposure to ECCE, 2017
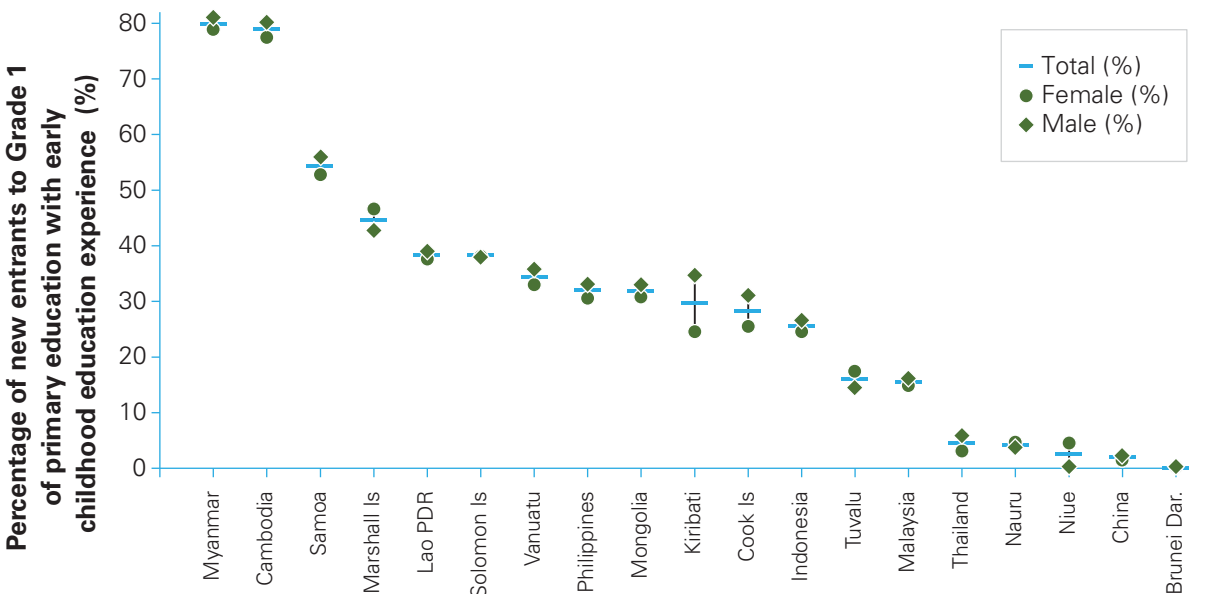
Notes: The year is 2017 except in Myanmar (2010), Cambodia and Vanuatu (2013), Kiribati (2014), Thailand (2015), Cook Islands, Marshall Islands, Nauru, Niue, the Philippines and Tuvalu (2016). Countries without data between 2010–2017 are not included.

Source: UIS, 2019

A few national OOSCI studies also examined the percentage of children who had not had any exposure to pre-primary education using household survey data. In Indonesia, data from the national 2009 census and the 2008–2009 school census suggest that nearly half of the children do not attend kindergarten or receive any form of pre-primary education (Indonesia OOSCI study). Children from more disadvantaged backgrounds are least likely to be accessing any form of early childhood learning opportunity. Being female and living in rural areas of Indonesia limits opportunities to participate in any kind of ECD programme (59 per cent) compared to their urban counterparts (41 per cent) (Indonesia OOSCI study).

Over-Age Enrolment

Higher proportions of late-entry children are correlated with a larger risk of dropping out from school (Sabates et al., 2010). Children who are **1 to 2 years older than the theoretical age for their grade** are at risk of dropping out. The causality of the relationship is not simple to establish as some children enter school late because of health-related reasons. In some countries, students who fail to pass examinations are held back, while in others the vast majority will be promoted automatically to the next grade.

Education systems generally define the official age for a level of education based on the age of the child at the beginning of the academic year. The interpretation of the status of a child who is 1 year over-age is more difficult with household surveys, as there might a gap between age at the time of the survey (several months after the beginning of the school year) and at the beginning of the school year. If a child's birthday passed before the survey, a child would be considered over-age even if they were at the appropriate age at the beginning of the school year. According to a UIS recommendation, the calculation of over-age children only should include those children who are **2 years or older** than the official age for the grade, if age data cannot be adjusted for the gap (UNICEF and UIS, 2015).

For 12 of 22 countries with recent data available, the national average of over-age enrolment (2 years or more) in primary education is below 10 per cent (see Figure 36). Four countries have more than 1 in 5 children (20 per cent) who are over-age in primary education.[39] Being over-age is particularly an issue in Papua New Guinea, where 47 per cent of children are 2 or more years over-age for their grade, and in the Solomon Islands, where three-quarters of children are over-age. In Cambodia, being over-age is the result of several factors including high repetition rates in the early grades of primary and absenteeism due to work (Cambodia OOSCI study). Rates tend to be similar or higher for **boys** in most countries. Yet, the gap is larger than 3 percentage points in Cambodia, Marshall Islands, Palau, the Philippines and Timor-Leste.

As children enter **lower secondary**, it becomes increasingly **common** to be over the expected age for one's grade. In 8 countries – the Philippines, Marshall Islands, Cambodia, Lao PDR, Timor-Leste, Vanuatu, Papua New Guinea, and the Solomon Islands – 20 per cent or more of children in lower secondary are at least 2 years over-age (see Figure 37). Larger gender gaps also emerge at this level, particularly in Lao PDR, Palau, the Philippines, Timor-Leste, Tokelau, and Vanuatu, where **boys** appear to be lagging behind the official grade progression more than girls. As at primary level, over-age enrolment is particularly prevalent in Papua New Guinea (50 per cent) and the Solomon Islands (74 per cent).

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39 The countries are Cambodia, Timor-Leste, Papua New Guinea and the Solomon Islands. Vanuatu also has high proportions over-age for primary level, but recent data are not available.

FIGURE 36. Proportion of pupils in primary education who are 2 or more years over-age for their current grade, by sex, 2017
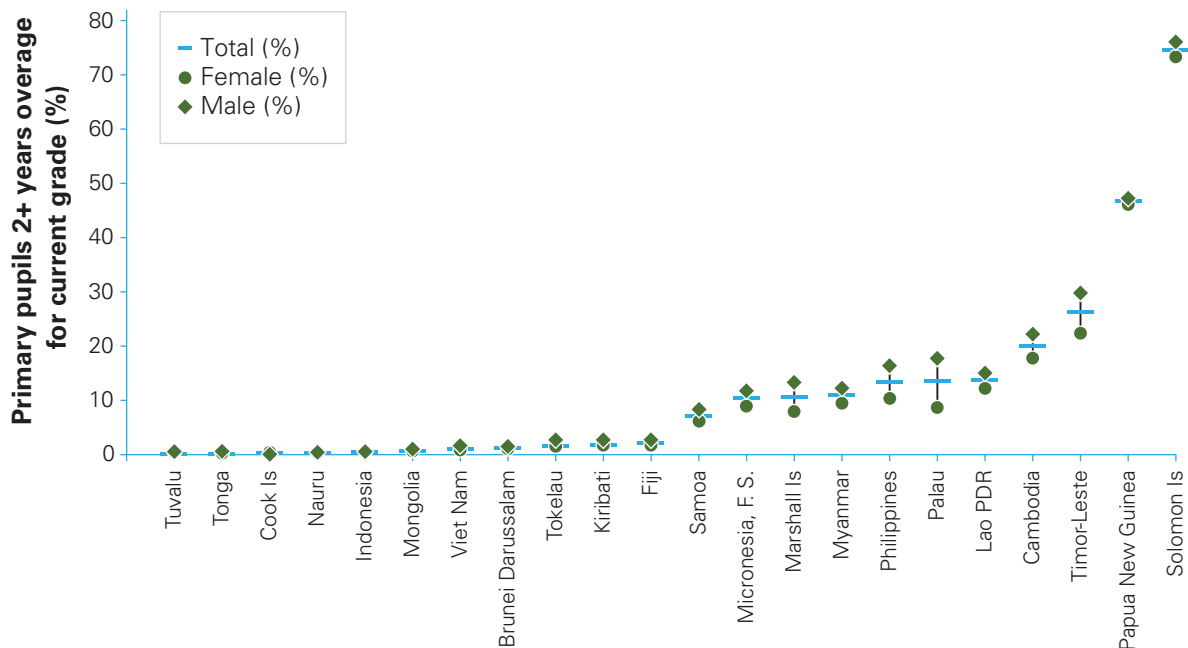
Notes: The figure shows the percentage of pupils enrolled in primary education who are at least 2 years over-age for the grade they are currently in. The year is 2017 except in Micronesia, F. S. and Palau (2014), Tonga (2015), Cook Is, Fiji, Indonesia, Marshall Is, Nauru, Papua New Guinea, Philippines, Timor-Leste, Tokelau, Tuvalu and Viet Nam (2016). Countries without data between 2010–2017 are not included.

Source: UIS, 2019

FIGURE 37. Proportion of pupils in lower secondary education who are 2 or more years over-age for their current grade, by sex, 2017
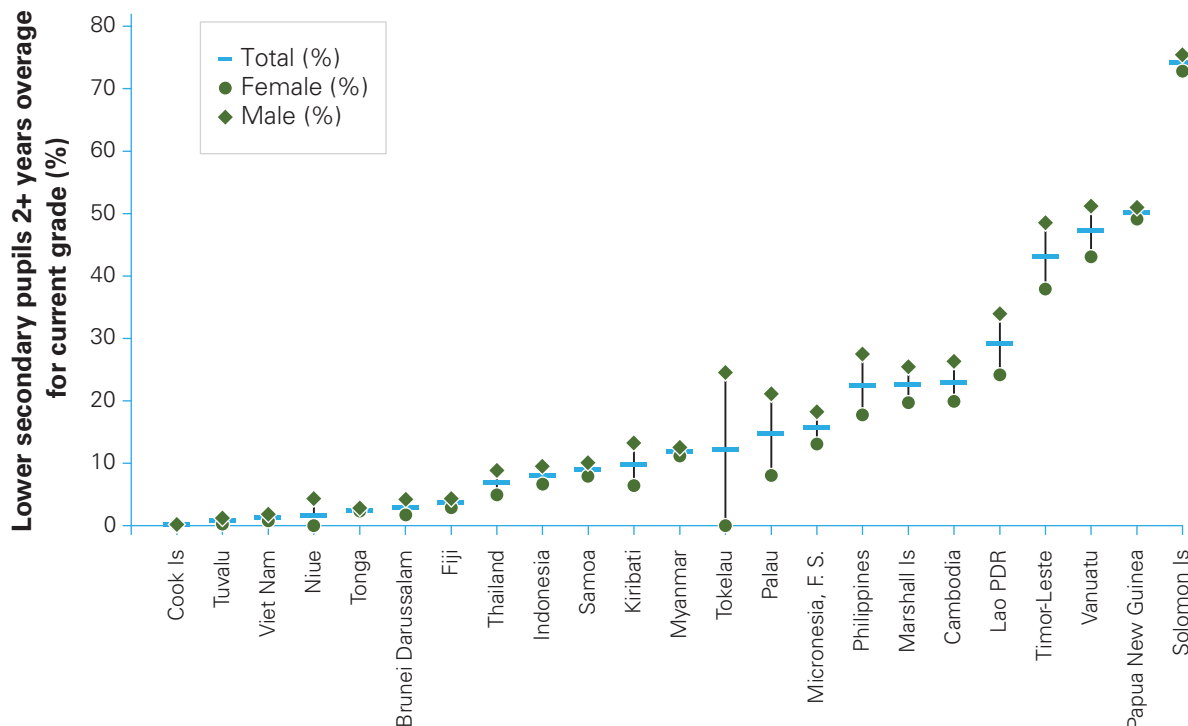
Notes: The figure shows the percentage of pupils enrolled in general lower secondary education who are at least 2 years over-age for the grade they are currently in. The year is 2017 except in Vanuatu (2013), Micronesia, F. S. and Palau (2014), Indonesia, Niue and Tonga (2015), Cook Is, Fiji, Marshall Is, Papua New Guinea, Philippines, Timor-Leste, Tokelau, Tuvalu and Viet Nam (2016). Countries without data between 2010–2017 are not included.

Source: UIS, 2019

Over-age enrolment can vary per education level within a country. In Myanmar, for example, the higher the grade, the higher the proportion of children who are over-age regardless of the data source (see Table 10). The national administrative figures are lower than the Labour Force Survey figures, which report that 1 of every 4 children (26 per cent) are over-age by the time they reach upper secondary education. Cumulative drop-out rates in primary and lower secondary education are high in Myanmar relative to other countries in the region and could be related to the share of over-age children in each level (see Table 9).

TABLE 10. Over-age enrolment, by education level in Myanmar

	Administrative data (2014–2015)			LFS data (2015)		
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary
	Share of children (%)					
Official age of the grade	89.6	86.2	73.7	71.1	70.6	41.4
1 year over	6.8	10.1	19.9	15.1	17	31.5
2 years over	2.6	2.8	6.3	6	8.2	26.1
3 years over	0.7	0.7	..	4.9	2.9	0
4 years over	0.3	0.2	..	2.8	1.1	0
Total over-age	**10.3**	**13.7**	**26.3**	**28.9**	**29.2**	**57.6**

.. : data are not available.

Source: Myanmar OOSCI study

Low Learning Achievement as a Drop-out Risk

Low learning achievement is linked to increased risk of dropping out of school at both primary and lower secondary levels. Perceptions of the relative returns or benefits of schooling by students and parents influence the decision to continue education. Labour market chances, as well as the availability of options to access secondary education, can influence parental decisions to continue with primary education (Sabates et al., 2010).

The diversity of learning outcomes across the region is visible for those countries participating in international assessments of student achievement, such as the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS). Fifteen-year-old students from China and Viet Nam outperformed the average OECD students according to PISA results for reading, math and science (see Table 11), while students from Indonesia, Malaysia, the Philippines and Thailand score below the OECD average in PISA or TIMSS results by more than a half standard deviation (World Bank, 2018a). Among the 10 national reports, low student achievement is reported as a measurement of risk in Dimensions 4 and 5 only in the Philippines. The Pacific Islands Literacy and Numeracy Assessment (PILNA), conducted in 13 Pacific islands in 2012 and 2015 (and reaching up to 15 in the 2018 survey), found that, for the region as a whole, learning outcomes improved sharply, while almost one-third of students with 6 years of primary education still performed below the expected level in numeracy in 2015, and around half of students did so in literacy. In 2012, students' writing skills were particularly an issue in Papua New Guinea and the Solomon Islands: only around 20 per cent in the Solomon Islands, and less than 10 per cent in Papua New Guinea, could write at the expected level (UNESCO, 2015).

	Average composite constructed PISA score of test takers (2000–2015)
Indonesia	386
Thailand	439
Viet Nam	509
Beijing, Shanghai, Jiangsu and Guangdong (China)	514
Macao SAR, China	517
Taiwan, China	526
Hong Kong SAR, China	541
East Asia and Pacific average	**505**
OECD average	**497**

Note: The PISA score is reported on a scale from 0 to 1,000. Excludes Malaysia's 2015 score. Includes all economies participating in PISA 2015. Shanghai's score is from PISA 2012.

PISA = Programme for International Student Assessment.

Source: World Bank, 2018b, p.58

▌ **BOX 6.** Identifying At-Risk Students in Malaysia

With a strong commitment to the issues of equity and quality in education, the Ministry of Education in Malaysia has been making progress in collecting, analyzing and utilizing a vast amount of administrative data, including those on individual students and their characteristics. The Ministry of Education has developed 'Golden Repository' which facilitates data consolidation across numerous databases and applications that exist in government agencies and other organizations. For example, the government Dashboard based on the Golden Repository can show detailed lists of individual students at specific schools who are identified as being at risk of dropping out, based on 7 indicators. They include: attendance, academic achievement, disciplinary record, distance from school, household wealth, disability status, and status of parents/guardians. A pilot project conducted in one state has succeeded in reintroducing 262 secondary school students who have dropped out back into school, which will be followed up by subsequent national rollout. The Repository could also develop an early warning system for many other areas/issues of concern for UNICEF, such as child obesity (nutritional status), risk of early marriage/pregnancy etc. The Ministry of Education is also currently working on Artificial Intelligence (AI) predictive analysis of students' employability based on supply and demand data, drawn from various government and industry databases and applications.

3.4. Patterns of Exclusion Across the Five Dimensions

Where are the Out-of-School Children in the Region?

The EAP countries are **diverse** with regard to how many children are out-of-school at each level. In some countries, large numbers remain out of school. In others, relatively small percentages of children are out of school, although this does not mean that they are successfully completing basic education. This report uses an **out-of-school children rate** at primary and lower secondary age of **10 per cent** to classify the countries. Although any such classification is to some extent arbitrary, countries where more

than 10 per cent remain out-of-school likely have serious shortfalls in the supply of schools, classrooms, teachers, funding and other types of support. The problem is not *just* one of marginalized groups, although marginalized groups are likely to be over-represented among the out-of-school population. By contrast, countries with lower than 10 per cent out-of-school rates are likely to have a more or less adequate supply of educational inputs, but there are **barriers** that keep the remaining children from attending school. These countries may be able to target their resources towards identifying and addressing these barriers with targeted programmes or policies.

Based on the data, most countries in the region can be classified into **3 broad typologies**[40]:

Typology 1 – Countries with high out-of-school rates: Across all education levels throughout many Pacific States, Cambodia, Papua New Guinea and Timor-Leste, **more than 10 per cent** of children are **out of school**. While data is limited on pre-primary, it is considered that these countries have high out-of-school rates at this level too. In Cook Islands and Tuvalu, less than 4 per cent of pre-primary age children are out of school, while in Samoa, the figure jumps dramatically to 63 per cent. Attachment to schooling also tends to be weak for some of these countries (Cambodia, Solomon Islands, Timor-Leste), as indicated by **high drop-out** rates in primary and/or lower secondary levels. **Policy priorities** for these countries are likely to include ensuring that a school is accessible, including in remote and poor areas, and addressing poverty-related barriers to education. Policies to increase children's access to early learning programmes/pre-school can also help reduce out-of-school rates and weak attachment at subsequent education levels.

Typology 2 – Countries with weak attachment to primary education: In Cook Islands, Lao PDR, Myanmar, Samoa and Tuvalu, although enrolment in primary education is relatively high (less than 10 per cent out-of-school rates), attachment to school is low with **high drop-out** rates before completion of the primary education cycle. **Policy priorities** to reach and retain children in this group require identification of country-specific barriers to school access and completion – including for the most marginalized groups – with a focus on the quality of teaching and learning policies in the early grades. This also requires careful analysis of overlapping factors of disadvantage, such as girls from the poorest households in remote rural areas, child labour and the most disadvantaged geographical regions etc. Data-driven early warning systems, for example, could identify risks and prevent premature dropout.

