Pakistan Human Capital Public Expenditure and Institutional Review (P176014)

Engaging Out of School Children

November 2022

Summary

Pakistan has one of the highest out-of-school children in the world , with an estimated 20.3 million of its 63.3 million school-age children are out of school.[1] In addition, Pakistan's learning poverty rate—the percentage of children unable to read and understand a short age-appropriate text by age 10—at 75 percent before the pandemic and the 2022 floods is more than 16 percentage points higher than the average for South Asia and more than 19 percentage points higher than the average for lower-middle-income countries. The high number of primary and secondary school-age children who are not in school and the low quality of education—about 65 percent of children perform below minimum proficiency in reading—explain Pakistan's high learning poverty rate. So, simply bringing all children to school will not enough to end Pakistan's learning poverty and build its human capital.

Among the top barriers to children's enrollment and progression in school, the most common are high cost, distance to schools, perceived poor quality of education, and shortage of teachers. These barriers are particularly relevant in rural schools and persist across education levels. Therefore, an important first step is to recognize that out-of-school children (OOSC) are not a homogenous group. Policies need to be tailored to the characteristics of distinct groups to maximize impact. The longer children are out of school, the less likely they are to go to school, especially children who have dropped out. Tackling dropouts requires targeted, aggressive, and innovative solutions. Bringing all children into school while also improving learning outcomes and overall education system efficiency is challenging, but it can be done.

Pakistan can create supportive environment for increased retention by training teachers and school administrators to identify children at risk of dropping out and provide in-school remediation for low-achieving primary school children. It can also scale up the existing more effective and efficient approaches and expand them to schools in districts with high dropout rates. And Pakistan can support households in reducing dropouts by expanding the education conditional cash transfer programs, increasing benefit amounts for secondary school children, and providing dedicated and free transport for secondary school girls and female teachers.

Bringing all children to school while ensuring a higher level of learning would cost at least 5.4 percent of GDP, up from the current spending of 2.5 percent. This would require large efficiency gains in access and improvements in quality. Employing business-as-usual to bring out-of-school children into school in each province and improve the quality of education would cost around 4.3 percent of GDP.

Introduction

With nearly one-third of its children out of school and three-quarters of them trapped in learning poverty, Pakistan is experiencing a human development crisis. Although enrollment of Pakistan's children age 5–16 rose from 50 percent in 1990 to 70 percent in the school year 2018/19, learning challenges persist throughout the system, and barriers to enrollment and learning increase as

children grow older. For example, while 85 percent of boys and 79 percent of girls are enrolled at age 9, just 56 percent of boys and 40 percent of girls remain in school by age 16.[2] Each year, therefore, Pakistan's education system loses a huge number of students. In 2018/19, 8 percent of students (15 million) dropped out.[3] Due to school closures and the socioeconomic impact of the COVID-19 pandemic and the 2022 floods on families, an estimated 2million–3.5 million additional children will drop out of school in Pakistan, erasing years of enrollment gains.[4]

Pakistan spends only 2.5 percent of its GDP on education, far less than the international median of 4.4 percent.[5] The government spends roughly 10 percent of its annual budget on education—half the international benchmark recommended by the Education 2030 Framework for Action.[6] Increasing funding and the efficiency of that funding remain key challenges for providing every child a quality education.

Little is known about the costs of bringing out-of-school children to school, and how to do it efficiently. This chapter develops back-of-the-envelope estimates of what it would cost to provide all children with a "life raft": schooling at a minimum quality level to achieve literacy and develops a framework of interventions to better cater to the needs of out of school children. It begins with a set of stylized facts on the out-of-school population and then offers estimates of how much it will cost Pakistan to have all of its children in school under different assumptions, including the added cost of a higher-quality education. Although the debate over out-of-school children usually lumps children with different life stories and characteristics under a single label, a single solution will not bring all children into school. That is why the chapter develops a framework that, along with higher and better targeted funding, responds to the varying needs of different groups of children to sustainably reduce learning poverty and enable Pakistan to realize its human capital potential.

Children out-of-school

The most recent estimate puts the number of out-of-school children at 20.3 million—just over 11 million girls and 9 million boys (table 5.1).[7] This estimate, based on data from the Pakistan Social and Living Standards Measurement Survey (PSLM) 2019–20, is a substantial reduction since the Alif Ailaan estimate of 25 million in 2014.[8] To contextualize these numbers, this section presents seven stylized facts about out-of-school children in Pakistan.

Table 5.1 Distribution of out-of-school children age 5–16 in Pakistan, by gender, 2019/20

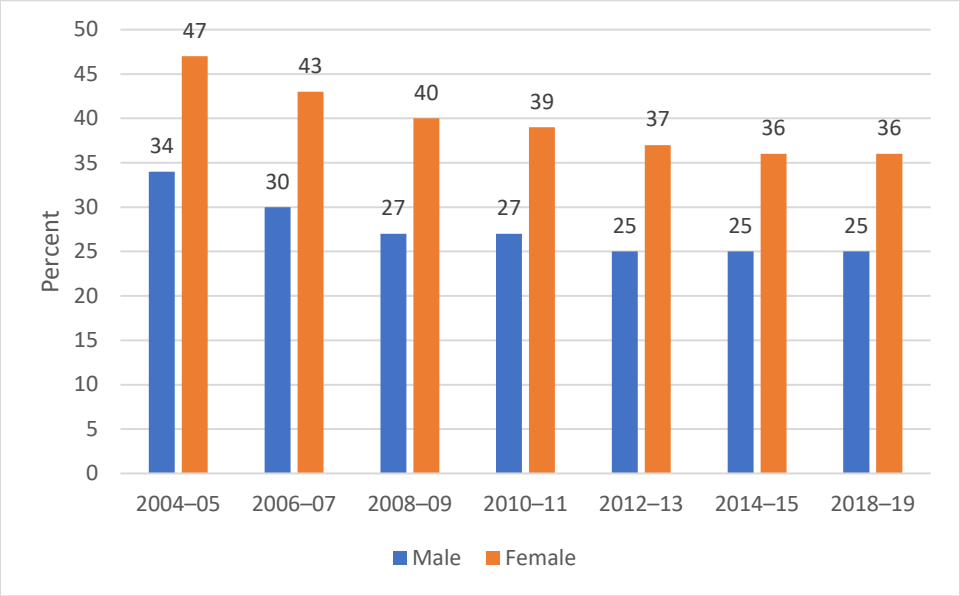
Gender	Population of children age 5–16	In school	Out-of-school children	Percentage out of school
Girls	30,135,715	19,075,908	11,059,807	37
Boys	33,187,662	24,127,430	9,060,232	27
Total	63,324,209	43,060,462	20,263,747	32

Source: World Bank staff calculations using data on age structure from Pakistan Census 2017 and on education participation from Pakistan Social and Living Standards Measurement Survey 2019–20.

A majority of Pakistan's out-of-school children are girls

During the 2019/20 school year, before the onset of the COVID-19 pandemic, 37 percent of girls and 27 percent of boys age 5–16 were not in school. At 10 percentage points, the gender gap in enrollment has narrowed slightly, from 13 percentage points in 2007 (figure 5.1).

Figure 5.1 More girls than boys are out of school



Source: World Bank staff calculations using data from the Pakistan Social and Living Standards Measurement surveys 2004–19.

Girls' school attendance is impeded by supply and demand constraints.[9] Obstructions on the supply side include distance to schools and low quality of schools (low quality teaching and learning materials, lack of water and sanitation facilities and boundary walls, and shortage of female teachers). Demand constraints include poverty, concerns about girls' security to and from school, and social norms and attitudes about girls' education.

The likelihood that a girl will not be in school increases with age.[10] Only 1 woman in 5 in Pakistan has completed her secondary education.[11] The dropout rate for girls rises from 34 percent in primary school to 73 percent in secondary school. In recent years, the cohort survival rate in public schools has fallen for girls but increased for boys. For example, in 1996, 53 percent of boys and 63 percent of girls reached grade 5, whereas in 2016, 60 percent of boys and 53 percent of girls reached grade 5, a drop of 10 percentage points for girls against a gain of 7 percentage points for boys. In 1996, 22 percent of boys and 33 percent of girls reached grade 10, whereas in 2016, 30 percent of boys and 29 percent of girls reached grade 10, a drop of 4 percentage points for girls and a gain of 8 percentage points for boys.

