



# **Learning from Pakistan**

# The experience of Public-Private Partnerships (PPPs) in Sindh

This document is accompanied by a podcast on the same theme and is a part of a library of Global Public Goods about education reforms and coalition building in Global South countries.

We encourage people to share these materials freely, but its use is strictly limited for educational purposes.1

 $<sup>^{</sup>m 1}$  This document was produced in 2023 by João Pedro Caleiro, from the Lemann Foundation Programme at the Blavatnik School of Government at the University of Oxford, as part of the South-South Programme, with support from partners Education Development Trust (EDT), the Lemann Foundation, the Lemann Centre for Leadership and Equity in Education in Sobral, Zizi Afrique Foundation in Kenya, Idara-e-Taleem-o-Aagahi (ITA) in Pakistan and the Foreign, Commonwealth and Development Office (FCDO) of the United Kingdom.

This is a discursive learning document intended for education policymakers from Global South countries. It describes experiences of Public-Private Partnerships (PPPs) to improve foundational learning in Pakistan, with a focus on successful projects in Sindh province. The document also examines the regulatory framework of PPPs and their implementation realities, and surfaces areas of attention that should be on the radar for those aiming to establish a successful PPP in education.

These materials are designed to be useful even if you are not interested in PPPs or if they have no special relevance to your context. PPPs are incredibly varied, and their implementation encompasses many different types of challenges. Reflecting on them can help any policymaker practice how to hone in on relevant information, among substantial detail, which is a key skill across domains of evidence-based policymaking.

In a separate document, we suggest learning tasks to be performed individually or in groups. Their purpose is to enrich the quality of deliberation and decision-making in education, and to encourage participants to explore how elements of what is described in the discursive learning documents would work in their own contexts.

# Introduction

Public-Private Partnerships (or PPPs) are a strategy that governments use in many policy areas around the world, including education, where they can take many forms, from the mere construction of public schools by private partners to the actual operalisation of day-to-day teaching within schools. While there is no comprehensive survey of their numbers, nor a consensus on their definition, it is widely believed that education public-private partnerships (PPPs) are gaining popularity in the Global South.

In comparison to other developing countries, Pakistan has very low levels of investment in education as a proportion of GDP<sup>i</sup>. To tackle this issue, for the last 20 years, the country has been using PPPs to address many of its educational challenges. Over 3.3 million children are enrolled through PPP schemes in the country<sup>ii</sup>.

Prominent among education challenges in Pakistan is access, given that 32% of the country's children aged 5-16 are not attending school<sup>iii</sup>. This equates to over 20 million children<sup>iv</sup>, the second highest absolute number of children not going to school anywhere in the world<sup>v</sup>.

Boys outnumber girls in every level of the Pakistani school system, and by large margins<sup>vi</sup>: when considering primary and lower secondary levels only, the percentage of out of school children is 21.17% for boys and 33.6% for girls. Dropout rates pretty much everywhere are high, and even established schools often lack adequate facilities.

Learning outcomes for those who are already in school are insufficient, and in 2019, before the pandemic, 3 out of 4 children at late primary age were not proficient in reading (adjusted for out-of-school children)<sup>vii</sup>. This is a big concern, as educators commonly stress that foundational learning, understood as the initial years of education and the achievement of literacy and numeracy at the right age, guarantees the base upon which subsequent learning builds.

These pre-existing challenges, in both access and learning outcomes, have likely been exacerbated by two disruptive events, starting in 2020. First, due to social distancing policies to contain the COVID-19 pandemic, schools in Pakistan were closed (fully, partially or intermittently) for 64 weeks between March 2020 and March 2022, some of the longest closures in the worldviii, and with minimal and unequal support for online learningix.

Shortly after schools reopened, many had to be closed again due to the catastrophic floods in 2022 which have caused widespread destruction of education infrastructure. School closures are associated with "large, persistent and unequal" negative effects on learning, as well as higher dropout rates, accentuating the preexisting challenge of making sure that all children achieve basic literacy and numeracy on the right age.

Pakistan has a decentralised education system and since the passage of the 18<sup>th</sup> amendment to the Constitution in 2010<sup>xii</sup>, provinces are responsible for providing

education to all children aged 5-16 years as a constitutional fundamental right to education; PPPs are a preferred option, together with other interventions and reforms.

Punjab, the most populous province in the country, has obtained positive results in PPPs by using "appropriate legal framework, strong decision-making mechanisms, and open process, clear contracts, upfront agreements on service delivery and infrastructure, a well-developed website with information for partners, and follow-up and close monitoring and evaluation agreed up front"xiii, according to the World Bank.