Typology 3 – Countries with weak transitions and/or attachment to lower secondary education: More than **10 per cent** of children remain **out of school** or **drop out** at **lower secondary** age and do not finish the compulsory education cycles in Fiji, Indonesia, Malaysia, Niue, Philippines, Thailand, Tonga, and Viet Nam. These countries are nearly all **lower-middle income** countries but are quite diverse. In some countries, such as Indonesia, Malaysia and Tonga, a significant number of children are not continuing and/or completing lower secondary education after high levels of primary school participation. Some countries could be included in both Typologies 2 and 3 – such as Myanmar and Lao PDR – which face both weak attachment to primary education and weak transitions to lower secondary schools. **Policy priorities** need to focus on the transition to lower secondary education, including alternative forms of educational provision for those who are unable to stay in the formal system, and related issues such as preventing irregular school attendance, repetition and drop-out.

Across those 'typologies', all countries must prioritize strategies to ensure the **most marginalized** groups of children and adolescents are enrolled and supported to stay in school and learn effectively. Once in school, policies will need to provide these children with an **inclusive and supportive learning environment** to ensure that all children have the opportunity to complete basic education with solid learning outcomes.

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40 Some countries did not have sufficient number of data points or high rates for classification.

TABLE 12. Summary of OOSCI dimensions, per country and typology

	Dimension 1	Dimension 2	Dimension 3	Dimension 4	Dimension 5
	Rate of OOSC (%)			Drop-out rate (%)	
Typology 1: High OOSC rates at most education levels					
Cambodia	57.0	9.4	13.3	23.8	31.7
Marshall Is	34.4	21.5	22.9	..	..
Micronesia, F. S.	23.6	16.0	18.1	..	..
Nauru	25.2	15.6	17.6	..	..
Papua New Guinea	26.5	22.3	12.0	..	..
Solomon Is	34.6	30.5	..	30.1	15.5
Timor-Leste	66.9	19.2	12.9	19.5	4.3
Typology 2: Weak attachment to primary education					
Cook Is	0.9	4.2	0.3	23.4	9.8
Lao PDR	36.9	6.7	21.7	18.9	25.3
Myanmar	..	2.3	24.0	24.6	16.1
Samoa	63.1	3.8	1.8	13.2	2.6
Tuvalu	3.0	2.5	11.3	48.2	26.2
Typology 3: Weak transitions and/or attachment to lower secondary					
Fiji	..	0.1	4.0	8.8	13.8
Indonesia	3.2	7.3	11.8	2.4	6.5
Malaysia	1.4	1.4	12.1	3.6	5.8
Niue	44.3	..	..	..	28.8
Philippines	20.4	4.5	7.3	12.5	11.5
Thailand	3.0	..	11.1	7.8	10.1
Tonga	..	0.1	11.5	..	..
Viet Nam	0.7	1.9	..	4.0	9.2

Notes: Where data are missing, countries have been classified on the basis of other data from UIS and secondary sources (see Box 7). Brunei Darussalam is excluded from this categorization due to low levels in each dimension. Data from earlier than 2010 are shown as not available in this table. For data years, see Table 6, Table 7 and Table 9. n: nil or negligible

.. : data are not available.

Source: UIS, 2019

Most out-of-school children in the region are **concentrated in the largest countries by population**, even though these countries are not necessarily the ones with the highest rates of out-of-school children. In 2017, there are some 7 million children of primary school age who are out-of-school and 8 million adolescents of lower secondary school age who are out of school and another 16 million are youth of upper secondary school age. These are likely to be **under-estimates**, as recent data for some countries (e.g. primary and lower secondary age children in China and lower secondary age children in Viet Nam) are not available. One-quarter of the region's out-of-school children of primary and lower school age are in **Indonesia** (3.7 million), another 16 per cent in **Myanmar** (1.1 million) and 15 per cent in the **Philippines** (1 million). Figure 38 shows the distribution of these children by age group. Some estimates suggest that including updated data from China might add a further 1.7 million primary-age children and 1.4 million lower secondary-age children (see Box 7).

FIGURE 38. Numbers of out-of-school children by country, 2017

FIGURE 38. Numbers of out-of-school children by country, 2017
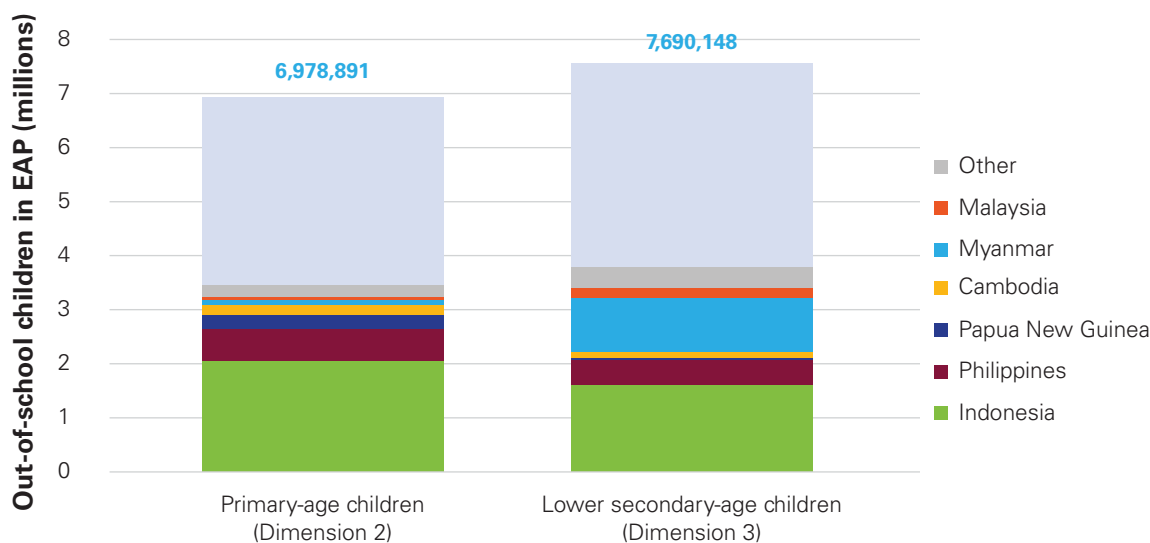
Notes: Data are from Table 7. Data are not available between 2010–2017 for Dimension 2 in China, DPR Korea, Niue, Thailand, and for Dimension 3 in China, Kiribati, Mongolia, Niue, Palau, and Viet Nam.

Source: UIS, 2019

Some of the Pacific Island countries have among the biggest challenges with out-of-school children in the region, accounting for 47,000 out-of-school children and adolescents at primary and lower secondary level.[41] The Solomon Islands accounts for 70 per cent of the total primary-age children, followed by Vanuatu at 12 per cent. More Pacific Island countries struggle to keep children and adolescents in school, although only 6,000 children are out of school in this age group and live mostly in Fiji, Tonga, the Marshall Islands and Micronesia, F.S.

Who are the Out-of-School Children?

In most countries in the EAP region, a **large majority** of children are **enrolled in and attend primary** and lower secondary school, although many still have **limited exposure to pre-primary** education and are at risk of **dropping out before completing lower secondary** education. It is important for policies to focus on the marginalized groups of children and adolescents who remain out-of-school, and to understand specific barriers and challenges that affect these groups. In addition, educational policies should examine the quality of teaching and learning with regard to their ability to retain those children who are at risk of dropping out and do not complete their basic education without necessary skills and competencies.

To develop and implement such policies effectively, it is essential that policymakers identify and monitor the composition of the **most disadvantaged groups**. The **characteristics** of out-of-school children vary by country, but the evidence from both OOSCI country studies and global data defines some broad groups, which are summarized in Table 13. Policymakers should recognize that many children indeed have **multiple compound vulnerabilities** by belonging to several of these groups at the same time, which in effect could compound their difficulties in entering or completing schooling. Annex 4 shows figuratively the impact on the out-of-school rates of belonging to various disadvantaged groups based on area of residence, sex and wealth quintile in 7 EAP countries with available disaggregated data and country examples in Table 13 drawn from that set.

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41 This paragraph is considering the Pacific Islands at the exclusion of Papua New Guinea.

TABLE 13. Who are the out-of-school children?

Children and adolescents from poor households	Children and adolescents from the poorest households (usually defined as the lowest 20 per cent in the income quintile) are much more likely to be out of school at pre-primary, primary or lower secondary levels (in Dimensions 1, 2 or 3) than children from richer families in all countries, where data is available.
Children and adolescents living in rural areas	Disparities in school attendance can be based on area of residence, creating large rural-urban gaps (e.g. Cambodia, Lao PDR, Timor-Leste). In some cases, the rural-urban gap may be compounded by differences in poverty incidence, so that the rural poor are worse off than the general rural population, and notably worse off than the urban poor, as is the case in Cambodia, Indonesia, and Viet Nam.
Children and adolescents living in remote areas or small islands	The isolation of small islands or other remote locations in mainland countries tend to cause a scarcity in the supply of education (e.g. fewer schools, more physical barriers, fewer qualified teachers). Although data are not always available, studies indicate this is likely to be an issue for attending school in the Pacific Islands, especially Solomon Islands, Micronesia, F. S., Palau and Marshall Islands, as well as in remote areas in Cambodia and Myanmar, for example.
Children and adolescents living in poor urban areas	There is less poverty in urban than rural areas, but those who are poor in urban areas are among the children at risk of educational exclusion. The urban poor are similarly, if not more, disadvantaged as the rural poor in terms of access to primary education in Lao PDR, Myanmar, Thailand, Timor-Leste and Viet Nam. Although pre-primary provision is usually highest in urban areas, children from the poorest urban households are unlikely to attend school at all or attend low quality public schools or unregulated private institutions.
Young and adolescent girls	Girls are less likely to attend or complete schools than boys in some countries, although gender parity has increasingly been achieved across the region. Girls are more likely to be out of pre-primary school (Dimension 1) in Micronesia, F. S., Mongolia, Brunei Darussalam, Thailand and Marshall Islands. Disadvantages in primary and lower secondary are less common in the EAP region, but the disadvantage of being a girl can often be compounded with being poor or living in rural areas. For example, in Lao PDR and Myanmar, girls are disadvantaged relative to boys among the poorest families, but not among wealthier families.
Young and adolescent boys	The disadvantage for boys (relative to girls) can be observed across all education levels in different countries. For example, boys are less likely to attend pre-primary school in Palau, Nauru, Cook Islands and Malaysia or primary school in Marshall Islands, Timor-Leste, and the Philippines. The scale of the disadvantage tends to grow in lower secondary education. Boys are particularly likely to be over-age for their grade in several countries (including Cambodia, Lao PDR, Marshall Islands, Palau, the Philippines, and Timor-Leste), a risk factor for dropping out. In Cambodia and Viet Nam, boys are disadvantaged relative to girls among the poorest families, but not among wealthier families.

Children and adolescents from ethnic or linguistic minorities	These children and adolescents are over-represented in the out-of-school population across several countries including Cambodia, Lao PDR, Myanmar Thailand, Timor-Leste and Viet Nam. There are varying degrees of educational (and other) exclusions among different 'minority groups' in each country context.
Children and adolescents who work	In Lao PDR and Myanmar, there is a strong association between working and being out-of-school in primary and lower secondary school (Dimensions 2 and 3). In other countries, children who work often seem to be able to combine work and school to a certain extent, but children who work long hours or who live in challenging conditions may still have difficulty doing so and become out-of-school.
Children and adolescents who migrate or whose parents migrated	Across all education levels and out-of-school dimensions, rural-urban migrants are more likely to be out of school than non-migrants. This is the case in Viet Nam with internal migrations, as well as in Thailand, where children of international immigrants often drop out after completing primary education. Vulnerabilities associated with migration might also be related to non-economic factors such as climate change. In these cases, data are limited for most countries.
Children and adolescents with disabilities	Children and adolescents with disabilities are much more likely to be disproportionately out of school in all education levels and out-of-school dimensions than those without disabilities or with partial disabilities. Although data collection on children with disabilities is limited in most countries, reports in Viet Nam, Cambodia and Myanmar strongly confirm their disadvantage.

3.5. Data Issues in Profiling Out-of-School Children and Adolescents

Two main types of data limitations arise from the gathering of data to create regional profiles of out-of-school children: **missing or old** data and **inconsistency** across various data sources. For the first issue, as observed in various comparative data tables and figures throughout this section, recent statistics on out-of-school children and adolescents are not available for several countries in the UIS global database. Other sources or older data need to be consulted to get some indication of how many children and adolescents are out of school, although the figures are not necessarily comparable. The second issue is raised in those countries where data are available both in the global database and from other sources (e.g. census, household surveys), but the values diverge due to methodological differences. In these cases, it is worth treating statistics with some caution, and understanding the methodological differences in data collection and population surveyed. Nonetheless, when trends on the various data sources tend to be consistent, which is most often the case, suggested observations and policy solutions remain valid independently of the numbers used.

Box 7 provides detailed explanations for various countries with both types of data limitations in the region – including China, DPR Korea, Myanmar, Papua New Guinea and the small Pacific Islands – which face significant data limitations in the global database.

BOX 7. Filling in for missing education data across EAP

China has no recent out-of-school estimates in the global database. According to UNICEF China, nearly 99.7 per cent of children are enrolled in primary school (net enrolment). The gross enrolment ratio at lower secondary level is 99 per cent. However, attendance estimates based on household surveys suggest that there may be higher numbers of children and adolescents out of school. The number at primary level may be as high as 4.7 million (5 per cent), although of these, 3 million are 6 years old, who have not yet begun schooling. As the law also allows children to start school at 7 in a small number of areas where conditions are inadequate to start at 6, some might have been considered to be too young to enrol at the start of the school year. Approximately, 2 per cent of 7 to 11 year old's may be out of school, and some 1.4 million (3 per cent) adolescents of lower secondary age may be out of school (National Bureau of Statistics of China et al., 2015). A substantial minority of children do not enrol in pre-primary education, where the gross enrolment ratio is 84 per cent (UNICEF China, 2015). This suggests that including China would affect the regional estimates of the numbers of out-of-school children and adolescents.

In **DPR Korea**, the most recent data on pre-primary and primary education is from 2009, when 82 per cent of children enrolled in pre-primary education and 3 per cent were out-of-school at primary age. Estimates based on the 2017 MICS survey suggest that there had been huge improvements in pre-primary education, with 97 per cent of children attending school 1 year prior to primary school entry age, 97 per cent attending at primary age, and 96 per cent attending at lower secondary age (UNICEF DPR Korea, 2018).

Myanmar has recent data in the global database, but the statistics based on administrative data are quite different to those available from other sources. The UIS administrative data suggests that 44 per cent of children and adolescents at lower secondary age are out-of-school, while a household-survey based estimate for 2016 also available in the global database suggests it is only 16 per cent, and the Myanmar country report finds that only 12 per cent are out-of-school, using Labour Force Survey data from 2015. The administrative data may under-estimate the number of out-of-school children and adolescents in primary education (Dimension 2), but over-estimate the number in lower secondary education (Dimension 3).

Papua New Guinea does not have data for Dimension 3 (lower secondary education) in the global database. The country report, using administrative data, finds that there were 118,000 children and adolescents out-of-school at lower secondary age, representing 34 per cent, which would make it one of the countries with the most severe barriers to lower secondary education in the region. The country report also suggests the number of out-of-school children and adolescents at primary age may be much higher than suggested by the UIS data, at 259,000 or 16 per cent.

In the Pacific Islands, there is missing data on lower secondary age children in the **Solomon Islands, Kiribati, Tokelau and Niue**. There is missing data on primary age children in **Tokelau and Niue**. In the Solomon Islands, the net enrolment rate in lower secondary was only 24 per cent in 2015, suggesting there is a very high proportion of children and adolescents in Dimension 3. In Kiribati, net enrolment rate at lower secondary level was 78 per cent in 2015. For Tokelau, the adjusted net enrolment rate in 2016 at lower secondary level was 88.5 per cent, and the gross enrolment ratio at primary level was over 100 per cent. In Niue, the primary GER is over 100 per cent and the lower secondary ANER is 88.5 per cent.

The low proportion of out-of-school children and adolescents (under 1 per cent) in Dimension 3 (lower secondary) in **Vanuatu** is difficult to reconcile with an adjusted net enrolment rate of only 47 per cent, although it may partly be explained by children and adolescents remaining (thus being over-age) in primary school.

Several countries – **Nauru, Niue, Thailand and Vanuatu** – reportedly have lower proportions of children and adolescents out-of-school at lower secondary age than at primary age. This is possible if large numbers of children and adolescents are enrolled over-age in primary school.

Countries with small populations are highly subject to fluctuations due to migration and other factors, which make it difficult to obtain reliable education participation statistics. This affects **Cook Islands, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tokelau and Tuvalu**, in particular.

During the preparation of this section, it was observed that estimates of the number and rate of out-of-school children can differ widely between the statistics collected from UIS – which are based on EMIS administrative data submitted to UIS and international population statistics – and those calculated for the OOSCI country studies. Many country studies use household surveys and national population estimates for their main estimates of out-of-school children and adolescents (Dimensions 1, 2 and 3). Some estimates are based on household surveys (which relate to school *attendance*), while others preferred EMIS data (which depend on *enrolment*). Data also differ according to the year selected and presented. This Section was prepared to provide a regional perspective and overview of the situation of out-of-school children across the 28 countries, therefore the UIS global database was used to maintain cross-country consistency in the definitions and calculations of indicators.

The implications of counting out-of-school children by using various data sources (e.g. administrative, household) were introduced from a general perspective in Section 2.3. Table 14 shows **differences between the estimates** based on **attendance** in household survey and **enrolment** in administrative data gathered by UIS for pre-primary, primary and lower secondary education (Dimensions 1, 2 and 3), as obtained in those countries with available data. There is no general rule about which estimates are higher: for primary education, estimates for out-of-school children and adolescents from household surveys reported in the OOSCI country reports are higher than those based on administrative data. The converse is true in lower secondary education. The discrepancy in estimates can be quite large in primary education: for example, in Cambodia, household surveys estimates are 4 times higher than administrative data. In Lao PDR and Papua New Guinea, household surveys are 3 times and twice as high, respectively. At the pre-primary level in Thailand, 6 times more children are estimated to be out of school in household survey data than in administrative data. The gap is reversed – with administrative data nearly twice higher than household surveys – in Indonesia in primary education.

Both household surveys and administrative data have **advantages** as ways of estimating rates of out-of-school children and adolescents. When estimates differ, it is important to look at possible differences, such as in which population figures were used, how old the data is and possible biases. Household survey studies need to use the best methods available to take account of survey timing in cases when exact age is not available (Barakat, 2016).