Little analytical work has been done on the impact of social norms on families' schooling decisions for girls in Pakistan. In a qualitative study of men's perceptions of girls' education in Khyber Pakhtunkhwa (KP) province, where girls' enrollment is among the lowest in the country, Pashtun men of diverse backgrounds agreed on several major barriers to girls' education. These included poverty, Pashtunwali (tribal code), religion, accessibility (transport), resources, shortage of female teachers, curriculum, and political apathy and corruption.[12] Among these barriers, social

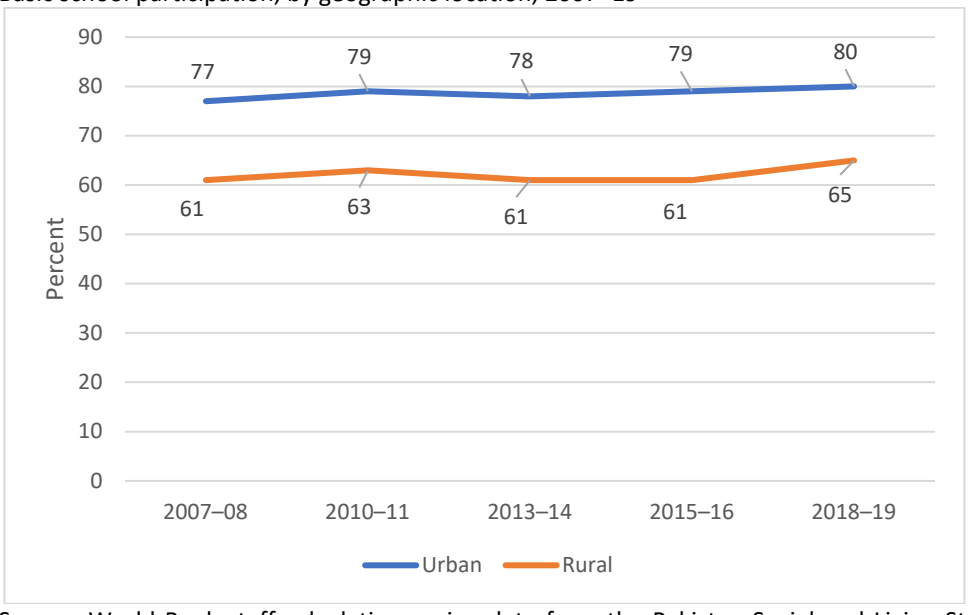
norms favoring boys' education over girls' were most frequently mentioned. These findings are in line with those of the World Bank's recent "Barriers to Girls' Education in Pakistan" and the Human Rights Watch Report, "Shall I Feed my Daughter, or Educate Her?"[13]

Out-of-school children are more likely to live in rural areas

In 2018/19, 35 percent of Pakistan's rural children (15 million) age 5–16 were out of school, compared with 20 percent (4.4 million) of urban children (figure 5.2). This sizable gap in basic education participation rates[14] has remained large over the past two decades, varying only by about 3 percentage points (from 15 to 18 percentage points). Growth in participation rates has been low in both urban and rural areas, up 3 percentage points among urban children (77 percent in 2007/08 to 80 percent in 2018/19) and 4 percentage points among rural children (61 percent in 2007/08 to 65 percent in 2018/19). In rural areas with low school density, increasing school supply can reduce the share of out-of-school children and boost learning. For example, construction of new schools in rural areas increased enrollment rates and learning outcomes for all students, especially for girls, in Afghanistan and increased school attendance in Indonesia.[15] However, the cost of providing access to quality schooling is higher in rural areas, where children are dispersed across wide areas and many are not in school. The main factor limiting access to education for girls, but also for boys, is distance to school, which points to the lack of adequate infrastructure in rural areas.[16] In Pakistan, this is confounded by parental perceptions of insecurity for girls at school and on their way to and from schools.

Figure 5.2 Rural children are more likely to be out of school

Basic school participation, by geographic location, 2007–19



Source: World Bank staff calculations using data from the Pakistan Social and Living Standards Measurement surveys 2007–19.

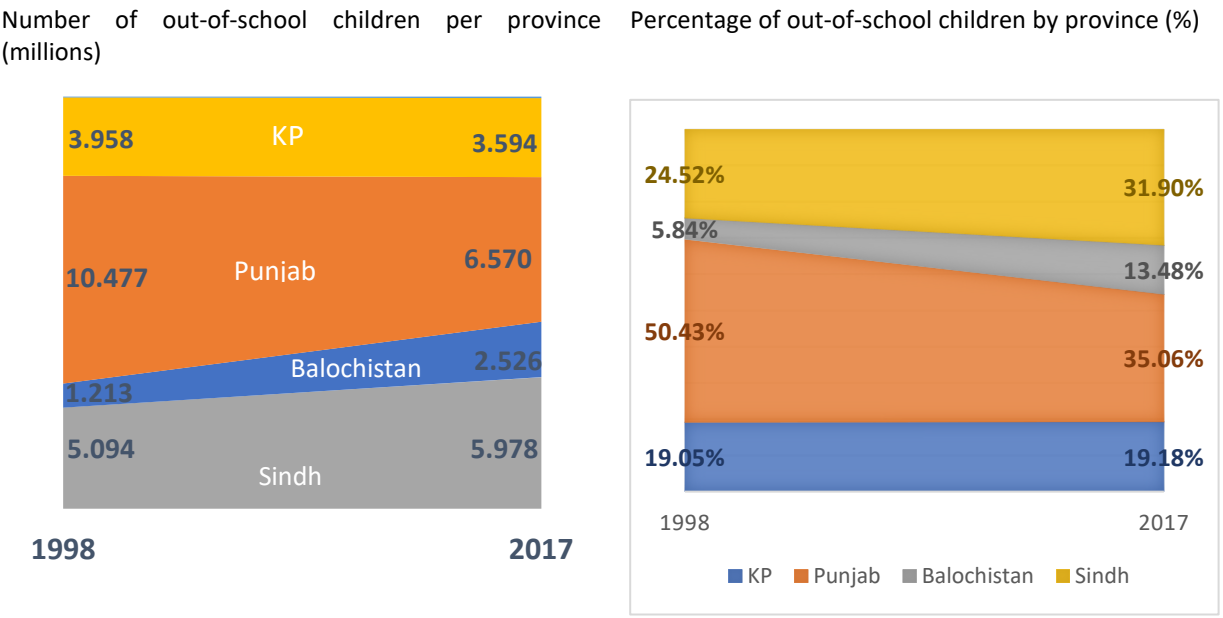
Note: The education participation rate is the number of children attending any type of school (public, private, madrassas, other) expressed as a percentage of the total number of children in the 5–16 age group during a given school year.

Among provinces, Punjab made the greatest strides in reducing out-of-school children over the last two decades

The number and share of out-of-school children differ across provinces and are highest in Punjab, followed by Sindh. More than three-quarters (76 percent) of the country's population live in Punjab (53 percent) and Sindh (23 percent). In 2019/20, these two provinces accounted for almost 14 million of Pakistan's 20.3 million out-of-school children—69 percent. Although Punjab has seen the greatest drop in its share since 1998 (down 15 percentage points), when it had more than half of all out-of-school children, the province still has the largest number (6.6 million) and share (35 percent) (figure 5.3).

While Punjab shows that it is possible to make good progress in a fairly short time, challenges remain there and in the rest of the country. Almost 62 percent of Pakistan's out-of-school children lived in the other three provinces in 2019/20, most of them in Sindh (32 percent, 6.5 million) and KP (18.7 percent, 3.8 million), along with 10 percent (2 million) in Balochistan. Balochistan and Sindh have struggled to increase enrollment in step with population growth. Between 1998 and 2017, the number of out-of-school children doubled in Balochistan, with almost 1.2 million more children out of school, while the number rose by almost 1 million in Sindh.

Figure 5.3 The distribution of out-of-school children by province changed between 1998 and 2017



Source: World Bank staff calculations using data on age structure from Pakistan Census 2017 and on education participation from Pakistan Social and Living Standards Measurement Survey 2017–18.

Balochistan and Sindh have the highest rates of out-of-school children

Higher shares of children are out of school in Balochistan (59 percent) and Sindh (42 percent) than in the other two provinces (table 5.2). Punjab's rate is roughly one-third that of Balochistan and half that of Sindh. If the policy objective is to reduce the total number of out-of-school children, focusing on Sindh and KP is the right approach; if the objective is to reduce prevalence

of out-of-school children per province, the focus should be on Balochistan and Sindh, and to a lesser degree KP. Clarifying the objective matters for funding, planning, and targeting pedagogical approaches. Although this chapter argues that *all* children should be able to attend school, there are important policy questions on how to start, what to focus on, and what should be the long-term strategy. The answers matter for equity, funding, implementation capacity and, especially important, education outcomes for girls and boys.