TABLE 14. Comparing national and international estimates for out-of-school children in pre-primary, primary and lower secondary education, Dimensions 1, 2 and 3, most recent year available

	Administrative data OOSC estimates (from UIS)			Household survey data OOSC estimates (based on attendance)		
	Number of OOSC	Rate of OOSC	Year	Number of OOSC	Rate of OOSC	Year
	Total	%		Total	%	
Dimension 1: Pre-primary school age						
Cambodia	175,636	57.0	2012	212,710	70.9	2012
Indonesia	8,733	0.2	2013		25.1	2012
Lao PDR	84,558	57.1	2012	75,340	47.0	2011/12
Thailand	1,846	0.2	2011	11,158	1.4	2012
Timor-Leste	18,965	52.0	2013	8,972	29.0	2011
Viet Nam	43,179	3.0	2014	99,200	6.7	2014
Dimension 2: Primary school age						
Cambodia	46,721	3	2012	249,728	13.2	2012
Indonesia	1,127,807	4	2012	621,970	2.1	2012
Lao PDR	38,302	5	2012	114,770	15.4	2011/12
Papua New Guinea	310,521	29	2012	600,615	40.0	2011
Thailand	..	..		217,628	4.3	2012
Timor-Leste	14,013	7	2011	18,643	9.4	2011
Viet Nam	127,071	2	2013	180,521	2.6	2014
Dimension 3: Lower secondary school age						
Cambodia	255,442	27	2012	107,401	11.4	2012
Indonesia	1,809,975	13	2012	1,369,811	10.3	2012
Lao PDR	150,395	25	2012	118,159	20.5	2011/12
Thailand	342,572	12	2012	159,498	5.2	2012
Timor-Leste	25,785	27	2012	7,623	9.3	2011

Notes: UIS data are for the closest year to the household survey for which data were available. Dimensions 4 and 5 are often calculated with different methodologies in the country reports, so not directly comparable to UIS data. For Dimension 1, the UIS indicator is the number and rate of out-of-school children, 1 year before the official primary entry age.

Source: National OOSCI studies; UIS, 2019

Barriers
Why Are These
Children and
Adolescents Out
of School?

4. Barriers: Why Are These Children and Adolescents Out of School?

Access, participation and completion of basic education is dependent on a multitude of factors on both the **demand** and **supply** sides of education as discussed in detail below. The OOSCI **country studies** present a wealth of research in identifying various barriers to education within each country as well as national strategies to removing or mitigating the negative impact of those barriers. The following sections provide an **overview** of these various country information and accounts, as reported in the OOSCI country studies, and synthesizes **major common elements** in the EAP region in the exclusion of children and adolescents. While the report aims to present an overview of the regional situation, these sections also build on specific country examples which were available to illustrate the general issue. These examples do not intend to imply that these are the only countries facing the issue.

4.1. Demand-related Barriers

Demand-related barriers to education include numerous issues directly related to poverty (e.g. real and opportunity costs of education), as well as indirectly (e.g. migration for family subsistence). Social norms and traditions, as well as having a disability, can cause children and adolescents to not attend education. Failing demand can also be due to systemic barriers to education, such as those related to enrolment requirements and the school timetable.

School-related Fees and Costs

Key factors in the increase in enrolment rates at a global scale have been related to a combination of universal and targeted policies to **reduce the household cost of education.** The **abolishment of school fees** tends to increase the enrolment of children and adolescents from the most disadvantaged families.[42] In Papua New Guinea, the government committed to covering the cost of school fees previously paid by parents in the Tuition Fee Free policy. The rate of out-of-school children and adolescents (aged

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42 For example, a review of fee abolition policies in sub-Saharan Africa found that the enrolment of disadvantaged groups, such as girls and orphans, increased (UNESCO, 2015b).

6 to 18 years) decreased by 20 percentage points between 2011 and 2015, but has led to overcrowded classrooms, inadequate resources and an increase in over-age students in primary education (PNG OOSCI study; UNICEF, 2017d).

Pro-poor targeted policies to reduce the cost of school include the reduction of school-related fees, the provision of **free meals** (including breakfast), **learning supplies** and **textbook** provision, **scholarships**, **stipends**, **cash transfers** or other demand-side financing mechanisms to support children from the poorest families. Indonesia's conditional cash transfer programmes (Beasiswa Untuk Seswa Miskin: BSM and Programme Keluarga Harapan: PKH) provided cash transfers to low-income households upon the condition of school attendance at the primary and lower ("junior") secondary levels (Baker and Gadgil, 2017).

Differentiated national policies to remove or charge school fees can leave some groups unable to access education. For example, in 1995, Malaysia introduced a school fee for children who are not Malaysian. Non-nationals or children who could not prove their nationality faced a financial barrier to enrolling in school (Malaysia OOSCI study).

Nonetheless, despite fee removal legislation in most countries, household contributions to education account for 31 per cent of total expenditures on education. In some countries, such as Cambodia, Malaysia, the Philippines, Thailand and Viet Nam, private contributions account for at least half, if not three-quarters, of the total expenditure on education (UNESCO, 2015b). Some of these countries – such as Cambodia – spend a low proportion of GDP on education, while in others both public and private expenditure is high (see Section 1.5). Schools **continue to charge some sort of fees** – formally or informally – to account for budget gaps. Parents can also be requested to contribute in-kind or financially to school materials, learning materials, school construction and teacher housing, as well as meals, uniforms and transportation costs.

Tuition fees levied by teachers for **extra lessons** outside of normal class time are a common feature in many countries. When teachers are inclined to increase their income, such activities create disincentives for providing quality teaching in the classroom, and eventually create a barrier to quality learning for poor students. In Cambodia, such fees were readily reported by parents, who spend up to $108 per child per year in total schooling costs (UNDP, 2014). Figure 39 shows the distribution of school fees in Cambodia, in which "allowances" or informal fees account for a majority of costs at all education levels. Informal fees might include bicycle parking fees as well as daily teacher's fees (Cambodia OOSCI study).

FIGURE 39. Distribution of household costs of schooling in Cambodia, 2012
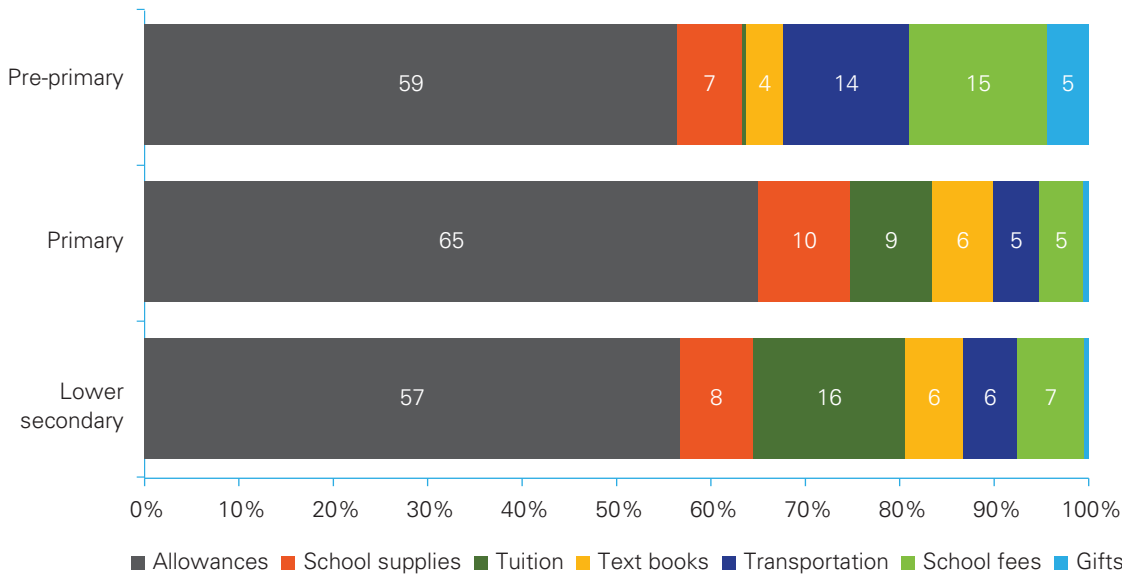
Notes: Tuition fees refer to extra lessons outside of school and are not the same as school fees. Allowances are for children studying away from home (detail unspecified).

Source: Cambodia OOSCI study

In Cambodia, Lao PDR and the Philippines, as in other countries, these **hidden costs of schooling** can be a disincentive for entering school on time or for completing school, especially for poor families and adolescents (Cambodia, Lao PDR and Philippines OOSCI studies). The hidden costs of school also can create inequity among geographic groups: urban fees are higher than rural fees in Cambodia and Lao PDR.

Schools often charge **informal fees** or **parental contributions** in response to insufficient funding, especially when governments have abolished formal fees without replacing the income stream that they provided. Per-pupil school grants are one mechanism that can replace fee income while allowing schools to maintain decentralized control over how the funds are used. In Indonesia, Timor-Leste and Vanuatu, **school grants** were introduced alongside fee-free education (Lugaz and Grauwe, 2016). Grants can also be used to provide specific assistance for disadvantaged groups, as in Mongolia for learners with disabilities, and in Indonesia for learners from poor households. Although parental contributions tend to persist where school grants have been brought in, they have reduced the cost of schooling to parents, particularly for poor families (ibid.).

Child Labour

The **'opportunity cost'** of education is the value that a child's time would have if he or she were not in school but working, whether in the household or outside of it. In contexts where children and adolescents can earn high wages, where the demand for labour is high at certain times of year (such as in agriculture), or where households rely heavily on children's work because they are poor, the opportunity cost of education is high. This means that parents face incentives to let children leave school – or at least, reduce the time they spend on school-work – and work instead.

As noted above, *child labour* has the specific legal definition[43] and is considered generally to harm children's education by leaving insufficient time for them to attend school and do school work, or by risking damage to their health. *Child work* that does not fall into this definition is not necessarily harmful or incompatible with education, but it still reduces the time that children dedicate to school.

Child labour is a significant consequence of **poverty** which directly impacts education attainment and school attachment. In several countries in the EAP region, including Cambodia, Viet Nam, Mongolia, and the Solomon Islands, substantial proportions of children are involved in child labour (see Section 3.2). In most countries, child labour is overwhelmingly concentrated in **rural** areas and among the **poorest** households; most employed children work in **agriculture** with their families. Gender differences in child labour are not large, but in the Philippines, Mongolia and Viet Nam, more boys than girls are involved in child labour, while in Solomon Islands and Lao PDR, slightly more girls are involved (see Figure 26).

Work[44] and schooling are **not incompatible** – many children and adolescents combine work and school in the region – but school attendance is lower among children and adolescents who work than those who do not, especially at lower secondary age. Internationally, children and adolescents who work tend to be **more at risk of repeating and dropping out** and have **poorer learning outcomes** (UNESCO, 2015b).

Child work in the **household**, which in many countries is disproportionately done by **girls**, can affect schooling just as much as paid employment. In the Philippines, income is often irregular or seasonal in poor families and can have significant negative impact on schooling. In large poor families with many children, older girls might be required to stay home from school with younger children while the mother works (Philippines OOSCI study). **Boys** from poor families are also likely to face societal pressures to start working to support their families. This is the case in Malaysia, where boys were reported to drop out of school as a result. In many Pacific Island countries, boys are likely to have lower enrolment rates, attendance and achievement than girls (World Bank, 2018b).

Many countries in the region report struggling with child labour as it relates to schooling opportunities. Yet some policies create a **"pull" factor** for engaging in child labour. For example, in Myanmar, there is a large gap between the end of the 5 years of compulsory education (ages 9–10) and the **legal minimum**

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43 Child labour refers to children aged 5 to 11 years who work at least 1 hour a week in economic activity or at least 28 hours of household chores; children aged 12 to 14 years who worked at least 14 hours in economic activity or at least 28 hours of household chores; children aged 15 to 17 years who worked at least 43 hours in economic activity or household chores, and any children aged 5 to 17 years who work in hazardous activities.
44 Work in the household is only classified as child labour if it is done for at least 28 hours per week.

working age of 14 for factories and shops. The impact of working in Myanmar creates a strong association with being out of school, as only 10 per cent of children who work are also enrolled in school (Myanmar OOSCI study). In Viet Nam, child labour along with poverty are considered the main barriers preventing children and adolescents from attending school in household surveys. Surveys in 6 provinces found that children and adolescents who worked **performed poorly** at school, were **unmotivated** and tended to drop out. Those children who participated in seasonal labour interrupted school and fell behind, also a cause for future drop-out (Viet Nam OOSCI study). Yet, some evidence in Indonesia suggests that when children and adolescents work in combination with school, they are able to **pay for their education** rather than dropping out (Indonesia OOSCI study).

Several **pro-poor policies** were implemented in the EAP region – with varying levels of success – to target the reduction of the "pull factor" for child labour. In Viet Nam, the National Target Program (2006–2010) aimed to reduce poverty and, in some cases, specifically target ethnic minority groups (Viet Nam OOSCI study). The percentage of children in child labour aged 7 to 11 fell from 19 per cent to about 8 per cent between 2000 and 2011. During that same period, the percentage of children and adolescents in labour aged 12 to 14 halved from 47 per cent to 21 per cent (Guarcello et al., 2015). **Conditional cash transfers** can potentially have even greater effects, as they both reduce the need for child labour and incentivize school-going. In Cambodia, conditional cash transfers led directly to a reduction in child labour (Fiszbein et al., 2009). Since 2002, Cambodia has focused resources on scholarships for lower secondary students as a conditional cash transfer.[45] In other cases, the effects of cash transfers on child labour have been more muted, perhaps because the transfers are not sufficient to make up for the lost income (UNESCO, 2015b).

It is important for countries to have the **basic legal framework** in place to protect children and adolescents who work. Most countries in the region have ratified international conventions relating to child labour such as the ILO's conventions on minimum age for working and worst forms of child labour, as well as the Convention on the Rights of the Child (ILO, 2018). However, Cook Islands, Marshall Islands, Palau, Timor-Leste, Tonga, Tuvalu and Vanuatu have **not** ratified the ILO convention on minimum working age and several have not ratified the convention on worst forms of child labour. Solomon Islands has ratified the convention and agreed a minimum working age of 14 years, yet its national legislation permits children as young as 12 to work. In Cambodia, minimum age protection does not apply to domestic or household workers, while in Mongolia and Thailand it does not apply to children and adolescents who are not in formal employment (US-DOL, 2018).

In several countries, child labourer's are able to benefit from **non-formal** and **complementary education programmes** that are flexible and adapted to their needs and schedule, such as the Alternative Learning System in the Philippines (UNESCO, 2017). However, such programmes are rarely able to offer a route back into formal education for those who did not complete it.

National and International Migration

Most internal movement of people within a country can be categorized into two types of migration: **rural-urban** migration and **intra-rural** migration. The former can be a large flux of people moving for opportunities to work in urban areas, and who often move to high density, unregulated slums areas. The latter is usually associated with nomadic groups in search of more fertile lands or better climatic conditions.

Rural-urban migration is an important phenomenon in many countries in the EAP region, including Cambodia and the Philippines, where children and adolescents do not always accompany parents and can cause major disruptions in schooling. Some 29 per cent of the population of Cambodia, 19 per cent in Myanmar, 18 per cent in Timor-Leste and 17 per cent in Lao PDR are estimated to be internal migrants (UNESCO et al., 2018). In Cambodia, internal migrant children and adolescents are more likely to be **working** along with their parents. The national OOSCI study found that in 2012, 38 per cent of migrant children and adolescents aged 5–17 were economically active. Their migration is linked to **absenteeism** in school as well as being **over-age** due to repetition, creating marginalized groups of children and adolescents who are more **at risk of dropping out**. In Viet Nam, children and adolescents who move

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45 Conditions include enrolment, passing school tests and good attendance records.

with their families for work (e.g. transporters, vendors on rivers) have higher drop-out rates than other families in the same province.

Education systems can actually become more efficient as populations becomes increasingly **urbanized**, because education provision in urban areas is **less costly** and easier in terms of logistics and infrastructure (UNESCO, 2015b). Accommodating an influx of new migrant students need not place greater strain on the education system's finances.

Yet, the areas in which migrants usually settle are often serviced by **poor quality** public social and educational services. In some cases, these gaps in service delivery have enabled the development of **unregulated private schools**. More than 250 million people in East Asia and Pacific live in **slums**, and rates of **urban poverty** are high, particularly in Timor-Leste, Papua New Guinea, and Vanuatu (Baker and Gadgil, 2017). In Cambodia, Mongolia, and Myanmar, more than 40 per cent of the urban population live in slums. Slum areas are often cut off from the better-quality services that wealthier urban residents usually enjoy, due to capacity constraints, legal and regulatory barriers related to residency, and high costs.

In China and Viet Nam, household **registration systems** have presented a formal bureaucratic barrier to education for rural-urban migrants. Migrants who are not officially registered as urban residents have been barred from accessing urban government schools, or permitted to enter only if the school has space after admitting local residents. In China, migrants often created their own private schools as an alternative. Recent reforms to the registration system have compelled local governments to provide education for migrants and abolished school fees for them, and an overwhelming majority now attend urban public schools (UNESCO, 2015b). In Shanghai, the government also audited private schools serving migrant children and upgraded them with public support (World Bank, 2014, cited in Baker and Gadgil, 2017).

Education of **international migrants** is also a major issue in the EAP region. There are some 7 million people who have migrated from one country to another in the same region (including the region's high-income countries), although not all migrate with their children. In 2010, Malaysia hosted over 2 million immigrants, and Thailand over 1 million, while Indonesia, Philippines, Viet Nam, and the Pacific Islands all had large emigrant populations living in other countries. Most international migration within the region is of **unskilled workers**, but migrant workers are typically **better-educated** than the average in the country they come from (IOM, 2018). A significant proportion of migration in the region is "**irregular**". Estimates of the number of irregular migrants in Malaysia, mostly from Indonesia and the Philippines, range from 600,000 to 1.9 million, while the numbers of recognized and unrecognized migrants in Thailand – mostly from Cambodia, Lao PDR and Myanmar – fluctuates greatly due to policy changes and regularization programmes (UNESCAP, 2015). Irregular migrants may include people **fleeing conflict** in other countries. In 2014 there were 57,000 persons from Myanmar living in shelters in Thailand who were not registered as refugees by the government (UNESCAP, 2015).

International migrants face a range of **barriers** to education in their host country, especially if they do not have **permission** to be there. Many countries that receive migrants do not permit them to bring dependents, so accompanying children will have an irregular status and may not be allowed to attend formal education. Others have developed national resolutions or policies that specifically facilitate migrants' access to education. For example, Thailand passed a cabinet resolution in 2005 which provides free access to education for migrant children. Other barriers remain to further decrease access, including **documentation**, **language**, **stigmatization** and non-formal school **fees** (Arphattananon, 2012). The result is that "[there are] only a small fraction of migrant children enrolling in formal education... Many attend migrant learning centres operated by non-governmental organizations, which are usually not accredited..." (UNESCAP, 2015, p. 49). As a host country for migrants, Malaysia has similarly relied on initiatives by the private sector to provide migrant or undocumented children with access to education, but coverage is limited and the newly introduced Zero Reject Policy is expected to mitigate the barriers which hinders educational access of migrant children.

Countries may be **reluctant** to extend public services to migrants, especially to those who have not officially been permitted to enter the country, and reluctant to pay for these services. However, the **right to education** cannot be denied to children in an attempt to deter immigration. Rather than allowing a

second-tier school system to be set up for children of migrants and refugees, governments should work with NGOs and international agencies to ensure that they all have access to **appropriate and free forms of formal basic education**. This will mean reducing bureaucratic obstacles to entering school in some countries; reducing unofficial costs; and putting in place language policies for migrants whose mother tongue is different from that spoken in local schools.

Climate Change

The physical geographies of many EAP countries make them particularly vulnerable to climate change, and children and adolescents are likely to be most impacted by the **negative consequences** of sea level rising, massive flooding, crop failures and other outcomes. Existing evidence shows that children are already impacted by climate change in terms of their nutrition, health and livelihood, which in turn has an impact on their ability to attend school (UNICEF, 2011). In Indonesia, for example, one-fifth of rural children surveyed quit school because a crop failure associated with flooding or a drought made school too expensive. Changing weather patterns can also cause increased **migration**, leading to disruptions in schooling and adolescents. In the Pacific Islands, which are susceptible to the consequences of rising sea levels, children have reported missing school to clean up after extreme weather events. Another example is a natural disaster particular to Mongolia – dzud – which causes families to use funds for school supplies to buy food for the household. National education sector plans and policies need to take into considerations these negative impacts of climate change, particularly for ensuring the most vulnerable children and adolescents' education in each context.

Ethnicities, languages and social norms

The education progression of children from minority ethnic groups is **precarious** in many parts of the EAP region, although causes of dropping out of school can vary across provinces and ethnic groups. Children whose primary **language** is not the language of instruction in school are more likely to drop out of school or fail in early grades (Ball, 2014, 2019). Using mother-tongue language as the language of instruction can be the basis for inclusion and reduce marginalization for disadvantaged groups, but insufficient attention has been given to **Mother Tongue Based-Multilingual Education (MTB-MLE)** in the development of national education programmes. Large gaps in educational attainment between majority and minority ethnic groups are observed in Lao PDR and Viet Nam. Children and adolescents from minority groups are more likely to be **over-age** and have **lower completion** rates at primary and lower secondary levels (World Bank, 2018b).

Ethnicity can be a factor of disadvantage in terms of education opportunities that is compounded with **geographic isolation**, as is the case in Cambodia, Lao PDR and Viet Nam among others. Indigenous children in Cambodia live in areas where 47 per cent of primary schools are incomplete compared to the national average of 12 per cent. For example, in Lao PDR, ethnolinguistic groups have significant differences in living standards and developing indicators, such as living in remote highlands and being semi-nomadic. The Lao-Tai (ethnic majority) male students living in rural areas are 4 times more likely to have attended school than their male non-Lao-Tai counterparts (World Bank, 2018b). In Viet Nam, both the Khmer (72.5 per cent) and the Mong (72.1 per cent) have a similarly low attendance rate compared to the national average for 5 to 17 year old's (89 per cent) starting from preschool years, yet the profiles of the out-of-school children in those 2 ethnic groups differ. Most of the Khmer out-of-school children had once attended school and then dropped out, whereas almost half of the Mong out-of-school children had never attended school (Viet Nam OOSCI study). These differences are important for policy responses.

Cultural traditions in some ethnic minority communities also negatively impact the educational opportunities of children, in particular those of **girls**. In most countries, adolescent **boys** are more likely than girls to drop out often to start working and earning money, but different sets of barriers affect them. **Early marriage**, **teenage pregnancy**, **household obligations** and a **negative education bias** are factors that are perceived to reduce the duration of schooling for girls in the EAP region, although there is little data on the incidence of these among children of primary or lower secondary age. Around 18 per cent

of young women in Cambodia, 22 per cent in Indonesia, and 35 per cent in Lao PDR married before they turned 18. The majority of Indonesian girls (87 per cent) who married early stopped going to school upon marriage (UNESCO, 2017). Similar association between teenage pregnancy and adolescent girls' school drop-out is found in Thailand as well, notably at upper secondary level (88% of about 7,000 girls who dropped out at Secondary Grades 4 and 5) (estimates based on calculation of MICS 2015/16 data by UNICEF Thailand). In Viet Nam, girls from ethnic minorities and whose mothers were illiterate are at greater risk of being out of school, a relationship which is perceived as reflecting cultural differences, such as early marriage and a **low value** being attached to girls' schooling. Girls are reported to drop out when they marry or after becoming pregnant. Drop out usually occurs at the upper secondary age, but the expectation of early marriage can create a **disincentive** for participation and motivation in early years of schooling. Girls tend to drop out during the transition to lower secondary school, especially if they must travel **long distances** or board to continue her studies, which could taint their reputation as a future bride (Indonesia OOSCI study).

In Lao PDR, girls from the Mon-Khmer and Hmong ethnicities have higher rates of early marriage, low enrolment and higher drop-out rates (Lao PDR OOSCI study and Social Protection and Sustainable Livelihoods, 2015; see Table 15). Legal norms for early marriage (legal age is 16 for women and 18 for men, although recent legislation aims to set the age to 18 for all) in Papua New Guinea reinforce the marginalized role of women, who also suffer from widespread sexual violence both in and out of school (Papua New Guinea OOSCI study).

▌**TABLE 15.** Ethnicity and early marriage in Lao PDR, under age 15 and age 15–19, 2015

Ethnicity	% who marry before 15	% who marry at age 15–19
Lao-Tai	6.5	20.3
Mon-Khmer	15.1	31.4
Hmong-Iu Mien	17.2	35.1
Sino-Tibetan	11.1	30.1

Source: MLSW, 2015

Targeted pro-poor policies to support the education of minority ethnic groups and girls across various countries in the region have included scholarships, tuition exemption, subsidies for school materials and transportation, free lunch and other forms of cash support policies. In Viet Nam, these policies reduced the drop-out rate for marginalized children aged 5 to 14 years, as well as primary and secondary students from remote, border communities with high levels of socioeconomic challenges (Viet Nam OOSCI study). Being able to identify and understand the education barriers of disadvantaged groups has prompted Cambodia to collect and **publish data on children's ethnicities** with regard to education and learning (Cambodia OOSCI study). Where social norms – particularly those to do with specific groups such as girls or children with disabilities – lead to children being kept out of school, then there is a role for **Communications for Development** (C4D) programmes to raise awareness on the right to free education, the importance and value of education, and the importance of enrolling at an appropriate age.

Disabilities

Children and adolescents with disabilities live in **all EAP countries**: their wide geographical dispersion within countries, coupled with possible interaction with other factors of disadvantage (e.g. poverty, rural, gender) reduce the likelihood of school attendance and completion. An estimated **one-third** of all out-of-school children and adolescents have a disability (UNESCO, 2016a). The need to address multiple issues for children with disabilities can be greater in **conflict-affected countries**, where they are likely to suffer from the lack of access to medicine, medical treatment, or more generally, health and social services (el Zein and Chehab, 2015).

Children and adolescents with disabilities can be either excluded from entering education (Dimensions 1, 2 or 3) or at risk of future exclusions (Dimensions 4 and 5), often disproportionately. Those with disabilities attending school are more likely to drop out, and have primary completion rates lower than children without disabilities (WHO, 2011). Systems covering **inclusive education** – when existent – tend to target older children (primary age onwards), rather than pre-primary systems. For example, in Viet Nam, 83 per cent of 5-year-old children with a disability are not attending pre-primary or primary education, and this rate increases to 100 per cent in several provinces.

The **identification** and **measurement** of the incidence of disabilities among children and adolescents varies across countries and can be a limiting factor in developing adequate policies to address barriers to education. Proxy measures such as stunting (malnutrition) and poor access to health services give some sense of the likely incidence of impairments among young children, but are rough indicators at best. Global data estimate that between 2.5 per cent to 23 per cent of children and adolescents have a disability depending on the definition being used (UNESCO Bangkok and UNESCO, 2016). In Viet Nam, the 2009 Census identified that less than 2 per cent of children aged 5 to 14 years have some form of disability (Viet Nam OOSCI study). In Cambodia, 10.7 per cent of all children aged 0 to 14 years old's were identified as having a disability (Cambodia OOSCI study).[46] In Timor-Leste, the 2015 Census showed that 0.5 per cent of the national population indicated they had a disability, although this is generally considered an underestimation. The Census reported that one-third of all 5 to 24 year old's who had a disability were attending school, while another estimated that 46 per cent of children and adolescents with disabilities between 3 and 18 years old are not currently in school (Timor-Leste documents and comment). In **South East Asia** as a whole, disability prevalence of moderate and severe disability for children is estimated at **5.3** per cent, including 0.7 per cent who have severe disabilities (WHO, 2011).

The **Washington Group on Disability Statistics** was formed in 2001 to respond to the need for better internationally comparable data on disability. It has since developed several tools, including the 'short set' of disability questions that can easily be incorporated into household surveys. Disability is a complex multidimensional experience, with both **medical** and **social** aspects which cannot be wholly captured in simple indicators relating to impairments in functioning. However, it is still important for such data to be gathered in order to estimate the need for different forms of educational support (WHO, 2011).

Increasingly, countries are using **inclusive education** to ensure that children and adolescents with disabilities enjoy the same educational opportunities as others. Inclusive education is an approach that seeks to address the learning needs of all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions (e.g. UNESCO, 1994). Although intended to apply to all children, and especially those who are vulnerable to marginalization and exclusion, the term is still used most in reference to education for children and adolescents with disabilities. Several countries in the region have developed strategies to improve inclusive education for children with disabilities. Many children and adolescents with disabilities have moderate impairments for which relatively low or no-cost interventions could increase their access to learning (Croft, 2010). Children with more severe impairments may need greater support, while more 'invisible' disabilities such as ADHD, autism, anxiety, depression, Asperger's etc. require specialized support.

Implementing **disability-inclusive education** can be difficult in practice, because there is **little evidence** on the effectiveness of specific approaches, such as including children and adolescents with different disabilities in mainstream schools and classes; having separate classes within mainstream schools; and having separate schools altogether (Bakhshi et al., 2013; Howgego et al., 2014). Initiatives that are well-defined at the **policy level may not be effectively implemented**, including because schools lack resources, teacher training and expertise is not sufficient, and because negative social attitudes and discrimination persist (Bakhshi et al., 2013; Wapling, 2016).

Reviews of inclusive education programmes and policies have documented how children and adolescents end up being 'integrated' in mainstream classes – enrolled in the school with little attempt to adjust to their needs – rather than 'included', which would mean **significant changes** in how the school works. A concern to avoid segregated provision "can lead to an insistence on institutional change that is difficult to implement in settings where capacity is not always available to provide fully inclusive education"; and

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46 The Washington Group Questions used in the Cambodian Interim Census consists of 6 short questions to identify difficulty in performing the following 6 functions: walking, seeing, hearing, cognition, self-care and communication (Washington Group on Disability Statistics, 2016).

mainstreaming is not always a positive experience (Bines and Lei, 2011, p. 421; Howgego et al., 2014). There is also little evidence on **cost-effectiveness**. In Cambodia, a strong inclusive education policy framework did not necessarily translate into real inclusion at the school level (Wapling, 2016; Kalyanpur, 2011). In Thailand, a lack of funding to cover specialist equipment or support meant that schools relied on the parents of children with disabilities to pick up costs (Vorapanya and Dunlap, 2014). In Timor-Leste, the National Inclusive Education Policy was approved in 2017 and is intended to apply to all groups of vulnerable children; however, implementation remains a challenge (Analysis of the Education Sector in Timor-Leste).

Indonesia is pursuing **alternatives** to free government special schools, to facilitate the enrolment of children with disabilities in standard classroom. Special schools were not always available at a large scale in rural areas and sending children to those schools could be associated with additional costs or family embarrassment. The national education strategy in Cambodia includes a **home-based education** programme to reduce the out-of-school rate for children with disabilities. The programme targets young children from poor families, indigenous groups and children with disabilities in rural and remote areas. This regular weekly programme provides mothers with information on how to care for their children in the areas of nutrition, health, well-being and education (from birth to age 5). Take-up of the programme, however, is low (Royal Government of Cambodia, 2014). Working on the inclusion aspect of disabilities also requires changing **perceptions** and prevention of **bullying** of children and adolescents with disabilities. Cambodia's national teacher training curriculum includes inclusive education training, providing future teachers with specialized training in inclusion techniques, identification of disability and provision of support to children with disabilities (Cambodia OOSCI study).

In many settings, a **"twin-track" approach** to inclusion may offer the most potential, where many children and adolescents with disabilities will be brought in to mainstream schools, while some specialist provision will remain, at least in the short term (Bines and Lei, 2011). Special schools tend to be located in urban areas, leaving rural areas particularly under-served. In Lao PDR, children with mild to moderate disabilities were reportedly successfully included in classrooms after teachers had been given additional training and parents engaged to support children's learning at home (Howgego et al., 2014). Projects based on collaboration between local governments and international organizations in China and Viet Nam, with a mixture of teacher training and engagement of community leaders, were successful in increasing the inclusion of children with disabilities in regular schools (Srivastava et al., 2015, citing Villa et al., 2003 and Deng and Holdsworth, 2007).

4.2. Supply-related Barriers

Supply-related barriers to education are being tackled by many national education sector plans and strategies which aim to improve access for all children and adolescents. Problems related to physical access due to inadequate supply of schools or classrooms are common throughout the region. Other issues include the qualification of teachers and their deployment, relevance of education and curriculum, and education financing and governance. These inputs are important but also need to be contextualized with regard to the quality of education provision.

Beginning of Compulsory Schooling

Since the adoption of the SDG target on early childhood (4.2), many countries are moving forward to promote or expand the free provision of 2 years of high-quality **early childhood education and learning** before beginning compulsory schooling, usually for children aged 4 to 6 years (Britto, 2017; Naudeau et al., 2011; OECD, 2001, 2012; Yoshikawa and Kabay, 2015). This strategy is based on international evidence which highlights the importance of early learning for future success in subsequent education and schooling. Specifically, the provision of a second year of pre-school education increases school readiness, especially for students from **disadvantaged backgrounds** (Yoshikawa et al., 2013).

Many children in the EAP region and from disadvantaged communities are **not entering any learning programmes** until they reach **age 5 or 6** depending on the official primary school entry age. By this age, if those children have not had access to adequate learning environments in their home, they are likely to face developmental delays and poorer school readiness skills. Improving access to **2 years** of quality

preschool education to support integrated child development for all children aged 4 and 5 years old has multiple societal benefits, including school readiness, greater primary school efficiency and female labour market attachment (OECD, 2006)

Significant efforts have been made in most EAP countries to increase **access to pre-primary** programmes. From a policy perspective, several countries are increasing the relative importance of pre-primary education as part of the overall education cycle for all children (see Table 5). While primary education is the beginning of formal education in most countries, some countries have lowered the **beginning of compulsory education** to include children of pre-primary school age. Compulsory education begins at age 4 in Nauru and Tonga, and at age 5 in the Cook Islands, the Marshall Islands, Myanmar, Niue, the Philippines, Samoa, Tokelau and Viet Nam.

The inadequate supply of ECCE programmes can be the result of a combination of **low parental demand** and **insufficient government investment**. In some countries, private or non-governmental actors can invest in creating ECCE programmes, but these are often only available in certain parts of the country. Parents who are interested in obtaining formal centre-based placement for their child – whether to enhance their learning opportunities or facilitate parents' ability to work – can demand greater public investment in ECE. Until this is fulfilled, however, parents have been known to enrol their children "early" in primary education, – that is at an age earlier than the official primary school entrance age (usually by 1 or 2 years at most). This was observed in the 2012 Cambodia Socio-Economic Survey (CSES) where nearly two-thirds of children in school are enrolled early in primary education (national OOSCI study). Under-age children who are not being taught at their developmental-age level are not benefitting from a quality learning programme adapted to their holistic developmental needs (i.e. socio-emotional, cognitive, language, gross motor, fine motor). Moreover, children who have not attended pre-primary programmes are more likely to repeat grades or drop out by lower secondary, representing an inefficient use of limited resources (UNESCO, 2006).

The **duration** of pre-primary education also influences children's preparedness for primary school. In a meta-study of 38 ECD programmes in developing countries, there appeared to be a slight advantage in outcomes (in terms of later cognition, behaviour, health or schooling) for children participating in programmes that lasted between 1 and 3 years compared to less than 1 year (Nores and Barnett, 2010). In the EAP region, the duration of formal pre-primary education varies from 1 to 2 years. Certain countries, including the Cook Islands, Kiribati, Micronesia, Myanmar, Nauru and Papua New Guinea, increased the duration of pre-primary education (see Annex 3).

Physical Access

Insufficient **availability** of primary and lower secondary schools in rural areas is a primary supply-related barrier in many countries. Given the geographic diversities and complexities in all the EAP countries, it is no surprise that all countries report **transportation** issues in **rural** environments as a limiting factor for providing an adequate supply of quality schools. Yet, lack of data allows only limited level of analysis, without the ability to link the supply of schools with being out of school. Qualitative studies can enrich the limitations of quantitative data collected in EMIS or household surveys. For example, in Indonesia and Myanmar, such studies identified that transportation costs or lack of transportation were among the main factors leading to school dropout, especially at the lower secondary level. Living in remote areas or with non-existent roads (sometimes on a seasonal basis) were identified as limits to attending school in several countries (Indonesia and Timor-Leste OOSCI study). A study in Lao PDR found that 23 per cent of girls who had dropped out of school had to travel more than 10 kilometres to get to school (LYU and UNFPA, 2014). **Distances** to lower and upper secondary schools tend to be longer than for primary schools, and certain regions are more at risk than others for an insufficient supply of schools. As an example, this is the case in 2 disadvantaged regions in Viet Nam (see Figure 40). In Lao PDR, adolescents living in rural areas could travel up to 12 kilometres on average to attend upper secondary schools, compared to 7 kilometres if living in an urban area (Lao PDR OOSCI study).