Table 5.2 Balochistan has the country's highest concentration of out-of-school children, 2018/19

Statistic	Punjab	Khyber Pakhtunkhwa	Sindh	Balochistan
School-age children (5–16) (% of national total)	51	19	23	7
Province rate of out-of-school children (5–16) (%)[a]	21	31	42	59

Source: World Bank staff calculations using data from the Pakistan Social and Living Standards Measurement survey 2018–19.

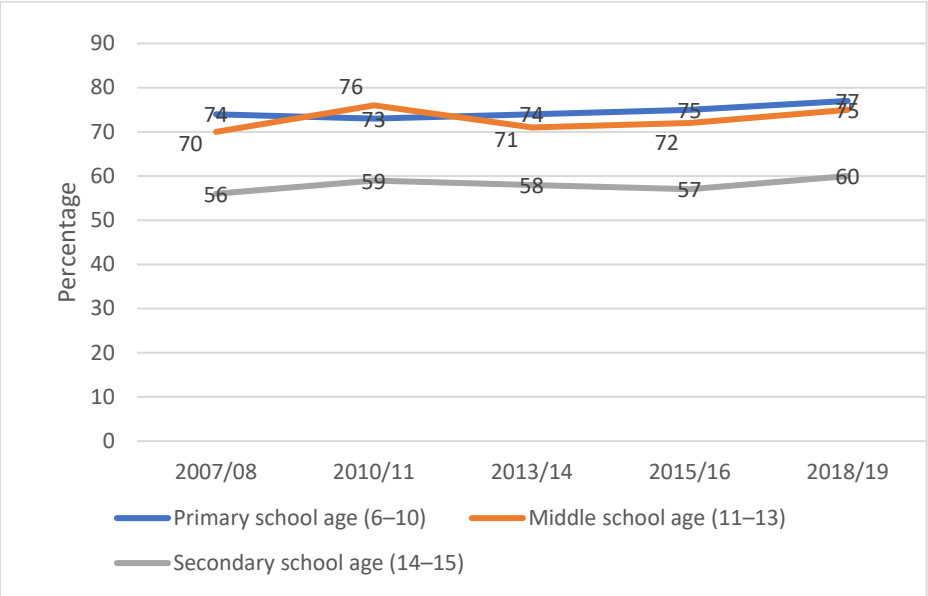
a. The number of school-age children in the province who are not enrolled in school as a percentage of total school-age children.

Out-of-school children tend to be older

More children are out of school at higher school levels. During the 2018/19 school year, more secondary school–age children (age 14–15) were out of school (40 percent) than middle school–age children (age 11–13; 25 percent, 3.6 million) or primary school–age children (age 6–10; 23 percent, 6.7 million). Between 2007 and 2019, participation rates rose slowly for children at each school level. The largest drop-off in the percentage of children enrolled in school occurred between middle and secondary school, fluctuating between 13 and 17 percentage points (figure 5.4). These facts are important for the design of programs that can address the needs and characteristics of out-of-school children to reduce out-of-school rates. It is important to pay particular attention to expanding access in middle schools, where the number of education establishments drops dramatically from primary levels.

Figure 5.4 The older the child, the less likely to be in school

School participation, by school level and age group, 2007–19

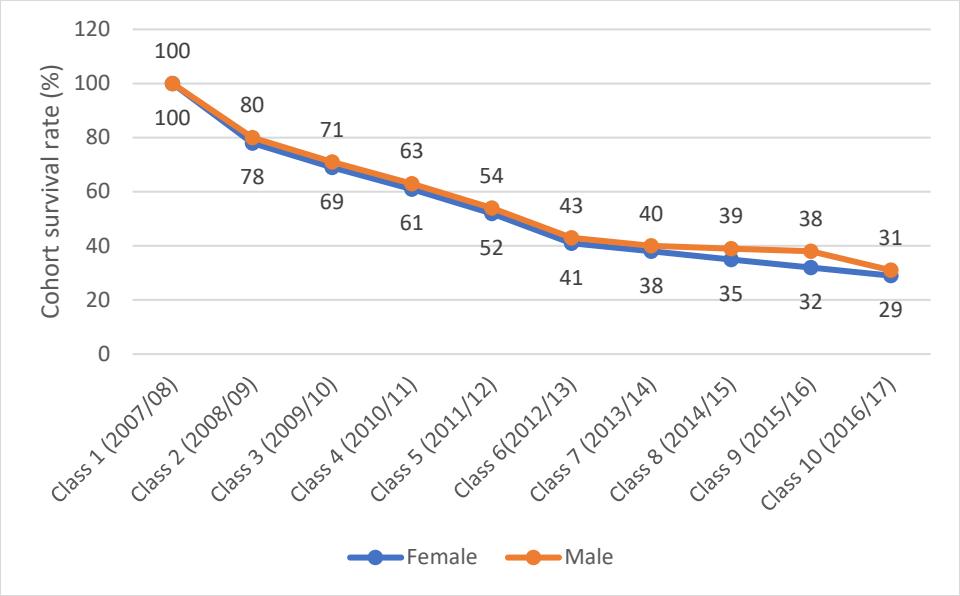


Source: World Bank staff calculations using data from the Pakistan Social and Living Standards Measurement surveys 2007–19.

Also important to the design of programs to reduce out-of-school rates are school completion and repetition rates. Limited public and private resources are not being used efficiently if children enroll but do not complete their studies (dropout) or take longer than expected to complete their studies (repetition). Increasing completion rates and decreasing repetition rates and improving pedagogy must be part of any effort to reduce the number of out-of-school children across Pakistan.

Only 1 student in 3 entering the school system completes secondary school on time. The cohort survival rate measures an education system's holding power and internal efficiency by following a group of students as they progress through the primary and secondary levels. In the 2007 cohort, of the 3.4 million children enrolled in grade 1 in 2007/08, almost half had dropped out by grade 5 in 2011/12 (48 percent of girls and 46 percent of boys; figure 5.5). By grade 10 in 2016/17, only 30 percent of children (0.9 million) remained in school, 70 percent had dropped out. Both boys and girls tend to complete primary school, but then more girls drop out in middle school, and more boys drop out in secondary school.

Figure 5.5 Only 1 student in 3 entering the education system finishes secondary school



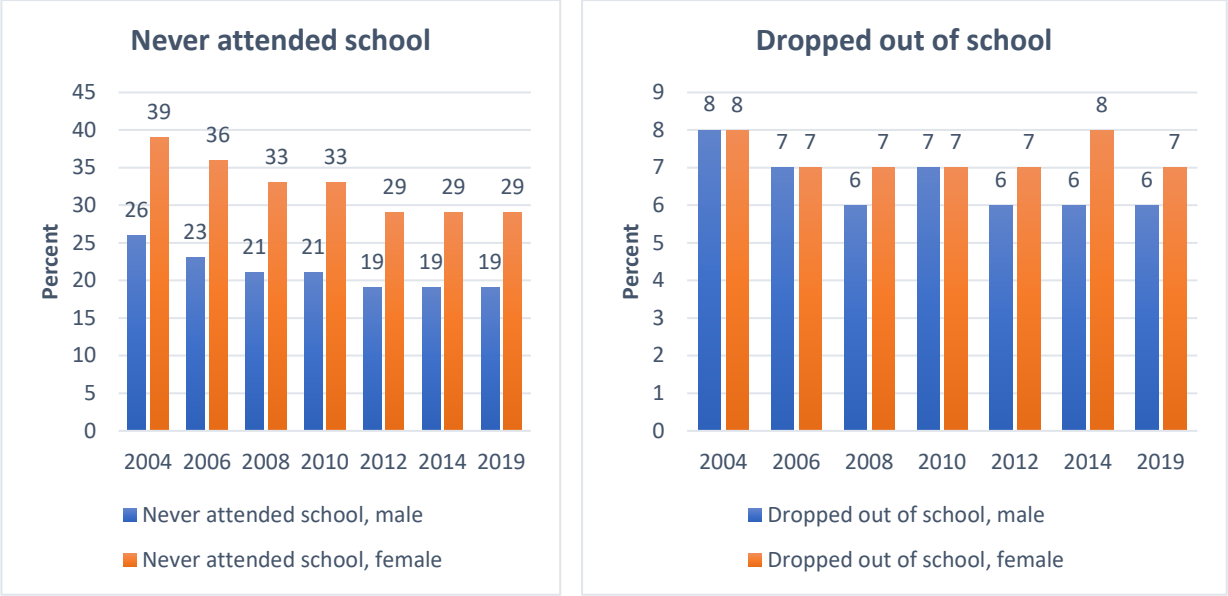
Source: World Bank staff calculations using Pakistan Education Statistics 2007–17.
Note: The cohort survival rate is calculated by dividing the total number of children originally enrolled in the first grade of primary school who reached each successive grade by the number of children in the same cohort and multiplying by 100.