FIGURE 40. Distance between village and nearest school in Viet Nam
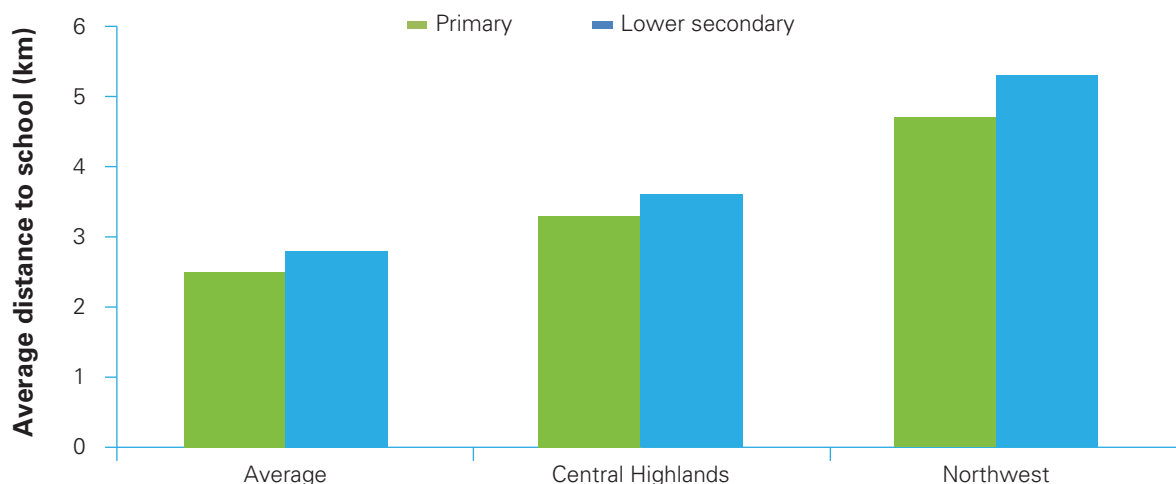
Note: The Central Highlands and the Northwest are regions characterized by high poverty rates and concentration of ethnic minorities.

Source: Viet Nam OOSCI study, 2013

Even in those countries, such as in Lao PDR, where a high percentage of the rural population is serviced by a primary school, most schools are **incomplete** and do not offer the full primary cycle or create multi-grade classrooms. If teacher training is not providing the workforce with the capacity to adapt to different classroom environments, the quality of learning suffers and parents can lose the motivation to send children to school. Girls' participation particularly appears more sensitive to the absence of complete primary schools. The supply problem also exists for lower and upper secondary schools, where children and adolescents from poor families, minority ethnic groups, or living in rural remote areas suffer most from exclusion (Lao PDR OOSCI study).

Poor **infrastructure** and **facilities**, especially in rural and poorer areas, are likely to deter children and adolescents from attending school in several countries. In Timor-Leste, schools have inadequate infrastructure, particularly in terms of **water and sanitation**: nearly half of the schools do not have a water supply (Timor-Leste docs, 2016 EMIS data). For schools that have water, everyday supply of water is not assured. An earlier study in Lao PDR found that around 40 per cent of school buildings were of temporary structure, and less than 20 per cent had fully-functioning water and sanitation facilities. Less than 15 per cent of rural schools had electricity, and schools relied on parental contributions to maintain their operations. In Viet Nam, schools in rural and disadvantaged areas often had limited infrastructure. In Cambodia, WASH facilities have not kept pace with the rapid increase in the supply of schools. In Papua New Guinea, **dilapidated** school buildings are not always rehabilitated because infrastructure grants fail to reach the schools that need them, while **overcrowding** is often a problem in urban areas.

Policies to increase the **supply** and **quality** of school infrastructure and facilities aim to improve **conducive learning environment** thereby increasing enrolment and retention to the next level of education. The expansion of school infrastructure by 44 per cent in Cambodia between 2003 and 2012 was linked to a reduction of that supply-related barrier for out-of-school children and adolescents. One of every 10 out-of-school children cited distance from school as the main reason for not attending school in 2003, and by 2012 that figure had fallen to 1 in 40 children. The number of incomplete schools has also fallen. Indonesia's programme to increase the supply focused on creating combined primary and lower secondary "One Roof" schools to expand access to basic education in poor and remote areas. Also, accessibility of school, including WASH facilities, is a key barrier to children and adolescents with **disabilities**.

Entry and Registration Requirements

Specific education policies can be discriminatory against particular groups. **Birth certificate requirements** for enrolment in school were identified as barriers in numerous country studies prepared for the OOSCI (e.g. Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Viet Nam).[47]

Registration of children's births (and deaths) enable children and their families to receive a set of intrinsic human rights and protection measures, including social, health and education services. Children who lack birth certificates are more likely to not be enrolled in education as this can be a significant administrative barrier to the right to enrol in school. In the EAP region (excluding China), an estimated **16 per cent** of children under age 5 have not been registered at birth, but the disadvantage is much more significant for the poorest 20 per cent and children living in rural areas in all countries (see Figure 41). In Lao PDR and Viet Nam, a poor child is 5 times less likely to be registered than a child from a wealthy family. In Myanmar, 32 per cent of **poor children** are not registered compared to only 3 per cent of their wealthier counterparts. In most countries, boys and girls are equally registered, with the exception of Nauru, where boys are slightly less likely to be registered at birth. In the Philippines, the **cost** of obtaining a birth certificate can be prohibitive for poor families (up to $40 in some areas), thereby putting their child at risk of not entering school (Philippines OOSCI study).

Removing civil registration barriers and fees has been achieved in some countries, even for the most disadvantaged and remote populations, for example among rural-urban migrants in Ho Chi Minh City, Viet Nam. Yet some policies continue to be discriminatory against the most vulnerable groups. For example, in countries such as Mongolia and Viet Nam, where birth registration is near universal, children and adolescents from **migrant groups** and **ethnic minorities** have lower birth registration rates than the national average. An official ruling in Malaysia in 2002 requiring birth certificates for school enrolment was the cause for non-enrolment of refugees, undocumented, plantation, and abandoned street children (Malaysia OOSCI study). In Myanmar, many stateless children and adolescents in Rakhine State are unable to attend school (UNESCO, 2017)"source":"Open WorldCat","event-place":"Bangkok","abstract":"In an effort to assist the countries in Southeast Asia to develop more robust policies and programmes for out-of-school children (OOSC.

FIGURE 41. Share of non-registered births in East Asia and Pacific, by country, wealth, sex and geographic location, most recent year available
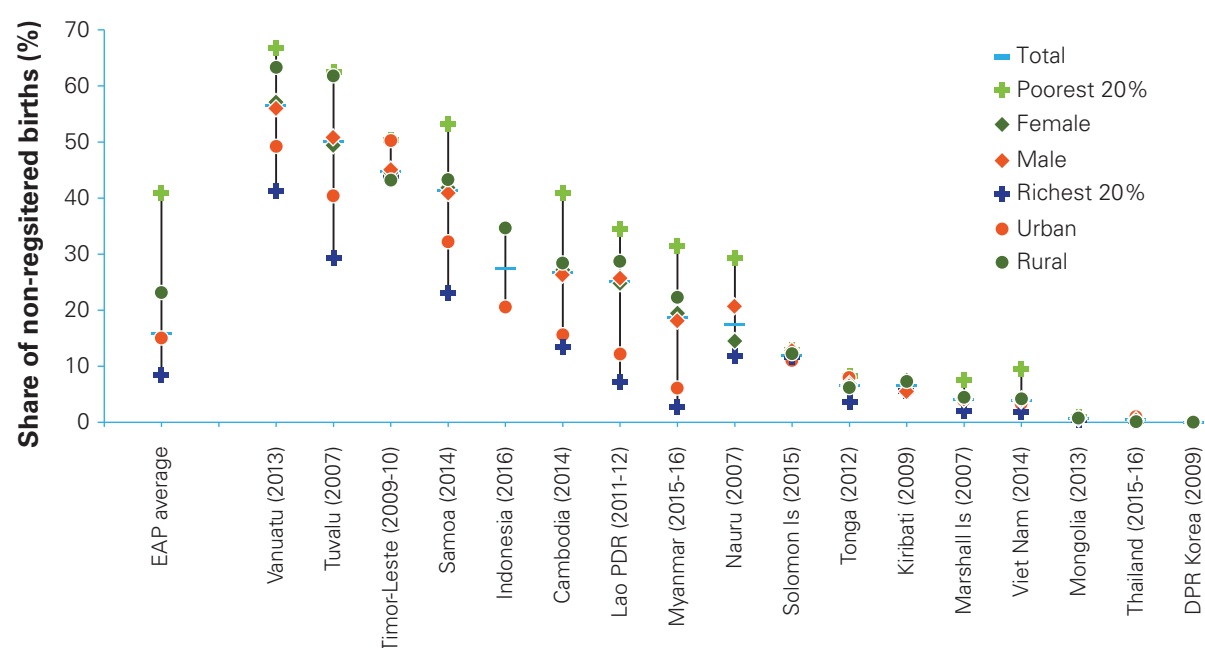
Notes: The share of children under age 5 who are reported to not be registered at birth as determined in household surveys conducted between 2007 and 2016. EAP average is based on available countries (all shown except the Philippines which does not have disaggregated data by group). Data years are indicated in parentheses.

Source: UNICEF, 2017e

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47 There is conflicting evidence whether birth certificates are required in Myanmar (Myanmar OOSCI study).

Other entry requirements can impose restrictions on parents' ability to enrol their children and adolescents in school. In Indonesia, some communities have schools which are over-subscribed for a variety of reasons (i.e. higher quality, better location). School management can allocate the limited places using a variety of mechanisms, such as restricting children below **age** 7 (beginning of compulsory education) even though children have a right to free education as of age 6. In junior secondary, over-subscribed schools can require **test scores** for enrolment. These factors might delay entry or divert children and adolescents to lower quality schools, thereby leading to conditions likely linked to dropping out (Indonesia OOSCI study).

Education policies related to **promotion** and **transition** between education levels can cause inequitable effects with relation to drop-out or children and adolescents at risk of dropping out. In Myanmar, for example, students must sit through **government exams** at the end of primary (Grade 5), lower secondary (Grade 9) and upper secondary matriculation (Grade 11). Increasing out-of-school rates as of age 10 are linked to these examinations (Myanmar OOSCI study). In Lao PDR, entrance into upper secondary education (which is not compulsory) is open to those students who have passed the lower secondary achievement examination (Lao PDR OOSCI study).

The use of **high-stakes examinations** can also have the inverse effect of reducing the value of education for those parents of children who do not pass the examination. This is the case in Indonesia, where the perceived low value of schools is reinforced with the poor learning outcomes observed at the end of the Grade 9 examination. Students from poor households who have mediocre results on the end of primary education exam (Grade 6) are further marginalized because they cannot gain entry into quality lower secondary schools, or have to incur the cost of private schools.

Teachers and Learning Environment

The **supply** and pedagogical **quality** of teachers are identified as barriers to education in several EAP countries. A rapid expansion of new classrooms requires a related build-up of the **qualified workforce**, which might take longer. Indonesia's need for qualified lower secondary teachers stems from the development of the combined primary and lower secondary schools, whereby qualified primary school teachers could not meet National Education Standards. The rapid expansion of pre-primary, primary and lower secondary schools in Timor-Leste has led to a workforce with poor subject knowledge and poor pedagogical skills: only 40 per cent of teachers met the required qualifications. Parents of children and adolescents who dropped out or are at-risk cite poor academic performance and not liking school as main reasons for leaving school. In some countries, such as Viet Nam, there is an over-supply of teachers in some provinces but an under-supply in others, pointing to a need for **more equitable deployment** of teachers to the areas that need them, which usually means to poorer and more remote, rural areas.

Teachers' **attitudes** in the classroom can also create disincentives which create conditions for dropping out of school or lower performance for certain groups. In Malaysia, nearly 70 per cent of the teacher workforce is female in primary and secondary education, which has been attributed to creating a less engaging environment for boys. Female teachers' **gender-biased attitudes and expectations** in learning, behaviour and academic success can influence students' education experiences and were found to be not in favour of boys.

School-related **violence** (sometimes gender-based) – including sexual and emotional violence and corporal punishment – create poor and unsafe learning environments for children and adolescents. Household surveys in Fiji, Kiribati and Vanuatu reported that more than one-quarter of children aged 16 to 17 years old had been physically hurt by a teacher in the month preceding the survey (UNGEI, 2014). Boys are more likely to be the object of teacher aggression as reported in Micronesia and Tonga, where they have higher injury rates from teachers than girls (UNGEI, 2014).

Several OOSCI studies indicated that these **abusive environments** are prevalent, even when protective policies are in place, such as in Cambodia, Viet Nam and Timor-Leste.

- Despite school-based violence prevention policies established in Cambodia in 2008, a recent report finds that as many as 85 per cent of boys and 80 per cent of girls in the first 3 grades of primary school experienced some form of corporal punishment and 82 per cent had experienced emotional violence by their teacher (e.g. insult, humiliation, mockery) (Cambodia OOSCI study).

- A gender-based study conducted in Viet Nam found that 52 per cent of students had experienced some form of violence in the 6 months preceding the survey. Schools have not implemented violence prevention policies and parents are not particularly knowledgeable about the socio-emotional developmental needs of their children (Viet Nam 2016 OOSCI study).

- A Timor-Leste study found that 75 per cent of boys surveyed and 67 per cent of girls reported experiencing physical violence (e.g. being hit, slapped, kicked, pinched or pulled) by a teacher in the past year. Emotional violence appears equally prevalent and children from poor households experience more violence than their wealthier counterparts, and this despite a 2008 ministerial guidance note on a zero-tolerance policy on violence (Yarrow et al., 2015).

The combination of increased political will, the integration of gender equality in education sector plans and violence prevention policies has raised awareness of school-related gender-based violence as a barrier to education. Several countries in the region have shared good practices, which include mainstreaming of gender issues into education policies (e.g. Fiji, Timor-Leste), holistic, community-based or inter-ministerial approaches to addressing societal violence against children (e.g. Indonesia, Timor-Leste) and gender budgeting in the education system (e.g. Lao PDR) (EAP UNGEI, 2014).

Curriculum Relevance and Learning

The **relevance** of the education experience is highly critical in determining whether children and adolescents complete their basic education. Even though increased schooling of children and youth in EAP is linked to improved **job prospects**, many children and adolescents are dropping out and not completing basic education (World Bank, 2018b). For example, in Viet Nam, additional years of schooling among 20 to 24 year old's increases the probability of obtaining higher returns, but 9 per cent of adolescents enrolled in lower secondary education are dropping out (Barro and Lee, 2013; UIS, 2019). The rate of return for an additional year of schooling in EAP varies from 5.1 in Lao PDR to 16.6 per cent in China (World Bank, 2018b, p. 37).

Recent changes in education policies in the region have generally aligned **curricula** to make them relevant to **current and future economic challenges**. The initial focus on increasing primary education with basic numeracy and literacy skills has shifted to **more sophisticated** and longer learning programmes (World Bank, 2018b). Some countries are developing **competency-based** curricula at primary education levels to develop motivation, creativity and other **life skills** relevant to competitive labour markets (e.g. Indonesia). **Child-centered pedagogical methods** to support these curriculum objectives can improve student learning and have been adapted in some EAP countries (e.g. Philippines).

Yet, for **marginalized** children and adolescents, the lack of relevance of the mainstream, highly academic curriculum can lead to **frustration** for those who would likely benefit from a curriculum relevant to local employment opportunities or skills, such as vocational training or more applied coursework. Moreover, **low learning levels** of adolescents (see section 3.3) and difficulties in making the **transition** to lower secondary teaching and learning methods create additional hurdles to complete that education level. These multiple factors are compounded so that children and adolescents are likely to drop out as observed, for example, in several national OOSCI studies (Indonesia, Malaysia, Viet Nam OOSCI studies).

The absence of **gender-responsive pedagogies** can lead to greater rates of exclusion, for both boys and girls depending on the education level. Cambodia reports that out-of-school children are affected by the presence of gender stereotypes in learning and instructional material and gender-differentiated treatment by teachers in the classroom. Rural, poor girls are more likely to be excluded at the pre-primary and primary levels (Dimensions 1 and 2) and boys at the lower secondary level (Dimension 3) (Cambodia OOSCI study).

Developing the curricula to be aligned with the parents' practices and languages are important factors to consider for the inclusion of marginalized communities. Education participation is often lower for ethnic minorities or disadvantaged groups speaking languages other than the national dominant language or the language of instruction. This form of exclusion is likely to be compounded by the fact that these groups are likely to suffer also from economic deprivation and lack of physical access to schools (UNESCO, 2015b). The high out-of-school rates for indigenous minorities in Cambodia can be attributed to the fact

that the **language of instruction** in most schools is Khmer, which can appear foreign to many children from those isolated communities. Several international studies present evidence on the benefits of teaching children to read in their native home language (Ball, 2011; RTI International, 2011). In Viet Nam, the combination of teachers who could not communicate with their students, and children who had not attended pre-primary school, led to the drop-out of students from ethnic monitory groups as early as the first and second grades of primary education. Indonesia had high repetition rates in pre-primary and primary education, especially at the rural levels, as the result of language barriers created by the medium of instruction being a national level language.

Mother tongue and multilingual instruction from the first grades of pre-primary and primary school are key learning elements to transition from the home to the school environment. Evidence suggests that flexibility in hiring teachers locally for remote, underserved and otherwise difficult areas will help improve learning (UNESCO, 2014). Innovative approaches to increasing the retention of indigenous populations use the native home language as a bridge to learning the official school language (Bühmann and Trudell, 2008). Since the 2000s, several EAP countries (e.g. Cambodia, Papua New Guinea, Timor-Leste) have increased resources to introduce multilingual education by developing relevant teaching training, recruitment of teachers from ethnic or indigenous communities and learning material development. In 2002, Cambodia approved indigenous languages as mediums of instruction in pre-primary and primary schools. Coverage might remain low, but the political commitment to improve indigenous children's access to school through multilingual education is included in the Ministry's planning processes. The Multilingual National Education Action Plan (MENAP) in Cambodia was launched in 2016 to reach more than 4000 children across 4 targeted provinces as a pilot approach before full implementation nationwide. Nonetheless the coverage remains too low to reach all indigenous children. With both Tetum and Portuguese as the official languages of instruction, Timor-Leste worked with non-governmental organizations to provide new resources in Tetum and technical expertise to improve access to learning materials in the local Tetum language (Analysis of the Education Sector in Timor-Leste).