Dropout rates are higher among older children. One reason is that there are far more primary schools than secondary schools in Pakistan. With longer distances to travel to middle and secondary schools, fewer children will make the trip. This is true particularly for girls because of parental concern for their safety, which seems, at least in part, to drive the decision to keep them at home. Paired with prevailing gender norms and low labor market participation of women, girls face increasing barriers to education as they age. Well-targeted international initiatives have found that paying older children to attend school can reduce dropout rates. In South Africa, for example, expanding the Child Support Grant raised teenage enrollment by at least 10 percent among beneficiaries.[17] This is important because demand-side initiatives, such as the Waseela-e-Taleem program are being expanded to middle and secondary education, with a premium for girls' enrollment.

Many children never make it to school

The proportion of children who have never attended school fell considerably in 2004–19, particularly among girls, but the rate is still high. In 2004, 39 percent of girls and 26 percent of boys had never attended school. By 2019, these numbers had dropped 10 percentage points for girls (to 29 percent) and 7 percentage points for boys (to 19 percent; figure 5.6). While encouraging, this still means that nearly 1 girl in 3 and 1 boy in 5 has never attended school. Dropout rates remained stable over the same period (around 7 percent). In addition, the average age of children in first grade is 7, meaning that many children are already overage by first grade. Taken together, these four facts—never attended, high dropouts, late entry, and repetition—mean that the stock of out-of-school children increases every year, implying an opportunity to improve the efficiency of education resource use.

Figure 5.6 Many children have never been to school, and large numbers drop out



Source: World Bank staff calculations using data from the Pakistan Social and Living Standards Measurement surveys 2004–19.

Total public spending on education matters for academic achievement, and low spending levels and poor efficiency lead to poor outcomes

Most public spending decisions on school education are made and executed by the provinces. In 2020/21, nearly all financial allocations to education (98 percent) came from provincial budgets. The responsibilities of the federal government for education consist largely of coordination with provincial governments, the higher education system, and school education within areas under its direct jurisdiction. The total provincial budget for education in 2020/21 was Rs 831.18 billion rupees (US$5,437.88 million),[18] and the federal government's education budget was Rs 15.52 billion (US$101.53 million), for a total annual expenditure per child of Rs 35,801 (US$235). Per child spending varied widely by province, from Rs 27,839 (US$182) in Punjab to Rs 57,559 (US$377) in Balochistan. These figures reflect the financing and planning challenges in providing education in a country where efficiency levels are determined by the varied management quality and geographic characteristics of each province.

Increasing funding and spending efficiency remain important challenges. Education spending per child differs considerably across districts, affecting years of schooling, school satisfaction, and learning outcomes.[19] With nearly 30 percent of children out of school, it is not surprising that Pakistan's capacity to transform spending into outcomes is low. The results are similar when the outcomes are education quality and enrollment in secondary education.

In terms of efficiency, Pakistan is far from the international frontier for education spending, as measured by the vertical distance between the country and the efficiency frontier, which is based on the outcomes (in this case gross primary enrollment) that the most efficient countries could achieve given their utilization of resources for a given amount of resources.[20]

Factors affecting school enrollment

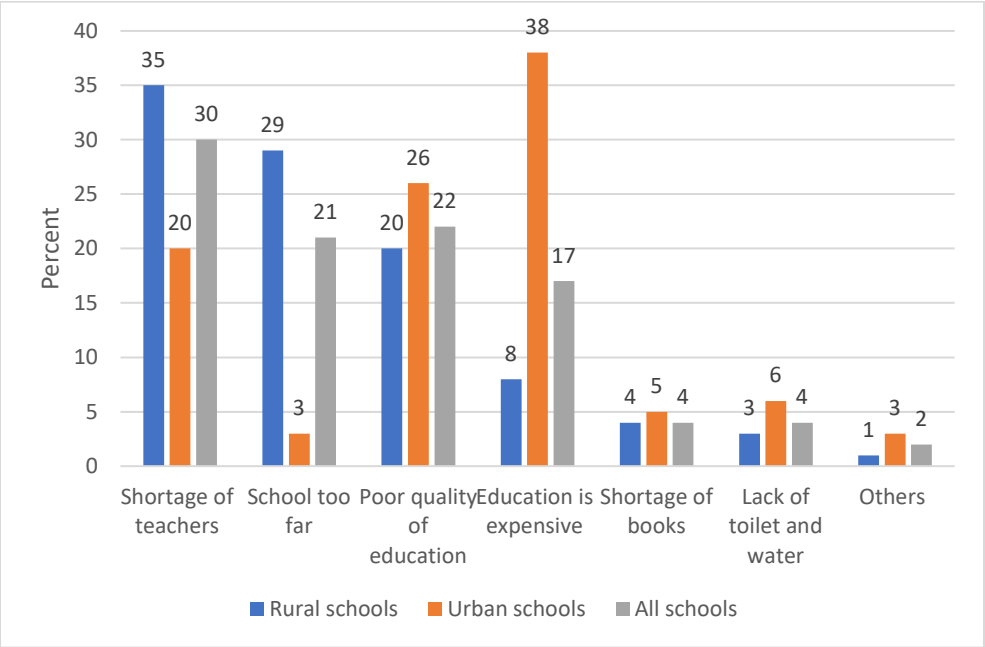
Following the framework developed in the *World Development Report 2018*: *Learning to Realize Education's Promise*,[21] this study identified factors in the school system (supply-side determinants) and in households and communities (demand-side determinants) that drive differences in education outcomes among children. Supply-side constraints include limited supply of schools and poor quality of learning environments, shortage and poor quality of teachers, and weak leadership and school management practices, as well as structural factors, such as corruption and lack of enforcement of compulsory education laws. Demand-side constraints include household characteristics (such as poverty, educational attainment of household head, and child labor); gender discrimination and social norms (such as early marriage); and insecurity, conflict, and emergencies (including wars and pandemics). The importance of these issues also differs across districts.

Poor and rural children, especially girls, are the most likely to be outside the education system. As children get older, the pressure to work, either at home or in the labor market, increases and the perceived low quality of education does not incentivize them to continue in school.

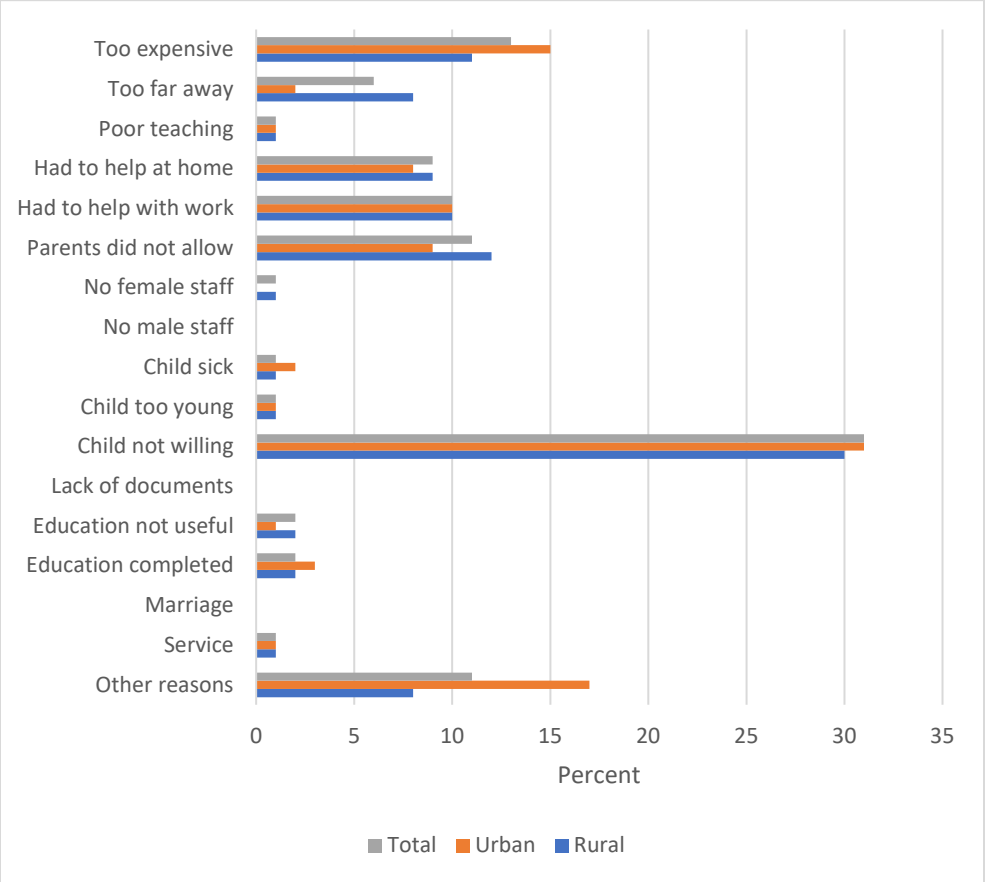
Multivariable analysis pinpoints the top barriers to children's enrollment and progression in school. Analyses of PSLM Survey 2014–15 data show that the most common problem that parents identified in schools is the shortage of teachers, followed by the poor quality of education, the distance to schools, and the high cost (figure 5.7). These problems are particularly relevant in rural schools and persist across education levels.

Figure 5.7 Why so many children do not go to school in Pakistan

School related reasons



Household related reasons



Source: World Bank staff calculations using data from the Pakistan Social and Living Standards Measurement Survey 2014–15.

Providing education to all children

Six scenarios were developed to estimate what it would cost Pakistan to bring and keep all of its children in school. The first three scenarios consider what it would cost to expand education to all children age 5–16, without addressing quality. The scenarios consider reductions in the number of out-of-school children while incorporating efficiency improvements in public investments and alternative costing drawn from service delivery mechanisms in the private sector, as well as the differences in cost of providing education in each province's rural and urban sectors. These three scenarios are then estimated again, reflecting the cost to improve quality. All estimates are presented as percentages of GDP to allow comparisons.

Educating all children without improving quality

The first three scenarios focus only on how much it would cost to expand access to education for all out-of-school children (table 5.3).

- *Scenario 1. Business as usual (BaU):* The public education system is expanded to include all out-of-school children at the average cost of providing public education (US$240 per child per year, calculated as national education expenditure divided by the number of students in the system).
- *Scenario 2. Big efficiency gains in public education:* The underlying assumption is that the public school system allocates resources inefficiently. Using this assumption, the total per student annual cost drops to US$202. The public school system becomes 25 percent more efficient, providing education to 25 percent of out-of-school children with no addition to total expenditure and incorporates all other out-of-school children into the system at the more efficient average cost per student per year of US$202. This cost provides a benchmark for increased efficiency.
- *Scenario 3. BaU + out-of-school children enrolled at the average cost of low-fee private schools*: The public school system continues to provide the same quality of education for children already in school at the current public school cost per child of US$240 but absorbs all out-of-school children at the unit cost of low-fee private schools of US$107.[22] This scenario is more of a thought experiment to analyze cost and does not imply endorsement. It could also be seen as an efficiency gain scenario, but because of fiscal constraints for the public education sector to provide education to all students at roughly the same level of quality and at the same cost, this scenario is better considered as using the private sector to provide education to all out-of-school children. This is not unrealistic as the experience of Punjab has shown in mobilizing the private sector to accompany the efforts of public sector.

Employing BaU to bring all out-of-school children into school is expensive and would require boosting annual education investment from 2.5 percent to 4.4 percent of GDP (see table 5.3, scenario 1)—a cost virtually identical to the global median. However, bringing all out-of-school children into school at the prevailing unit cost would be an expensive and inefficient way of expanding a system that is already weak in enrollment and retention.

A big push to enhance public sector efficiency by 25 percent (see table 5.3, scenario 2) to educate out-of-school children (see table 5.3, scenario 3) would cost around 3.5 percent of GDP, a 1 percentage point increase from the current cost. This implies that under prevailing fiscal constraints expanding access to all out-of-school children would be suitable only in scenarios that enhance the efficiency of money allocated within the system.

Improved targeting of pockets of out-of-school children at provincial and district levels to inform evidence-based budgeting, using relevant metrics and results, will be a critical first step toward a more efficient public education system. Current budgeting processes do little to take into account local conditions related to out-of-school children. Mapping target pockets of out-of-school children in all provinces would align the budgeting process with local needs and result in more efficient allocation of money against targets, leading to better enrollment results at lower cost.

Employing BaU to bring all out-of-school children into school in each province would require boosting annual education investment from 2.5 percent of GDP to 3.8 percent of GDP; enhancing efficiency by 25 percent or using low-fee private schools would cost around 3 percent of GDP. Provinces operate at different marginal-cost efficiencies. The amount of additional budget allocations required is greatly reduced by accounting for budgets, out-of-school children, enrollment, and unit cost estimates at the provincial level. This shows that targeting at the subnational level is critical for greater effectiveness and efficiency.

These estimates are indicative only and should be interpreted cautiously as lower bounds. The estimates do not capture other factors, including that many out-of-school children are in parts of the country where the average cost of reaching them is higher than the unit cost used in these calculations. These first three scenarios also assume that functioning schools already exist where they are needed (public, private, or both) or that provincial education systems take bold measures to increase access, perhaps by maximizing school infrastructure through double shifts, shorter school days, or other measures that would allow the current supply to respond to the increased demand. Moreover, the large financial push needed for the first three scenarios would result in limited reductions in learning poverty as they do not include improvements in education quality (discussed just below). Under the first three scenarios, learning poverty would fall modestly from 75 percent to 68 percent, despite substantial increases in the education budget.

Table 5.3 The sticker price of having all children in school under different scenarios—lower bounds

Stick price and assumptions	Current public expenditure in primary and secondary education	Scenario 1 Business as usual (BaU)	Scenario 2 Big efficiency gains in public education (25%)	Scenario 3 BaU + out-of-school children at the cost of low-fee private schools	Scenario 4 BaU + improved quality of public education	Scenario 5 BaU+ high efficiency + improved quality for out-of-school children	Scenario 6 Higher quality for all children
Sticker price using national parameters (% of GDP)	**2.5**	**4.4**	**3.7**	**3.3**	**4.9**	**3.8**	**5.4**
Sticker price using provincial parameters (% of GDP)	**2.1**	**3.8**	**3.1**	**2.9**	**4.3**	**3.4**	**4.8**
Assumptions	Average cost during 2017–19	Bringing all out-of-school children into public schools at the average cost for the country of US$240 per child per year	Public schools absorb 25 percent of out-of-school children at the same current total cost and absorb the rest of out-of-school children at the more efficient cost of US$202 per child per year	Public schools absorb all out-of-school children at the average cost of low-fee private schools (US$107 per child per year)	Public schools absorb all out-of-school children and retain current students with an investment in quality estimated to have a unit cost at the midpoint of the difference between the cost of a low-fee private school and that of highly efficient and effective private schools of US$163 (such as those run by the Citizen Foundation and others)	Public schools retain current students at the current unit cost of US$139.85 and absorb all out-of-school children at the unit cost of highly efficient and effective NGO schools of US$163	Public schools absorb all out-of-school children and retain current students at the current unit cost plus the quality premium calculated as the difference between the per-unit cost of highly efficient and effective NGO schools and low-fee private schools of US$240 + US$28)

Source: World Bank staff calculations based on multiple data sources. These include annual budget statements, Pakistan Education Statistics, and Pakistan Social and Living Standards Measurement survey data.

Educating all children while improving quality

The second three scenarios consider how much would it cost Pakistan to bring all children to school while ensuring a higher level of learning (see table 5.3).

- *Scenario 4. BaU + improved quality of public education:* All out-of-school children are absorbed into the public school system at the average annual cost per student (US$240) plus a premium of US$28 per child per year to improve the quality of public education. This premium is calculated as the midpoint of the difference between the cost of a low-fee private school (US$107) and the cost of highly efficient and effective schools run by NGOs such as the Citizen Foundation (US$163).
- *Scenario 5. BaU + high efficiency + improved quality for out-of-school children:* Students in public schools remain at the current cost level (US$240 per child per year), and all out-of-school children are incorporated into the public school system at the cost associated with schools run by a highly efficient and effective NGO (US$163).
- *Scenario 6. Higher quality for all children:* Students currently attending public schools and all out-of-school children receive an education at the current unit cost plus an added amount calculated as the difference between low-fee private schools and schools run by a highly effective NGO (US$28).