Education Finance

Although government expenditure is not the only factor determining quality and access, it has been proposed that governments should spend around **4–6 per cent of GDP** on education, and that **15–20 per cent of government budgets** should be earmarked for education, with a focus on basic education (UNESCO, 2015). Of the countries in East Asia and Pacific for which data is available, only Indonesia, Viet Nam, Thailand and Malaysia allocate 15–20 per cent of government expenditure to education, and many countries spend less than 4 per cent of GDP on education (see Figure 7; Figure 8). Education budgets are also not strongly focused on **basic education** in several countries.

The degree of **financial decentralization** can vary within a country and have significant implications on the equity behind school financing mechanisms, such as the imposition of household fees (see section 4.1). In Indonesia, **fees** can be levied on parents to complement the earnings of pre-primary teachers, who can earn as little as one-third of the minimum primary school teacher compensation (Denboba et al., 2015). The risk is that **teaching quality** might fall if teacher's salaries are dependent on the fees charged in private classes (i.e. rather than general fees across schools) and that **poor students** will be the most penalized. Cambodia's example shows the unintended impact of policy changes and the need for rapid and effective policy solutions. Right after basic education was declared free in 2003, the household costs of public primary schooling increased by 577 per cent between 2004 and 2012. In response, the government shifted in 2013 to promote an **equity-based formula** favouring small and disadvantaged schools to offset the increasing households' costs. An implementation study shows that further refinement is necessary to reach the most vulnerable schools.

A large share of public expenditures for education is attributed to **teacher salaries**. In Cambodia, teacher salaries have increased substantially since 2013 and are projected to increase again in 2018, with the expectation that such investments – as well as improved management and supervision of teachers – will offset the financial pressure of paying for private classes faced by poor parents. Other **pro-poor policies** include the **removal of financial barriers** for poor parents, which can have direct impact on school enrolment. The removal of yearly registration fees in Cambodia led to a surge in enrolment. Other countries have provided school lunches, learning materials and other necessary material for attending school.

The **cost of repetition** and poor internal efficiency in schools can be a burden on school budgets, and can be the causes of children dropping out. The Ministry of Education in Timor-Leste enacted a policy to eliminate the high rates of repetition in Grade 1 of primary education, by issuing a directive asking schools to enrol children in Grade 1 at the correct official entry age, which is 6 years old. This is meant to discourage enrolment of under-age children who are at high risk of repeating the grade. However, a key reason for high repetition in Grade 1 is the lack of preschool experience of children, with only 22 per cent preschool enrolment.

One of the most effective ways to target poor populations is to channel funds to where they are most needed through an **equitable block grant** process funded at the national level and disbursed through a **decentralized financing mechanism**. As noted above, these exist in several countries in the region and have often been brought in to accompany fee abolition (Lugaz and Grauwe, 2016). Indonesia's School Operational Assistance (SOA) is a block grant from 2009 which aimed to achieve basic compulsory education by providing direct support to primary and lower secondary schools.[48] It has effectively replaced district governments and household contributions as the principal source of funding for non-personnel related expenses. The SOA has its limitations though, by not being able to bring back out-of-school children to primary and lower secondary schools (Indonesia OOSCI study).

There is also an emerging **innovative financing mechanism** in the EAP region. An example is the newly established Equitable Education Fund of Thailand, which aims at addressing inequities in education. As a semi-independent body, the Fund aims to build synergies with the current education system and strategically invest its resources to leverage the current substantial budgets by Government systems thereby unlocking their potential to achieving better education outcomes for all children in Thailand.

BOX 8. Barriers to education in the Pacific Islands

The Pacific Island countries are diverse, but among them are countries with some of the highest levels of out-of-school children in the region. The Solomon Islands, in particular, has the largest population of the Pacific Island countries and has nearly 30 per cent of primary-age children out-of-school. Nauru, Micronesia, F. S., Palau, the Marshall Islands, and Vanuatu also have more than 10 per cent of primary-age children out-of-school. The modest rates of out-of-school children at lower secondary age hide the fact that many of these children are over-age, still in primary school, and unlikely ever to start secondary school. In the Solomon Islands and Vanuatu, around 10 per cent of primary-school pupils are repeating a grade. The share of children of lower secondary age who are actually in lower secondary education (net enrolment rate: NER) is only 24 per cent in the Solomon Islands, 35 per cent in Palau, 45 per cent in Vanuatu, 52 per cent in Micronesia, F.S. and 61 per cent in the Marshall Islands. Many children start over-age or repeat grades in primary school.

The Pacific Island countries share some common characteristics: small size, limited resources, geographic dispersion, and vulnerability to natural and environment disasters (UNESCO, 2015 [SIDS Overview]). In the Solomon Islands, distance to school is a particular barrier, with some children reportedly walking or paddling up to 2 hours to get to school, and parents postponing school enrolment until children are old enough to travel this distance (UNESCO, 2015). Children in outer islands and remote areas, children in families with low incomes and children with disabilities are among the most disadvantaged. Some countries have insufficient secondary places to accommodate all the children leaving primary education, which helps to explain low rates of transition and higher rates of out-of-school children at lower secondary age.

Results from the Pacific Islands Literacy and Numeracy Assessment indicate that many of the countries in the region have problems with education quality, with many children not reaching expected levels in writing and numeracy after 6 years of primary education (see section 3.3).

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48 The block grant is allocated based on student enrolment.

Policy Actions
How Can We Reach and Include All Out-of-School Children and Adolescents?

5. Policy Actions: How Can We Reach and Include All Out-of-School Children and Adolescents?

5.1. Major Findings

Dimension 1: Out-of-school children at pre-primary school age

An estimated **4 million** children (**13 per cent**) of pre-primary school age (1 year before primary) are out of school in the EAP region. The share of out-of-school children ranges from less than 3 per cent in the Cook Islands, Malaysia, Thailand and Tuvalu, to nearly 70 per cent in Samoa. A large share of the region's out-of-school children live in the Philippines, Indonesia and Viet Nam. Many countries experienced sharp declines in the rate of out-of-school children at this level since 2000. Gender gaps are not large in pre-primary education, but in most countries slightly favour girls over **boys**. There are large gaps by wealth of the household in most countries, with children from the **poorest** households much less likely to be in pre-primary school.

Dimension 2: Out-of-school children at primary school age

An estimated **7 million** children (**4 per cent**) of primary school age are out of school in the EAP region.[49] About 30 per cent of them are in Indonesia, but the highest rates of out-of-school children are in Timor-Leste and several Pacific Island countries such as Marshall Islands, Papua New Guinea and Solomon Islands. Most countries have reduced the proportion of out-of-school children since 2000. Most of the children in this dimension will later enter school, although their risk of dropping out may become higher by having entered school late (i.e. over-age). There have been large increases in girls' enrolment in primary education, with most countries either reaching gender parity or going beyond parity to have more girls than **boys** in school. Across the countries, there are typically large gaps by **wealth**, rural or urban **residence**, **disability**, **minority** ethnic or language groups and rural-urban **migration**.

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49 This UIS estimate includes inferred data for China, DPR Korea and Thailand for which data are not available, and so is possibly an under-estimate of the true total.

Dimension 3: Out-of-school adolescents at lower secondary school age

An estimated **8 million** children and adolescents (**8 per cent**) of lower secondary school age are out of school in the EAP region. Most of these children are in Indonesia, Myanmar, the Philippines and Thailand. As is the case for Dimension 2, this estimate would be substantially higher if China were included. At this age, the vast majority of out-of-school children in most countries are those who previously went to school but have **dropped out**. In most countries, there is a gender gap with more girls in school than **boys**. In numerical terms, girls' disadvantage in access to basic education has largely been eradicated in the region, although **girls** may still face numerous barriers in terms of experiences in and around school (e.g. violence, discrimination etc.) and access to further education and work opportunities. Similar inequalities by **wealth**, **residence**, **ethnicity**, **language** and **disability** are observed as for Dimension 2. **Child labour**, which is concentrated in rural areas and among the poorest households, risks affecting adolescents' school attendance and learning outcomes.

Dimension 4: Primary school students who are at risk of dropping out

Drop-out rates from primary education for the region as a whole have declined from 10 per cent in 2000 to **6.3 per cent** in 2016. In Cambodia, the Cook Islands, Myanmar, the Solomon Islands, Timor-Leste and Tuvalu, nearly 1 in 5 children (about 20 per cent) leave school before the last grade of primary education. Exposure to early childhood care and education – considered to be a key predictor of whether children are likely to stay in school and complete primary education – varies widely across the region. For most countries, few children are over-age, but Cambodia, Timor-Leste, Papua New Guinea and the Solomon Islands all have more than 1 in 5 children who are **over-age**.

Dimension 5: Lower secondary school adolescents who are at risk of dropping out

Drop-out rates from lower secondary education range from 2.6 per cent in Samoa to 32 per cent in Cambodia in 2016. As children enter lower secondary education, it becomes increasingly common to be **over-age**. In 8 countries, 20 per cent or more of children at this level are at least 2 years over-age. Larger gender gaps also emerge at this level, where **boys** appear to be lagging behind girls in terms of grade progression.

Based on the data, most countries in the region can be classified into **3 broad typologies**.

Typology 1: Countries with high out-of-school rates

At most education levels, **more than 10 per cent** of children are out of school. The countries in this group are mostly Pacific Islands, Cambodia, Papua New Guinea and Timor-Leste. Most are **lower-middle income** countries. While data is limited on pre-primary, most countries in this group have high out-of-school rates of children at pre-primary level too. Attachment to schooling is also weak, as indicated by **high drop-out** rates in primary and/or lower secondary levels. **Policy priorities** for these countries are likely to include ensuring that a school is accessible, including in remote and poor areas, and addressing poverty-related barriers to education. Policies to increase children's access to early learning programmes/ pre-school can also help reduce out-of-school rates at subsequent education levels.

Typology 2: Countries with weak attachment to primary education

In this group of countries, although enrolment in primary education is relatively high (less than 10 per cent out-of-school rates), attachment to school is low. **High drop-outs** rates before completion of primary education cycle are noteworthy in several countries (Cook Islands, Lao PDR, Myanmar and Tuvalu). Rates of out-of-school children at pre-primary age vary enormously among the countries for which data is available in this group, from less than 4 per cent in the Cook Islands and Tuvalu, compared to 63 per cent in Samoa. **Policy priorities** to retain children at this education level require identification of country-specific barriers to primary school completion – including the most marginalized groups – with a focus on the quality of teaching and learning

policies in the early grades. This also requires careful analysis of overlapping factors of disadvantage, such as girls from the poorest households in remote rural areas, child labour and the most disadvantaged geographical regions, etc. Data-driven early warning system could identify risks and prevent premature dropout.

Typology 3: Countries with weak transitions and/or attachment to lower secondary education

More than **10 per cent** of children remain **out of school** or **drop out** at **lower secondary** age and do not finish the compulsory education cycles in these countries. The countries in this group are nearly all **lower-middle income** countries but are quite diverse. In some countries, such as Indonesia, Malaysia and Tonga, significant number of children are not continuing and/or completing lower secondary education after high levels of primary school participation. Some countries could be included in both Typologies 2 and 3 – such as Myanmar and Lao PDR – which face both weak attachment to primary education and weak transitions to lower secondary schools. Indonesia – which accounts for the majority of primary age out-of-school children in the region as a whole – narrowly avoid falling into Typology 2 with 7.3 per cent out-of-school at primary age (although survey-based estimates are lower). **Policy priorities** need to focus on the transition to lower secondary education, including alternative forms of educational provision for those who are unable to stay in the formal system, and related issues such as preventing irregular school attendance, repetition and drop-out.

Across these 'typologies', all countries must prioritize strategies to ensure the **most marginalized** groups of children and adolescents are enrolled. Once in school, policies will need to provide these children with an **inclusive and supportive learning environment** to ensure that all children have the opportunity to complete basic education with solid learning outcomes.

Major **characteristics** of out-of-school children and adolescents in the EAP region are as follows, but the most vulnerable populations are usually characterized by several combined factors of disadvantage – such as gender, ethnicity and geographic location – which are not easily disentangled (e.g. ethnic minority girls from poorest household in remote rural area).

- Children and adolescents from poor households
- Children and adolescents living in rural areas
- Children and adolescents living in remote areas or small islands
- Children and adolescents living in poor urban areas
- Young and adolescent girls
- Young and adolescent boys
- Children and adolescents from ethnic or linguistic minorities
- Children and adolescents who work
- Children and adolescents who migrate or whose parents migrated
- Children and adolescents with disabilities

A wide range of **demand-** and **supply-related barriers** keep children out-of-school in the countries of the region, but major barriers include the following:

Demand-side Barriers	Supply-side Barriers
School-related fees and costs	Beginning of compulsory schooling
Child work	Physical access
Migration	Entry and registration requirements
Climate change	Teachers and learning environment
Ethnicities, languages and social norms	Curriculum relevance and learning
Disabilities	Education finance

5.2. 10 Policy Actions

The report presents a set of 10 key policy actions to tackle various barriers that the most disadvantaged and excluded children and adolescents face in their education in the EAP countries.

1) Expand public early childhood education provision and ensure smooth transition to primary education

Public investment in early childhood education should be increased to provide the most disadvantaged children with foundational skills, including cognitive, physical and socio-emotional skills, in preparation for life-long learning. As a result, the current trends of a heavy reliance on household expenditure for private service providers should decline. Early learning promotes school completion and increases the learning outcomes of children and adolescents later in primary and secondary education. Targeted resources and investments are needed to reach the most disadvantaged children, who would benefit the most from quality early learning opportunities, such as those provided in their mother tongue. Ensuring learning at this foundational level and smooth transition into primary education is a key gamechanger for the lives of children and adolescents in the region.

2) Facilitate on-time enrolment, progression and completion, particularly during grade transitions and emergencies

Grade repetition and dropouts are costly and counter-productive for ensuring equitable access and participation, as well as better learning outcomes. To motivate and support all children and adolescents in the EAP region, education systems need effective policies and strategies to facilitate on-time enrolment, promote smooth transition between education levels and to safeguard education during emergencies. To this end, it is essential to have a combination of improved teaching, relevant curriculum and inclusive pedagogies throughout education pathways. Also, effective use of Education Management Information System (EMIS) data with an early warning system can identify at-risk children and prevent dropouts. Ministries of Education should create an enabling environment for risk reduction and increase the resilience of education systems through risk-informed and conflict-sensitive planning, budgeting and programming in the face of emergencies, which include both natural disasters and conflicts.

3) Focus on learning, particularly to acquire the foundational skills and achieve better learning outcomes for all children and adolescents

Good learning environments and outcomes contribute to better participation and completion, not vice versa. Education systems thus need to strengthen the quality of teaching and learning so that all students meaningfully progress in the school system and acquire basic literacy and numeracy skills by the end of compulsory/basic education. Children and adolescents can then build on these foundational skills and obtain more complex knowledge and the transversal skills (also known as 21st Century skills). It is critical to establish strong national assessment systems to regularly monitor learning outcomes at various stages of education. Investing in such systems is cost-efficient, as data analytics can provide insights into critical policy questions around learning gaps and inefficiencies. Also, teachers should be trained and supported to carry out classroom-based formative assessments to improve teaching and learning, and by so doing, prevent grade repetition and dropouts. Key to this is pedagogic leadership and support by principals and supervisors to create effective and inclusive learning environments within schools.

4) Develop a truly inclusive education system with flexible strategies and pathways

The education system needs to become more inclusive by addressing the multiple challenges and barriers, such as those identified in this report. With strategic vision, political commitment and realistic planning and budgeting, various inclusive education strategies should be implemented. They are, for example, mother tongue-based and multilingual early literacy programmes, gender-sensitive teaching and learning materials, scholarships for the poorest children, and universal design and assistive technologies for children with disabilities etc. Also, the education systems should become adaptive and flexible, and embrace innovative ideas in the delivery of non-formal programmes, such as accelerated learning, flexible models, and catch-up programmes, with pathways to certification and accreditation. Such a national equivalency framework can facilitate children's and adolescents' movement across formal and nonformal education systems while promoting equity in education opportunities.

5) Promote decentralized accountability and provide comprehensive school support for local actions/ solutions

Effective school-based management is key to delivering improved education services in each locality, with decision-making authority, resources, associated responsibilities and accountability at the forefront. Well-managed decentralization can increase school autonomy, empower school communities and stakeholders, encourage their responsiveness to local needs, and ultimately improve educational participation and learning outcomes. Disadvantaged schools should be prioritized in the provision of resources and support by local and national authorities as they tend to lack internal capacity and resources to tackle various challenges. To have real impact, various forms of support (e.g. infrastructure, materials, teachers, funding etc.) need to be provided at the same time rather than in a fragmented and uncoordinated manner. These schools should also be assisted by regular, well-intended supervision and quality assurance (rather than fault-finding inspection) to support self-evaluation and improvement, enhanced school leadership and meaningful community participation.

6) Attract, develop and retain teachers and school leaders with the right set of skills, and deploy them in an equitable manner

The capacity of the education workforce in schools is the foundation to delivering successful policies which respond to children and adolescents' learning needs in an equitable manner. In other words, teachers and school leaders, who are well trained, qualified and motivated, are key drivers to transform low performing disadvantaged schools into well-functioning effective schools that promote equity and quality. Policies need to ensure the provision of pre-service training and in-service continuous professional development opportunities (including during the induction periods). To attract and retain a high-quality education workforce in these disadvantaged schools, the education systems should develop and provide supportive working conditions, including adequate financial and career incentives, as well as mentoring/coaching support. Deployment and management of each education workforce needs to be driven by data and needs, rather than ad-hoc decisions, favouritism and urban-bias.

7) Collect, analyze and use data effectively for equity

Data is at the heart of efforts to tackle inequities in education. Therefore, the national statistics system – and EMIS in particular – needs to be strengthened to produce timely, relevant and reliable data with variables related to vulnerable populations (e.g. ethnicity, disabilities, language). In the SDG 4 era,

education monitoring activities must integrate different data sources (e.g. administrative, household surveys, learning assessments, financial data), so close links should be established with various data producers/owners within and beyond Ministries of Education (e.g. civil registry, health, social protection, labour etc.). As this report has demonstrated, profiles of out-of-school children and adolescents can and should be regularly monitored and updated in each EAP country so that relevant and innovative policies are developed and implemented further to reach and support those who are at risk of being left behind. Annex 5 further suggests specific recommendations for enhanced data production, analysis and use for equity in education.

8) Prioritize education in government budgets, and invest smartly and efficiently

Government budgets in the EAP region need to prioritize education to meet the internationally suggested benchmark of education expenditure towards 15 to 20 per cent of total government expenditure, and 4 to 6 per cent of GDP, with a large proportion allocated for pre-primary and basic education. Strengthening public finance management systems in education is one of the key game-changers to bring better results for children, particularly the most disadvantaged, through equitable resource allocation and targeted investment in priority areas/population groups etc. (e.g. school grants, capitation grants, scholarships, teachers and other support systems). With equity-focused financial monitoring, data analytics can facilitate better understanding of financial effectiveness and efficiencies, or wastages, as they relate to enrolment, progression and retention.

9) Enhance partnership and coordination among stakeholders who serve marginalized groups

In most countries, marginalized groups need a greater voice and participation in the development and implementation of policies at a national and local level. Tackling the complex and enormous challenges around out-of-school children and adolescents necessarily requires that various stakeholders join forces and bring their strengths and resources together. At the national level, effective advocacy and communication is fundamental to encourage more partners and service providers – including civil society, religious leaders, business/companies, youth groups etc. – to come together to support education for the excluded populations. Stronger coordination among education providers is needed to advocate against unregulated, low-quality private schools which target the vulnerable children of immigrants or rural-urban migrants, children with disabilities or children who need to work.
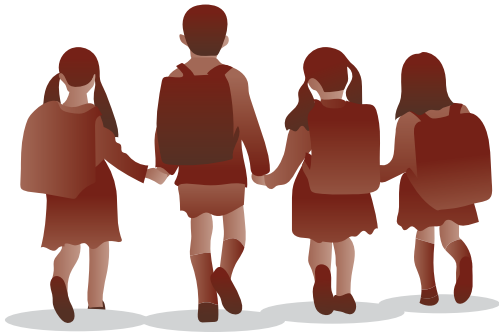
10) Promote cross-sectoral approaches and interventions to tackle barriers related to poverty and violence in and around schools

The diverse needs and challenges of the out-of-school population require a holistic approach to policies and programming, including the integration of health, nutrition, water, sanitation, child protection, social protection and gender-responsive interventions, as needed. For example, challenges of poverty require cross-sectoral solutions to reduce families' reliance on child labour and incentivize their support to their children's schooling and learning. Appropriately targeted social protection mechanisms, such as cash transfers or stipend programmes based on good attendance and performance, can have positive effects on reducing the impact of family poverty on school retention and learning. Also, barriers related to violence in and around school, including gender-based violence and attacks on schools in conflict-affected situations, require urgent policy interventions to ensure children's well-being, and effective and safe learning in the EAP region.

Way Forward
What Should We Do Now, Together?

6. Way Forward: What Should We Do Now, Together?

The issues around equity in education in general, and out-of-school children and adolescents in particular, are both complex and daunting. At a national level, they require strong commitment and leadership to realize the promise of SDG 4 and the CRC, with governments and key stakeholders – the 'duty bearers'. Identifying and supporting all out-of-school children and adolescents to survive and thrive, is also a strategic approach to accelerate social and economic development across low to middle income countries, and also ensure social cohesion in upper income countries. As highlighted in this report, it is essential to have a consistent, budgeted and long-term strategy led by government. Such strategy should be based on evidence, while also remaining flexible enough to adapt to the various needs of children and adolescents.

Responding to these challenges and needs also requires collective commitment and extra efforts by key partners and stakeholders. Indeed, there are opportunities in the EAP region where a number of regional mechanisms, platforms and initiatives exist. These can be strategically mobilized to further facilitate cross-national fertilization and intra- and inter-regional exchange and collaboration.
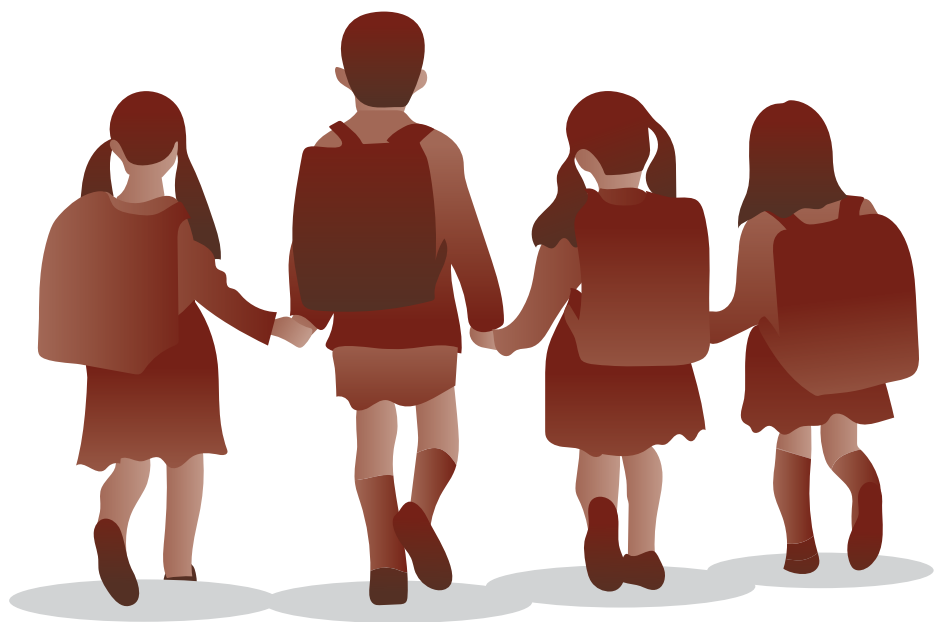
- In the context of the **Asia Pacific Regional Roadmap for the SDG 4-Education 2030 Agenda**, developed by the **Regional Thematic Working Group on Education 2030**, the **SDG 4 National Coordinators** from each government and key regional stakeholders, including the Southeast Asia Ministers of Education Organization (SEAMEO) and Asia South Pacific Association for Basic and Adult (APSBAE), could join force with UNICEF, UNESCO and other partners to address the barriers that many marginalized children and adolescents face in the EAP region.

- Financial and technical support needs to be mobilized to the implementation of the Association of Southeast Asian Nations (**ASEAN**) **Declaration on Strengthening Education for Out-of-School Children and Youth**[50]. The forthcoming **SDG 4 Progress Review** and the Asia Pacific Regional Education Conference (2020) could further highlight this and mobilize the political will and momentum around the issues of out-of-school children and adolescents in the region.

- A range of issues and recommendations could be followed up by various regional initiatives, such as the joint regional initiative by UNICEF EAPRO, UIS and UNESCO Bangkok on **'Enhancing Statistical Capacity for Education 2030-SDG 4'**. Data and statistics are key drivers to monitor and support out-of-school children and adolescents, and can contribute to the strengthening of capacity and systems.

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50 The Declaration was adopted in September 2016 and accessible at: https://asean.org/storage/2016/09/ASEAN-Declaration-on-OOSCY_ADOPTED.pdf

- The national OOSC studies point to the need for **further research**. There is a strong call for more **evaluations of targeted policies** to reduce out-of-school children and adolescents at national and local levels so that policy changes and investment can be linked to more structured monitoring and evaluation tools and outcomes. Similarly, regarding the complexity of **multiple factors of disadvantage**, rigorously designed research should be able to provide a better understanding of which policy targets might be more effective to reach the most marginalized.

- Finally, the challenge in increasing access and retention for the out-of-school population lies **beyond the education sector**. Developing more adequate and effective social and labour market policies can engage various actors to provide marginalized students with greater learning opportunities. Furthermore, enabling links between the education sector and the labour market can provide additional reinforcement to developing life-long learning needs for economic growth and sustainable development.

Alignment among these and key efforts led by other partners such as the Global Partnership for Education, World Bank, Asian Development Bank, the Pacific Community, bilateral donors, among many others, will be key to accelerate results and achieve SDG 4 commitments for all children and adolescents out of school in the EAP region.

UNICEF stands ready to further promote such collective efforts and contribute to the realization of the right of every child to quality education and learning.

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Annexes

Annex 1. National OOSCI Studies

Country	Report reference
Cambodia	Royal Government of Cambodia, Ministry of Education, Youth and Sport, UNICEF and UIS. Global Initiative on Out-of-School Children: Cambodia Country study, February 2017
Indonesia	Government of Indonesia, UNICEF and UIS. All Children in School by 2015: Global Initiative on Out-of-School Children. Indonesia Country Study, April 2015
Lao PDR	Government of Laos, Ministry of Education and Sports, UNICEF and UIS. All Children Learning in School by 2030: Global Initiative on Out-of-School Children. Laos Country Study, October 2017
Malaysia	• Out-of-school children in Malaysia: barriers and policies, Draft, Aug 2018 • Sabah OOSC Side Study (SOS), Draft, Aug 2018
Myanmar	Myanmar Out of School Children (OOSC) Initiative, Draft, May 2018
Papua New Guinea	Department of Education, Out of School Children Initiative (OOSCI) Country Report 2017, Draft, June 2018
Philippines	Philippines Department of Education, UNICEF and UIS. All children in school by 2015: Global Initiative on Out-of-School Children, 2015
Thailand	Draft documents on OOSCI profiles in Thailand
Timor-Leste	Democratic Republic of Timor-Leste, Ministry of Education, UNICEF and UIS. All Children Learning in School: Global Initiative on Out-of-School Children. Timor-Leste Country Study, December 2016
Viet Nam	• Ministry of Education and Training, UNICEF and UIS. Out-of-School Children in Viet Nam Country Study, December 2013 • Ministry of Education and Training, UNICEF and UIS. Report on Out-of-school Children: Viet Nam Country Study 2016, June 2017

Notes: Most draft reports were provided to the author in March 2018. Additional report drafts for Lao PDR, Malaysia, Myanmar, Papua New Guinea and Viet Nam were provided in March 2019 for the revisions of this document.

Annex 2. Population Change Between 2000 and 2017, Per Age Group and Country

	2000				2017			
	Total	0-14	15-64	65+	Total	0-14	15-64	65+
Brunei Darussalam	333,241	102,126	223,122	7,993	428,697	98,705	310,312	19,680
Cambodia	12,152,354	5,054,260	6,723,797	374,297	16,005,373	5,006,240	10,292,927	706,206
China	1,262,645,000	310,977,322	864,439,270	87,228,408	1,386,395,000	245,069,902	993,792,919	147,532,179
DPR Korea	22,929,075	5,947,414	15,630,051	1,351,610	25,490,965	5,255,504	17,816,137	2,419,324
Fiji	811,223	284,141	499,217	27,865	905,502	257,797	591,343	56,362
Indonesia	211,540,429	64,913,768	136,664,788	9,961,873	263,991,379	72,218,395	177,730,022	14,042,962
Kiribati	84,406	33,733	47,871	2,802	116,398	40,729	71,135	4,534
Lao PDR	5,329,304	2,311,444	2,827,394	190,466	6,858,160	2,255,296	4,326,530	276,334
Malaysia	23,185,608	7,737,110	14,542,000	906,498	31,624,264	7,689,014	21,945,261	1,989,989
Marshall Is	52,159	..	..	..	53,127	..	..	..
Micronesia, F. S.	107,432	43,314	60,120	3,998	105,544	34,953	65,514	5,077
Mongolia	2,397,436	833,633	1,475,318	88,485	3,075,647	912,471	2,039,199	123,977
Myanmar	46,095,462	14,815,960	29,057,381	2,222,121	53,370,609	14,319,926	35,991,678	3,059,005
Nauru	10,037	..	..	..	13,649	..	..	..
Palau	19,175	..	..	..	21,729	..	..	..
Papua New Guinea	5,572,222	2,213,557	3,182,667	175,998	8,251,162	2,965,168	4,971,773	314,221
Philippines	77,991,569	30,013,304	45,438,344	2,539,921	104,918,090	33,275,563	66,603,688	5,038,839
Samoa	174,610	71,104	95,694	7,812	196,440	71,869	113,559	11,012
Solomon Is	412,609	173,026	227,931	11,652	611,343	237,460	352,442	21,441
Thailand	62,958,021	15,099,952	43,741,964	4,116,105	69,037,513	11,956,601	49,229,328	7851,584
Timor-Leste	871,607	439,197	412,915	19,495	1,296,311	565,264	684,954	46,093
Tonga	98,082	37,701	54,773	5,608	108,020	38,705	63,028	6,287
Tuvalu	9,420	..	..	..	11,192	..	..	..
Vanuatu	185,063	76,763	102,116	6,184	276,244	99,167	164,939	12,138
Viet Nam	80,285,562	25,416,144	49,712,191	5,157,227	95,540,800	22,032,462	66,677,368	6,830,970
East Asia & Pacific (excluding high income)	1,815,956,211	486,492,847	1,214,935,802	114,398,425	2,068,308,373	424,302,486	1,453,523,744	190,348,534
East Asia & Pacific	2,047,150,745	526,936,969	1,374,877,065	145,119,304	2,314,364,990	458,383,866	1,614,182,154	241,588,489

Notes: Population estimates are not available for Cook Islands, Niue and Tokelau. Total population is from World Development Indicators.
.. indicates data not available by age group.
Source: World Bank, 2019a, 2019b

Annex 3. Official Entrance Ages to Pre-Primary and Compulsory Education

	Official entrance age to pre-primary education (years)	Official entrance age to compulsory education (years)	Official entrance age to primary education (years)	Theoretical duration of pre-primary education (years)	Notes[1]
Cambodia	3	-	6	3	
China	3	6	6	3	Comp/primary: change from 7 in 2004.
Cook Is	3	5	5	2	PPAge from 4 in 1998 and back to 4 in 2016; TDPP from 1 in 1998.
DPR Korea	5	6	7	2	PPAge from 4 in 1998.
Fiji	3	-	6	3	
Indonesia	5	7	7	2	
Kiribati	3	6	6	3	PPAge from 4 in 1998; TDPP from 2 in 1998.
Lao PDR	3	6	6	3	
Malaysia	4	6	6	2	CE in 2002.
Marshall Is	4	5	6	2	
Micronesia, F. S.	3	-	6	3	PPAge from 4 in 1998; TDPP from 2 in 1998.
Mongolia	4	6	6	2	CE down from 8 in 2002; PPAge down from 4 in 1998, up from 3 in 2013; PrAge down from 8 to 7 in 2005 and from 7 to 6 in 2009; duration from 4 5- to 4 to 3 to 2.
Myanmar	3	5	5	2	PPAge from 4 in 1998; TDPP up from 1 in 1998.

	Official entrance age to pre-primary education (years)	Official entrance age to compulsory education (years)	Official entrance age to primary education (years)	Theoretical duration of pre-primary education (years)	Notes[1]
Nauru	3	4	6	3	CE down from 6 in 2011; PPAge down from 5 in 1998; TDPP up from 1 in 1998.
Niue	4	5	5	1	
Palau	3	6	6	3	
PNG	3	-	6	3	PPAge down from 5 (1998) and 6 (2012); PrAge down from 7 (2012); TDPP up from 1 in 2012.
Philippines	5	5	6	1	
Samoa	3	5	5	2	
Solomon Is	3	-	6	3	
Thailand	3	6	6	3	
Timor-Leste	3	6	6	2	PPAge down from 4 (2012).
Tokelau	3	5	5	2	
Tonga	3	4	6	2	PPAge up from 3 to 4 (2012), down to 3 (2016); CE down from 6 in 2014; PrAge up to 6 in 2012.
Tuvalu	3	7	6	3	
Vanuatu	4	-	6	2	
Viet Nam	3	5	6	3	CE down from 6 to 5 in 2015.

Abbreviations for the Notes column are as follows:

CE   Compulsory education
PPAge   Pre-primary entrance age
PrAge   Primary entrance age
TDPP   Theoretical duration

Source: UIS, 2019

Annex 4. Out-of-School Children at Primary Age: Analysis of Household Survey Data

The following charts show inequalities by residence, wealth and sex in out-of-school children rates at primary age, in 7 countries for which disaggregated household survey-based data are available from UIS education data (UIS, 2019).
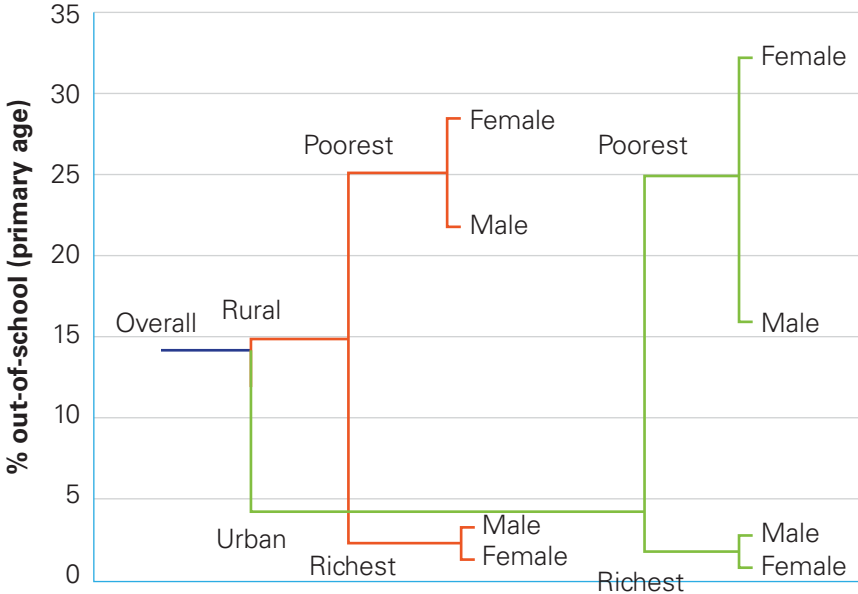
Cambodia, 2014
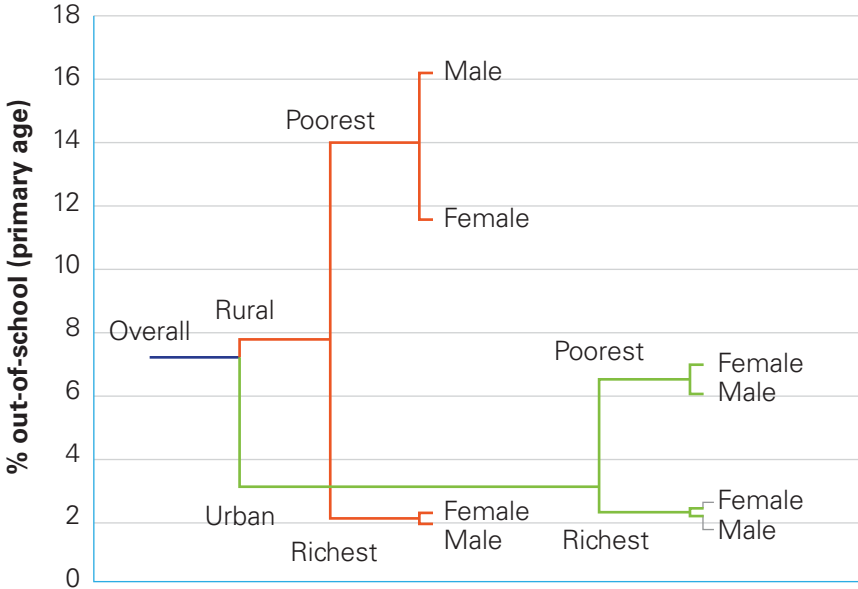
There is a large wealth gap, particularly in rural areas. Poor rural boys are twice as more than likely as the national average to be out-of-school. For other groups, gender gaps are small.