Under the BAU + improved quality scenario 4, costs rise by at least an additional 0.5 percentage point of GDP over the simple BaU case. Bringing all children into school under the BaU scenario with an annual per-child quality premium raises needed investment in education to 4.9 percent of GDP, up from 2.5 percent (see table 5.3, scenario 4). The additional cost to improve quality is lower than the cost to provide access for all children.

In the unlikely scenario 5 of *BaU + high efficiency + improved quality for all out-of-school children*, total expenditure would be 3.8 percent of GDP.

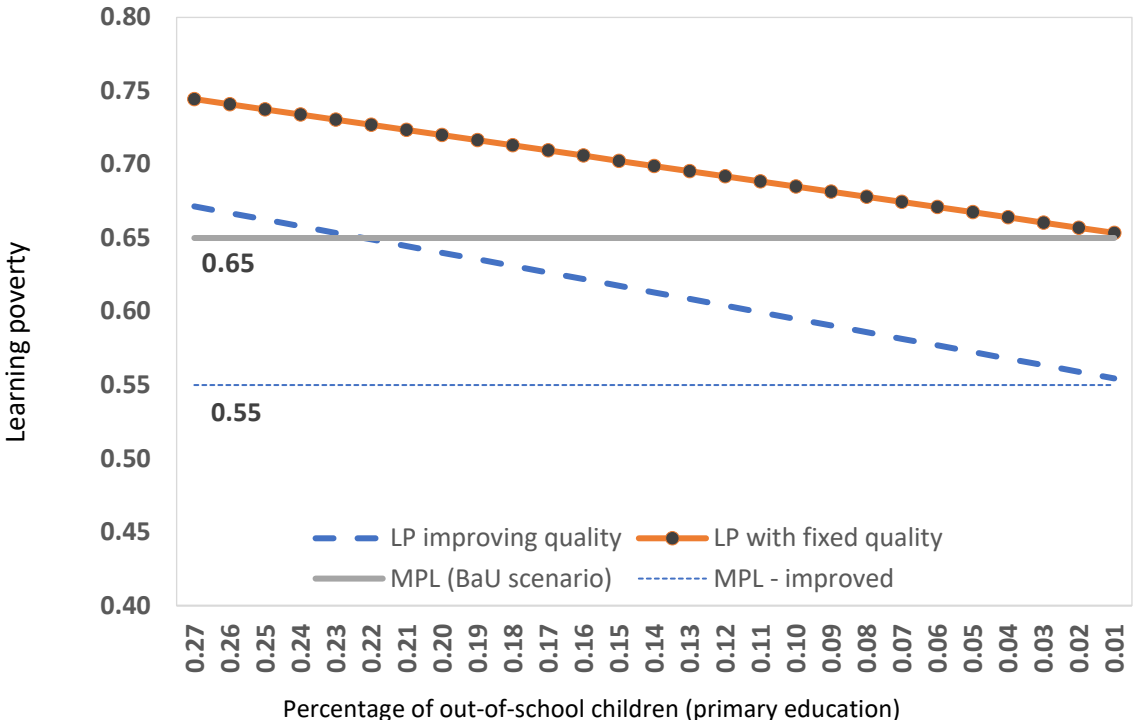
Under scenario 6, the cost would rise to at least 5.4 percent of GDP (up from the current 2.5 percent). This scenario would require large efficiency gains in access and improvements in quality. Employing BaU to bring out-of-school children into school in each province and improve the quality of education would cost around 4.8 percent of GDP for scenario 6. This is 0.6 percentage points lower than a national estimate that does not take different provincial parameters into account. Similarly, using provincial parameters would reduce the cost of scenario 4 to 4.3 of GDP and of scenario 5 to 3.4 percent of the GDP.

Improving education quality, not just expanding access, is essential

Just bringing all children to school but not improving quality will involve enormous financial cost, but learning poverty would not decline very much because of the poor quality of current education. Reductions in learning poverty would be limited by the high proportion of students unable to achieve minimum proficiency in reading, which is currently 65 percent in primary education. Under the BaU scenario, investments in education go from 2.5 to 4 percent of GDP, reducing out-of-school children to, say, 1 percent, and learning poverty from 75 percent to 65 percent.

The cost of reducing learning poverty by 10 percentage points could be offset by efficiency gains in public education. How much learning poverty could potentially be decreased is affected by the reading proficiency that students can achieve. For example, reducing the percentage of students performing below the minimum proficiency level in reading by 10 percentage points can reduce learning poverty faster than bringing more out-of-school children into school (figure 5.8). In short, bringing all children into school will not greatly reduce learning poverty because of the low education quality in Pakistan. Investments in reducing the number of out-of-school children must be accompanied by investments in improving the quality of education to achieve meaningful reductions in learning poverty.

Figure 5.8 Improving both access and quality reduces learning poverty faster



Source: World Bank staff calculations using data from simulation in table 5.3.
Note: BaU = Business as usual scenario for education; LP= Learning Poverty; MPL= Minimum Proficiency Level.

The COVID-19 pandemic is undermining education gains

The pandemic has likely increased the number of out-of-school children and worsened learning poverty in Pakistan, increasing the cost of bringing all children into school and improving the quality of education. As part of a nationwide lockdown beginning in March 2020, Pakistan closed all of its schools, which will have a profound effect on the education system, further eroding already low learning levels. In particular, it is estimated that 1 million–2.5 million additional children will drop out of school, learning-adjusted years of education will decline by one-third to two-thirds of a school year, and learning poverty will rise to at least 79 percent.[23] Disruption of education during the pandemic will disproportionately affect disadvantaged and hard-to-reach children, including girls and young women. Education inequities are likely to increase due to unequal access to remote learning technology. The full depth and scope of the impacts of the

pandemic will depend on its duration, its seasonal characteristics, government and education authorities' resolve, and the financial and technical response to mitigate its effects. Incorporating the estimated impacts of COVID-19 on enrollment is likely to substantially raise the cost of enhancing the education system to include more children and provide them with a better education. The increases reflect primarily the additional learning losses, which will increase the number of students who do not achieve minimum proficiency in reading, and, to a lesser extent, the increase in the number of out-of-school children. Preliminary data show learning losses in grades 1-5 in math and language in rural Pakistan due to school closures.[24] Data for the whole country on both dropouts and learning losses has just started to be collected and analyzed.

Giving children a better education

This section identifies time-bound priority policies and outlines a framework for them. The policies are designed to support *current students* in continuing their education and acquisition of life skills—offering "steppingstones" along their education path; and to focus on different groups of *out-of-school children*—providing "bridges" back into school. These policies are encapsulated in a framework to sustainably reduce the number of out-of-school children and learning poverty more widely. The recommendations below are grounded not only in the realities and experience in Pakistan but also in international evidence as per the Recommendations of the Global Education Evidence Advisory Panel reports.[25]

Building stepping-stones and bridges

Pakistan needs to educate all of its children to a level that promises them a more productive future. An important first step is to recognize that out-of-school children are not a uniform group. Policies need to be tailored to the characteristics of their different groups to increase impact. Bringing out-of-school children into education or training is a huge challenge. Research suggests that the longer children are out of school, the less likely they are to go to school, especially children who have dropped out.[26] Tackling dropout requires targeted, aggressive, and innovative approaches. Bringing all children into school while also improving learning outcomes and overall education system efficiency is challenging, but it can be done.

Stepping-stone 1. Create supportive schools for increased retention

- Focus on foundational skills, in particular early literacy, numeracy, and socio-emotional skills. Learning other subjects or skills is harder if students are still struggling to understand what they read, and communicate appropriately what they know, think, and can do. Conduct a rapid assessment of all early grade reading support initiatives in the country and develop training materials for caregivers of young children, using existing early childhood education curriculum and materials (see chapter 2). USAID, UNICEF, and various NGOs have offered early childhood education programs throughout Pakistan for years, and provide important resources and experience with what works, including structured lessons plans with linked materials, and some monitoring of and support to teachers.