Indonesia, 2009
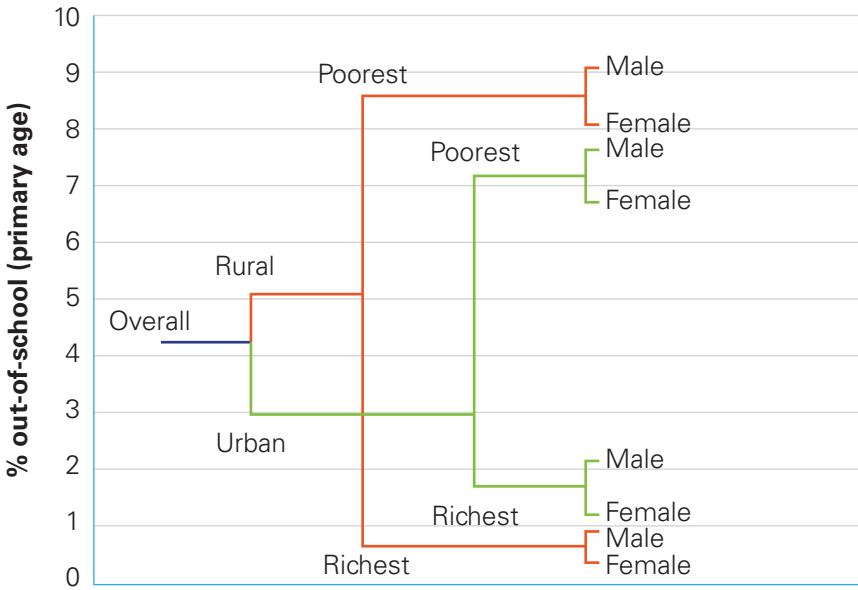
The wealth gap is large, particularly in rural areas. Boys are slightly more likely than girls to be out-of-school in all groups.

Lao PDR, 2012

The rural and urban poor alike are strongly disadvantaged compared to their richer peers. Wealth quintile appears to be more important than location in determining the likelihood of being out of school. Among the poorest, girls are also much more likely to be out of school than boys. As many as 1 in 3 poor urban girls is out of school, compared to under 1 in 6 of the population as a whole.

Myanmar, 2016
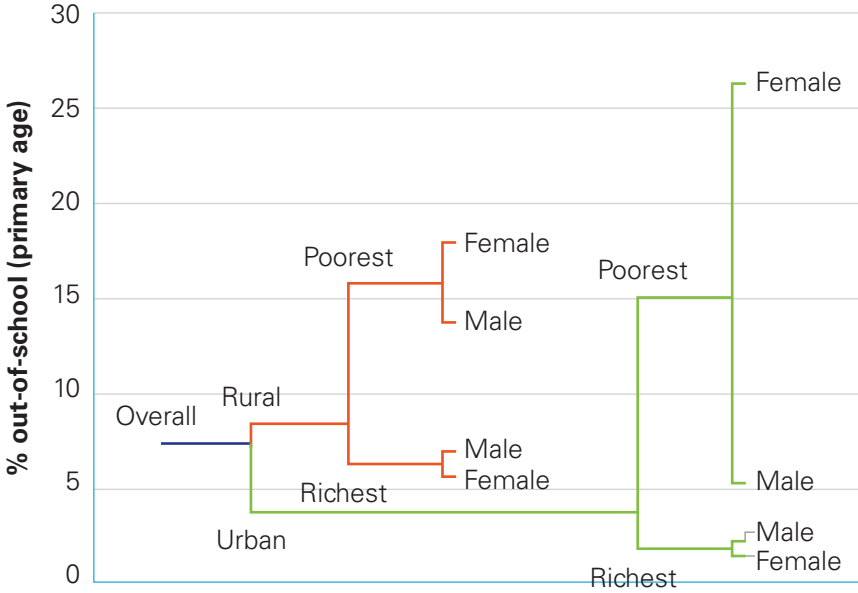
Myanmar has a similar pattern to Lao PDR: among both rural and urban populations, children from the poorest quintile of households are disproportionately likely to be out of school. Among poor urban girls, 27 per cent are out of school, compared to only 7 per cent among the population as a whole and only 4 per cent among the urban population as a whole.

Thailand, 2013
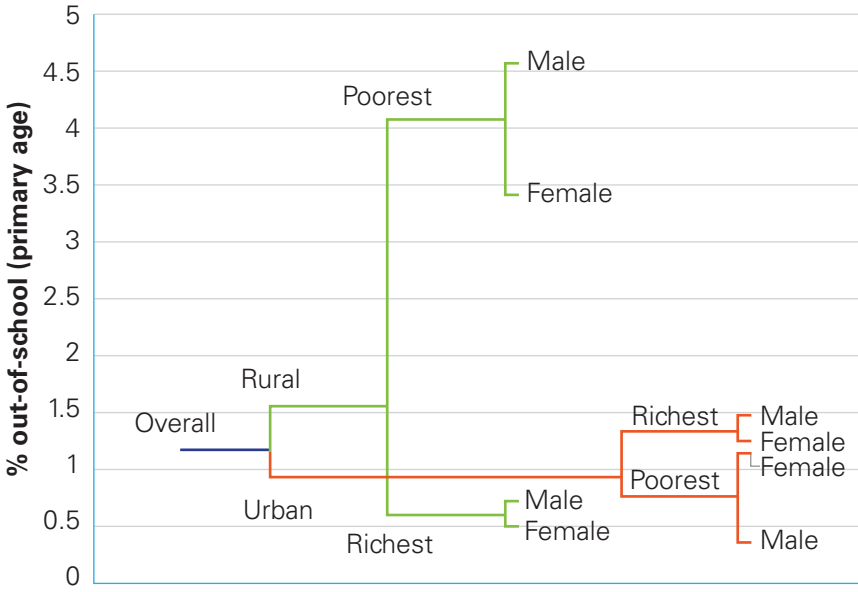
Out-of-school rates are low for all groups in Thailand. Unusually, urban children are more likely to be out of school than rural children, and among the urban poor in particular, 4 per cent of children are out of school, compared to only 1 per cent in the population as a whole. There are gender gaps in favour of girls among the urban poor, but in favour of boys among the rural poor.

Timor-Leste, 2009
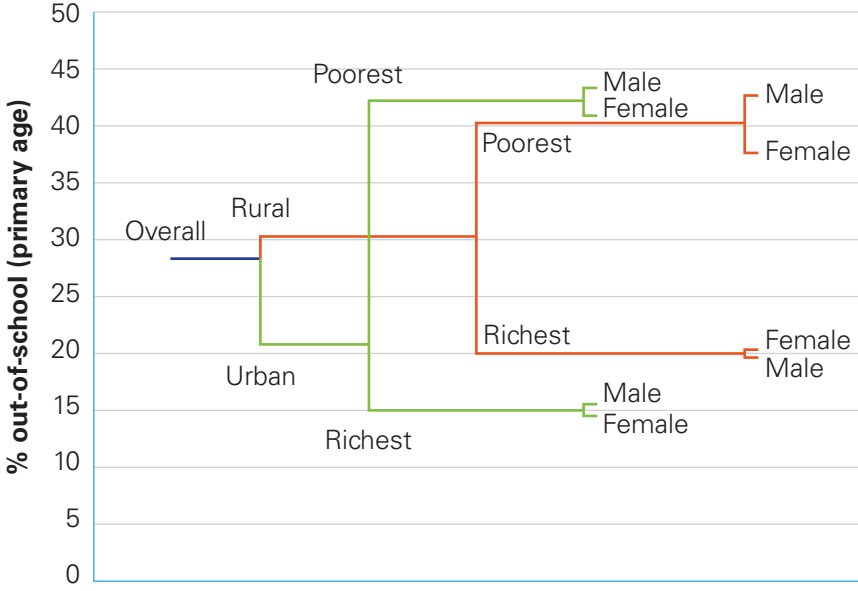
Gender gaps are relatively small, except among the rural poor, for whom more boys are out of school than girls. The wealth gap is very large – over 20 percentage points – and important in both rural and urban areas. The poorest quintile is worse off when living in an urban area than in a rural area.

Viet Nam, 2011
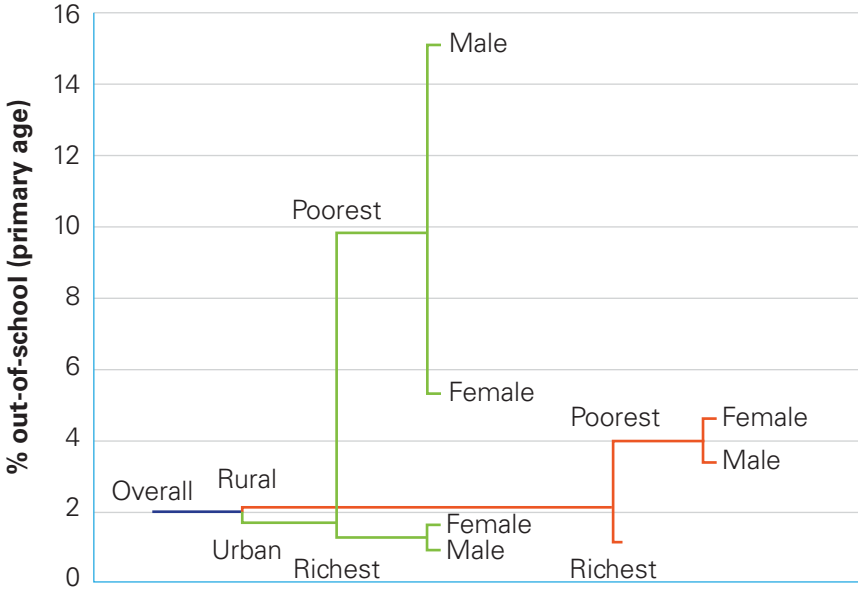
Note: Data is not available by gender for the richest quintile in rural areas.
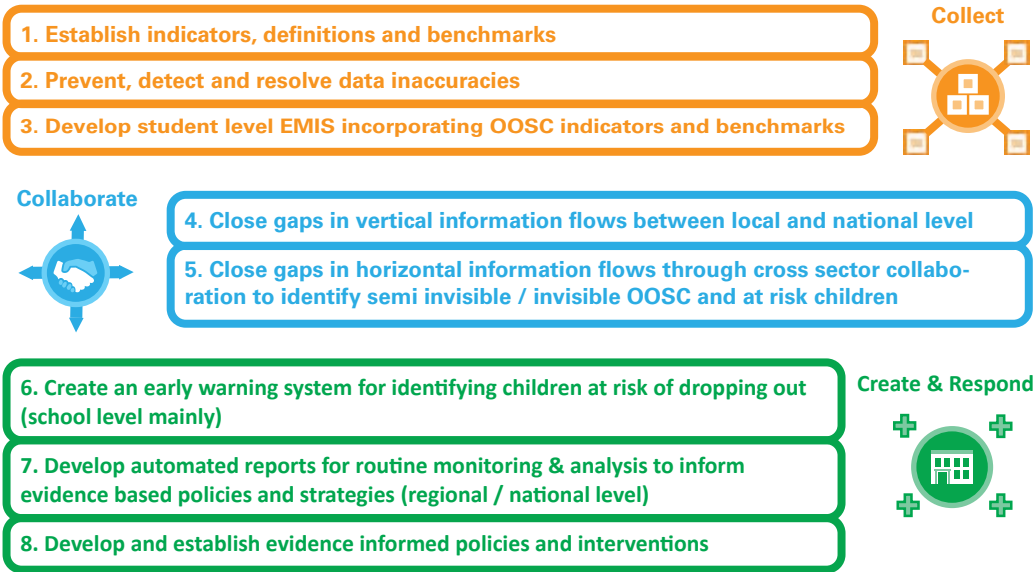
In Viet Nam there again appear to be large wealth gaps in urban areas. 15 per cent of boys, and 6 per cent of girls, from urban households in the poorest quintile are out-of-school.

Annex 5. Data Recommendations

Various thematic sections of the OOSCI studies highlight the **lack of data** as a constraint for understanding the impacts of demand- and supply-side policies with regard to being out of school. The relevant and efficient **disaggregation** of data is required for investigating the equity dimensions of access to education. Each country has its own set of **marginalized** populations, which first need to be identified before being integrated into the design, collection and analysis of national education data. The UIS guidelines provide an overview of how to identify the **equity dimensions** of measuring education indicators as well as a framework within which to operationalize equity in education planning and financing (UIS, 2018b).

Progress for providing more inclusive and equitable educational systems requires significant investment in **strengthening EMIS**. One suggestion includes linking **individual administrative records** with **existing household surveys** which contain rich socioeconomic and demographic data on children and their households (UIS, 2018b). UNICEF EAPRO is currently reviewing various EMIS in the region (i.e. Malaysia, Mongolia and Timor-Leste) with these key equity concerns in mind and the review is expected to provide insights and lessons for the countries in the region and beyond.

A UNICEF-UIS framework was specifically developed to improve the **monitoring** of out-of-school children, with attention to data collection, collaboration and using and reporting data to create evidence-based policy interventions. The **8 steps** include the recommendation to create necessary linkages at horizontal and vertical levels for data around out-of-school children (Step 4) and to reduce gaps due to poor interagency collaboration and data sharing (Step 5) (UNICEF and UIS, 2016).

Collect

1. Establish indicators, definitions and benchmarks
2. Prevent, detect and resolve data inaccuracies
3. Develop student level EMIS incorporating OOSC indicators and benchmarks

Collaborate

4. Close gaps in vertical information flows between local and national level
5. Close gaps in horizontal information flows through cross sector collaboration to identify semi invisible / invisible OOSC and at risk children

Create & Respond

6. Create an early warning system for identifying children at risk of dropping out (school level mainly)
7. Develop automated reports for routine monitoring & analysis to inform evidence based policies and strategies (regional / national level)
8. Develop and establish evidence informed policies and interventions

Source: UNICEF and UIS, 2016 Figure 4, p.14.

The **comparison** between administrative statistics provided by UIS and the household-survey based statistics reported in the national OOSCI studies (see Section 3.5) showed large **differences**, and a lack of a consistent pattern over time or between countries, even when comparing data from the same year. Some differences between household survey and administrative data are expected because surveys measure **attendance**, while administrative data measures **enrolment**, but the differences shown here are arguably too large. It would be useful to conduct a more detailed study of the source of these differences.

One potential source of differences is that household survey data often provides a **child's age** as a whole number, rather than providing their exact date of birth. If the survey takes place, for example, 6 months after the start of the school year, then many of the children who are of primary school age at the time of the survey would have been too young to enrol in primary school at the start of the school year. The data need to be adjusted to take this into account, and different procedures have been proposed to do this (UIS, 2010; Barakat, 2016), however in practice it is common for no adjustment to be made at all. It is important that the best available procedures for improving estimates at the analysis stage are used.

Collecting data relating to **marginalized populations** is inherently difficult. Groups such as children living in the street and undocumented migrants are difficult to include in surveys because of their mobility, their working patterns, and possibly fear of persecution or eviction by authorities. Some promising approaches for collecting better evidence on such groups include:

- **Specialized household or individual surveys**, such as the Viet Nam urban poverty survey, can focus on a limited set of locations, target a specific population group and allocate more time and resources than otherwise possible (Haugton, 2010). By complementing other nationwide household surveys, these one-off or unique surveys can fill data gaps and ensure coverage of marginalized groups, such as unregistered seasonal migrants and other nomadic groups.

- **Citizen-led household assessment exercises**, such as Annual Status of Education Report (ASER) in South Asia and Uwezo in East Africa, can provide rapid feedback on changes in learning outcomes. These exercises are very large scale, covering every district in the country, and so are less reliant on sampling frames than traditional household surveys. Engagement of local volunteers may also help to improve coverage of marginalized groups.

- **Community-led enumerations**: Led by groups advocating for the rights of people living in slums and campaigning against evictions, these involve community volunteers counting and documenting the population living in an informal settlement (Patel et al., 2012)which came out of a need in India in 1975 to find a more long-term solution to evictions, and charts its subsequent evolution and spread throughout other countries. Enumerations can help to build a community, define a collective identity, facilitate development priority setting and provide a basis for engagement between communities and government on planning and development. This process allows communities of the urban poor to assert their rights to the city, to secure tenure, livelihoods and adequate infrastructure. The paper discusses some of the specific methodological issues, including the challenges of legitimizing community data, and the use of technology by slum(1. They have also been used to document the availability of facilities such as water, sanitation and electricity, and could be extended to document education availability.

- **Respondent-driven sampling**: Marginalized groups are often 'hidden populations' – populations for which first, no sampling frame exists, and second, public acknowledgement of being part of the population is potentially threatening. Undocumented migrants and slum-dwellers are potentially examples of such populations. Traditionally methods such as convenience samples, key informant interviews and snowball sampling have been used to research such populations, but suffer from well-known biases. Heckathorn (1997) argues that a chain-referral system called respondent-driven sampling can overcome these biases. In respondent-driven sampling, an initial set of participants are selected from the target population. Those who complete a survey are given coupons used to recruit peers, who in turn receive more recruitment coupons if they complete the survey. Participants receive incentives for participating in the survey and for recruiting peers. The probability of being included in the sample can be modelled mathematically and used to generate survey weights and representative estimates (Johnston et al., 2010).

- **Information systems linked to social protection**, such as beneficiary registries, can be used to track students' progress and school attendance over time. Such approaches may be particularly important for "semi-visible" out-of-school children – children who are not currently visible in EMIS data but could be made visible through improved information flows. It is also important that children who are currently altogether "invisible" in government records are brought in to systems of this kind (UNICEF and UIS, 2015, 2016). System approaches to social protection (Rawlings et al., 2010) aim to identify children's shifting needs over time and respond quickly with coordinated, multi-sectoral interventions. Such approaches require accurate, rapid child-level and family-level information about children's needs, which if built could also feed into national education statistics. However strong institutional arrangements are needed for ministries of education or national statistics offices to be able to take advantage of, or help build, such systems (Barca, 2017).

All these points are being included and closely followed up in a regional initiative jointly led by UNICEF EAPRO, UIS and UNESCO Bangkok on **'Enhancing Statistical Capacity for Education 2030-SDG 4'** which aims at strengthening capacity and systems for effective monitoring of the education agenda with a strong focus on equity and quality, since 2017.

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