- Scale the more effective and efficient approaches and expand them to schools in districts with high dropout rates. Implement programs in the most disadvantaged districts of the country first, to increase school readiness among the most vulnerable.
- Plan for the systematic introduction of formal preschool classrooms with minimum quality standards for later phase-in. Hiring women in the community as caregivers and training them in early childhood education can increase community buy-in while providing income and social status for women.
- To support early literacy, establish school-based libraries and read-at-home kits (for example, Read@Home) that include low-cost story and chapter books in local languages. Prioritizing early childhood education, with a focus on early literacy, through these immediate actions will prepare Pakistan's youngest learners to enter school on time and ready to learn, which can boost enrollment rates and overall education system efficiency.
- In the short to medium term, train teachers and school leaders to identify children at risk of dropping out and provide in-school remediation for low-achieving primary school children. To better equip teachers to support all students, pre- and in-service training curricula should instruct teachers in how to identify at-risk children and common learning disorders (such as dyslexia) and inform them about available support. International evidence is clear that teachers are the key to student learning outcomes[27] and that strengthening their ability to connect with at-risk students is crucial for decreasing dropout rates.[28] Low-performing students are often the first to drop out of school.[29] Offering in-school remediation to lagging students in districts with the lowest primary–secondary school transition rates will reduce dropout hot spots. Additional resources, in the form of teachers and teaching and learning material, may be needed to support these efforts.

Stepping-stone 2. Support households in reducing dropout

- Continue the expansion and improve the implementation and verification of the education conditional cash transfer program, increase benefit amounts for secondary school children, and provide dedicated and free transport for middle and secondary school girls and female teachers. The transition to secondary school is a key attendance drop-off point for boys and girls in Pakistan. Boys are often pulled out to work to help support the family, while parental concern for girls' safety increases as they reach adolescence. Providing monetary support and school transport resources directly to families of secondary school-age children can ease these concerns and stem secondary school dropout rates.[30]
- Reduce time to school by refurbishing existing spaces, create and support community schools (with local teachers), and provide materials that have shown to be impactful. Expanding Public-Private Partnerships (PPP) to middle school and across the country, with strong accountability mechanisms for private schools and ensuring teachers' conditions, can help improve supply of education services wherever public provision is inadequate.
- In the short to medium term, improve the overall availability and targeting of conditional cash transfer programs.[31] Conditional cash transfers are most effective when payments are directly linked to desired behavior change,[32] for example, predicated on children's enrollment and regular attendance at school.[33] Expanding the conditional cash transfer

to offer nutritious meals and fresh produce, in the most disadvantaged villages is a highly effective means of ensuring that children have the energy to show up in school and learn. Community members can be employed to help with food preparation, including local farmers to provide the food and local women to prepare it.[34]

Bridge 1. Undertake remedial actions for recent dropouts

- Immediately, provide additional learning support for students who are re-enrolling after a moderate period of being out of school (less than two years). Support can be provided after school, through one-on-one or small group tutoring during the school day in parallel with regular classes, and through bridging programs held when school is not in session (summer school).
- In the short to medium term, partner with school committees and teachers to identify recent dropouts and support their return to school. Identify common reasons for dropout (for example, for girls living in rural areas it might be a lack of transport to school or lack of latrines in the school). Next—and this is key—give school committees the authority and resources to remediate identified issues, with teacher input, perhaps through teacher representatives appointed to the school committees. For example, offer and oversee the use of dedicated grants for two years for students returning to school, predicated on consistent attendance. Re-enrollment campaigns and work with all stakeholders in the community to send children to school can pay off as it did in Punjab with SMS messaging are cost effective ways of enhancing re-enrollment, particularly after the school closures caused by the COVID-19 pandemic.[35]

Bridge 2. Offer alternative learning pathways for children who have never been to school and for long-term dropouts

- Immediately, provide accelerated-learning programs for children who have never been to school or who dropped out. For example, offer digital learning options to educate youth who have some reading skills, primarily in urban areas. Set up computer centers that children can access, where they are able to learn in a safe environment. Local area networks can be set up to keep children safe within the digital space. For example, Idara e-Taleem o-Aagahi's (ITA)'s "Chalo Parho Barho" (Let's Read and Grow) program shows learning gains for children in underperforming districts of Sindh, Punjab and Balochistan. The CPB program covers grades 2-5 and is open to children in school and out of school. It enables children out of school to enroll (or re-enroll) in an appropriate grade and it helps ensure that children at risk of dropping out of school (because their learning is not progressing) stay in school.[36]
- In the short run, introduce basic literacy and numeracy programs, coupled with skills development programs, to prepare older children who have never attended school or are longer-term dropouts for integration into the labor market. Partner with local community organizations and potential employers to meet the needs in the locality. For example, in rural agricultural areas, focus on agricultural skills (such as no-till farming and agri-marketing). In urban centers, partner with humanitarian organizations (such as Edhi Foundation) to provide safe living conditions for street children, with accelerated learning opportunities, including life skills.

- In the short to medium term, build schools in areas where difficult or no access to secondary school is the key reason for dropout. Couple it with the conditional cash transfers and a program on safe transportation services for girls and female teachers.
- Hire female teachers to increase enrollment and attendance among adolescent girls.

Reducing the number of out-of-school children and learning poverty more widely

The below proposed framework identifies three types of out-of-school children (never in school, dropped out for less than two years, dropped out for more than two years) and in-school children who are falling behind and recommends policy packages targeted to the specific needs of each group (table 5.4). Programs are needed not only to bring out-of-school children into school, but also to prevent more children from being out of school. For each group of out-of-school students, proper targeting (by age, gender, household socioeconomic status, rural/urban location, and so on) is fundamental for devising and implementing solutions that will increase learning.

For children of all ages who are already in school, structured pedagogy and report cards and parent–teacher conferences can help keep them there. Pakistan might consider offering its teachers access to structured pedagogy, a coordinated approach to teaching to the right level that includes student materials and teacher lesson plans (including scripted), training and ongoing support, which are shown to be effective in international studies (Annex 4A). Student report cards paired with parent–teacher conferences can also improve student learning. Structured pedagogy and school report cards appear to be cost-effective means of improving student learning once children are in school.

Older children who are in school may benefit from blended-learning options that pair face-to-face classroom learning with online curriculum components. These programs work well when delivered to students through structured online and in-class settings by teachers trained to facilitate this interaction and when they include some student control over time, place, path, or pace. With blended learning, classroom and online experiences are tailored to reinforce one another.[37]

For children who have dropped out less than two years ago, in-school remediation can support curricular catch-up, including one-on-one and small-group tutoring. One-on-one and small-group support are proven catalysts for accelerated learning. Tutoring has the greatest impact on reading abilities in the early years (especially in kindergarten and first grade) and on math in later grades. Tutoring conducted during school hours is more effective than tutoring after school and tutoring by teachers or paraprofessionals is more effective than tutoring by volunteers or parents.[38]

Table 5.4 A framework to sustainably reduce out-of-school children and learning poverty

Out-of-school children and at-risk students in school	Proposed policies, by age		
	Age 5–9	Age 10–12	Age 13 and older
Out of school			
Never in school	School outreach to family + in-school remediation + multigrade classrooms	School outreach to family + in-school remediation + bridge program (e.g., summer	Accelerated skills program + technical and vocational education

		school) or accelerated skills program	
Students who dropped out			
Less than 1 year ago	School outreach to family (identify dropout reasons) + in-school remediation	School outreach to family (identify dropout reasons) + in-school remediation	School outreach to family (identify dropout reasons) + in-school remediation
1 to 2 years ago	School outreach to family (identify dropout reasons) + at-home reading materials + in-school remediation	School outreach to family (identify dropout reasons) + in-school remediation or accelerated skills program	School outreach to family (identify dropout reasons) + in-school remediation or accelerated skills program
More than 2 years ago	School outreach to family + at-home reading materials + in-school remediation	School outreach to family + in-school remediation + bridge program (e.g., summer school) or accelerated skills program	Accelerated skills program + technical and vocational education
At-risk students in school			
Started on time	Structured pedagogy	Teacher training to identify at-risk students + structured pedagogy + school report cards / parent-teacher meetings	Teacher training to identify at-risk students + structured pedagogy + school report cards / parent-teacher meetings
Overage by 1 to 2 years	Multigrade classrooms + structured pedagogy + at-home reading materials	Structured pedagogy + blended learning options	Structured pedagogy + blended learning options
Overage by 2 or more years	Multigrade classrooms + structured pedagogy + at-home reading materials	Structured pedagogy + blended learning options	Structured pedagogy + blended learning options

Source: World Bank 2020e (Global Education Evidence Advisory Panel reports); Evans and Popova 2016; Evans and Yuan 2019; World Bank 2018.

For children who have been out of school for more than two years, bridge programs may be necessary to help them catch up on the curriculum. Key considerations for policymakers include the need to plan early, provide program and staffing continuity from year to year, and integrate summer teaching with staff development.[39]

For older children and youth who have never been to school, accelerated skills programs focusing on functional literacy and numeracy, and on professional and life skills training, are important for developing basic human capital. Training programs such as the Jóvenes programs in Latin America have demonstrated success in reaching vulnerable youth and in improving their formal employment opportunities and earnings.[40] If needed, accelerated skills programs could be followed by more formal, longer-term technical and vocational education and training options.

Conclusion and Policy Recommendations

The population out of school children broadly comprises three distinct groups, each with different needs, and policies need to be tailored to maximize impact. The youngest out of school children (age 5-9), around half of the total (9.5 million), have the most straightforward needs: access to schools, a caring teacher in front of the classroom, and perhaps a nudge to parents from the community to enroll their children in school. But children who are in school and at risk of dropping out (typically age 8-16) often require additional learning support, to make sure that parents see the value of keeping their child in school. As the labor and marriage markets start pulling older children away from school, parents may need incentives that reduce their cost of sending children to school, such as stipends. Older children who have never been to school require specific literacy interventions and/or short-term skills training to help them become literate and obtain job-related skills.

Based on the analysis in this chapter and global best practices, policy and programming recommendations include:

Expand the supply of safe school schools so that every child has a guaranteed seat in school

- **Prioritize public sector provision and public-private partnerships**. Strong controls on providers to guarantee school outcomes, along with the safety and welfare of students and teachers, are paramount to get and keep children in school. Clean water and basic WASH facilities, including safe bathrooms, must be present in all schools.
- **Rehabilitate and build schools where they are needed.** School and classroom construction is particularly important in areas where difficult or no access to school is the key reason for dropouts. This has been successful in parts of Balochistan where abandoned public buildings have been adapted and made adequate for service provision of education.
- **Hire more qualified (especially female) teachers based on merit to increase enrollment and attendance among adolescent girls.** Like girls, female teachers may require safe and dedicated transport to reach schools, particularly in remote areas. Parents see female teachers as an indicator of security for young girls.

Support households to increase enrollments and reduce dropouts

- **Expand the education conditional cash transfer (CCT) program to both boys and girls and provide dedicated and free transport for secondary school girls.** The transition to secondary school is a key attendance drop-off point for boys and girls in Pakistan. Boys are often pulled out to work to help support the family, while parental concern for girls' safety increases as they reach adolescence. Direct provision of monetary support and safe school transport can ease families' concerns, increasing enrollment and stemming dropout. Conditional cash transfers are most effective when payments are directly linked to children's enrollment and regular attendance at school. In the most disadvantaged districts, adding a premium for food or food vouchers can offset families' need for children to participate in household or paid work, freeing resources for the education required to build human capital.

- **Raise awareness about the importance of education, particularly for girls.** Community approaches that bring parents, and other household and community members into advocating for and facilitating girls' access to education and security from home to school can increase education demand. More research is needed on measuring and shifting social norms around girls' education. This work includes sharing information on returns to education, and the value of education for all for human capital development.

Prioritize literacy to increase retention, and enable human capital accumulation

- Develop literacy training materials for caregivers and teachers of young children, using existing curriculum and materials.
- Conduct a rapid assessment of all reading initiatives across Pakistan.
- Draw on existing initiatives: Government, NGOs and development partners have offered early reading programs throughout Pakistan for years that can provide important resources and implementation experiences.
- Direct support to teachers, including structured pedagogy and training in teaching at the right level, have also shown positive impacts on children's literacy levels.
- Train teachers and school leaders to identify children at risk of dropping out and provide in-school remediation centered on foundational learning and numeracy. Low-performing students are often the first to drop out of school. International evidence is clear that teachers are key to student learning outcomes and strengthening their ability to connect with at-risk students is crucial for decreasing dropout rates. To better equip teachers to support students, pre-service and in-service training curricula should show teachers in how to identify at-risk children and common learning disorders (i.e., dyslexia), informing them of available support.
- Introduce basic literacy and numeracy programs, coupled with skills development programs, to prepare older children who have never attended school or are longer-term dropouts for integration into the labor market. Partner with local community organizations and potential employers to meet the needs in the locality.

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[1] Estimates of out of school children range between 18.7 and 20.7 million depending on different sources of data and different simulation exercises. We have kept our own estimates based on census data from 2017.
[2] PSLM 2018–2019.
[3] PSLM 2018–2019.
[4] This estimation comes from information from a phone survey carried out by the World Bank in January 2021.
[5] UNESCO 2019.
[6] The Education 2030 Framework for Action proposes two benchmarks as 'crucial reference points': Allocate at least 4-6% of GDP to education and/or allocate at least 15-20% of public expenditure to education. (World Bank, UNESCO, UNDP, UNHCR, UNICEF, UN Women, ILO, UNFPA (authors)).
[7] This is triangulated with the age cohort findings of the national population census conducted in 2017. The results are based on the population age 5–16.
[8] Alif Ailaan 2014. Alif Ailaan was a national education campaign in Pakistan that worked on mainstreaming education data to raise education quality and decrease the incidence of out-of-school children with support from Foreign Commonwealth and Development Office (FCDO)
[9] Trako et al. 2020.
[10] Pakistan Education Statistics 2016–2017.
[11] UNESCO Institute for Statistics 2020.
[12] Jamal (2016) led participants through a two-round Delphi exercise, followed by in-depth qualitative interviews.
[13] Trako et al. 2020; Human Rights Watch 2018.

[14] The education participation rate is the number of children attending any type of school (government, private, madrassas, other) expressed as a percentage of the total number of children in the 5–16 age group during a given school year.
[15] Burde and Linden 2013; Duflo 2001.
[16] Trako et al. 2020; Human Rights Watch 2018.
[17] Eyal, Woolard, and Burns 2014.
[18] Numbers in this paragraph are based on April 20, 2021, exchange rates.
[19] World Bank 2019a.
[20] Herrera and Ouedraogo (2018) used both Free Disposable Hull and Data Envelopment Analysis methods in their analysis.
[21] World Bank 2018.
[22] Information from Punjab suggests that low-fee private schools provide roughly the same level of education quality as public schools but at a much lower cost per student. This is a thought exercise. Pakistan's current private school sector cannot achieve this at today's human and physical capacity. It would need to expand. In essence, neither public nor private schools, or a combination of the two, have the ability to absorb all of Pakistan's out-of-school children. More capacity will need to be created.
[23] World Bank 2020c.
[24] ITA 2021.
[25] Word Bank 2020d and 2022e.
[26] OECD 2020.
[27] See, for instance, Hanushek and Rivkin (2006).
[28] Dinu 2015.
[29] Rumberger 2001.
[30] Large distances significantly limit enrollment and attendance, particularly for girls (Theunynck and Rabakoson 2017). In a review of 58 randomized controlled trial studies of pre-secondary schools in 28 low- and middle-income countries in Africa, Asia, and Latin America, J-PAL (2017, Roll Call: Getting Children into School. p. 11) found that "when school is far away, reducing travel time can help boost participation. This can be particularly important for girls and in areas where security is an issue."
[31] Evans and Yuan 2019.
[32] In Malawi, conditional and unconditional cash transfers to girls who had dropped out of school raised enrollment and English reading comprehension. Enrollment effects were almost twice as large among conditional cash transfer recipients than among unconditional cash transfer recipients. Reading comprehension also increased more in the conditional cash transfer group (Baird et al. 2016).
[33] Baird et al. 2016.
[34] WFP 2020; Drake et al. 2016.
[35] Hasan, et al. 2021.
[36] https://www.itacec.org/CPB-(Accelerated-Learning-Programme).
[37] Horn and Staker 2011, 2012.
[38] Nickow, Oreopoulos, and Quan 2020.
[39] Harris 2001.
[40] The Jóvenes programs offer poor youth training in professional and life skills, followed by workplace internships. Based on a pilot in Chile in the early 1990s, this comprehensive approach to training has spread throughout Latin America, with countries tailoring the program to their needs. Usually, disadvantaged youth are identified through out-of-work and out-of-school statistics, socioeconomic data, and poverty mapping. Qualified private firms, NGOs, public institutions, and training agencies then provide training on a competitive basis. Before receiving government funds for training, providers are required to arrange internships for trainees and to ascertain what kinds of skills local employers need. Life skills training focuses on problem-solving skills, workplace behavior, conflict management, job search techniques, and self-esteem (Ibarrarán and Shady 2009; González-Velosa, Ripan, and Shady 2012).