Sindh, the second largest province in the country by population, has also strongly emphasised the role of PPPs in addressing educational challenges using public financing for private provision of infrastructure, teaching, and management of schools. Here we examine their institutional framework and one of their projects, called the PPRS (Promoting Low-Cost Private Schooling in Rural Sindh), which increased both enrolment and test scores according to a recent study<sup>xiv</sup>.

# What is a PPP?

PPPs are defined as a "mechanism for government to procure and implement public infrastructure and/or services using the resources and expertise of the private sector"xv, with performance and risks shared by both partners. In this relationship, the government becomes less of a direct provider and more of a regulator, facilitator and "steward" of the education sectorxvi.

PPPs in education are widespread practice across the developed and the developing world and can take many models. In developed countries, they are usually associated with the voucher model, first proposed by economist Milton Friedman, though there have been experiences with vouchers in developing countries, too.

This is a system whereby parents receive a grant from the government that can be used to pay for tuition in any school, public or private, profit or non-profit. The idea is that greater parental choice would lead to competition between schools that would benefit students, leading to more variety and quality<sup>xvii</sup> of public schools.

However, rather than creating competition to improve quality, PPPs in developing countries are often more related to improving public access and quality by mobilising private resources. In the subsidy model, for example, the government pays a fee per student or a block grant to a non-state school. In the "contract schools" model, the schools are owned and funded by the government, but are operated by a non-state provider, be it a private entrepreneur or for-profit company, or a non-profit operator.

Private paid education composes a large share of the education sector in Pakistan (34% of all primary enrolment in 2019)\*\*viii and is driven by several factors, including low prices\*\*ix, proximity to students and the perception that they deliver better outcomes than public schools\*\*x. Even though their tuition pricing is not always at the level of maximising profits\*\*xi, they are nonetheless driven mainly by market incentives\*\*xii.

PPPs, on the other hand, can be run by a non-profit or a for-profit entity, but their goal is to work to targets set for outcomes-based results to achieve the same ends as regular public provision: of access, quality, and equity<sup>xxiii</sup> in education for all.

#### **Evidence**

One review by the Education Partnership Group done in 2017 notes that there are not many high-quality studies on PPPs, and found only very limited evidence about the impact of this modality on learning outcomes in developing countries.

In the model in which the government subsidises a private school or faith-based organisation, for example, the review found "weakly positive" evidence of success. A study on Sierra Leone (Wodon and Ying, 2009)\*\*\*, where more than half of all student attend faith-based schools, found that even though they perform generally worse than public schools, that is because they serve a more underprivileged population, and they perform slightly better when controlling for child and household characteristics.

According to the authors, these schools may benefit from outside funding and expertise because of links with sister organisations in other countries. Other possibility is that they have moral authority and links with the poorest members of the community, which may help them mobilise resources for the schools.

In the case of Uganda (Osorio et al, 2016)xxv, the dynamic is precisely the opposite: scores were found to be higher for students from PPP schools, but this was mainly due to student selection, or the fact that students in those schools were more likely to come from more educated households with better resources. However, PPP were also associated with positive changes in factors such as teacher presence and science laboratories, suggesting that their PPP program uses some educational inputs more efficiently and with some gains of scale.

In one international comparison, Woßmann (2005) reached a "positive conclusion" about PPPs in education looking at learning outcomes in reading, maths, and science for 15-year-olds\*\*xvi\*. The data came from 29 OECD countries participating in PISA, a global initiative which collects comparable test results in dosens of countries. Though the study does not investigate the mechanisms for success, it finds that the most successful PPPs usually combine private operation with public funding, while the combination of public operation with private funding usually does worst.

Two separate studies conducted in Pakistan have observed an advantage in learning outcomes associated with PPP when managed by the private sector through public-sector financing models. However, it is important to note that both studies come with strong caveats,

The first of them (Malik et al, 2015) found positive signs in the "adopt a school" mechanism in two provinces. In Punjab, the adopted schools are associated with better learning outcomes, with a percentage change of 12% change in Maths, 10% in Urdu and 55% in English in the period of 2009-2013 when compared to unadopted schools. In the case of Sindh, only moderate to low learning improvements were found among grade 4 students, according to survey data. Because results could have taken longer to show and the lower quality of the underlying data, these results should be taken carefully, something that the authors themselves acknowledge.

Amjad and McLeod (2014)\*\*vii point out that students from PPP schools generally outperform those from government schools (they are 40% more likely to succeed on the Urdu task, for example) and perform close to students from private schools. However, that superiority is attributed almost exclusively to private supplementary

tuition. When controlling for this effect, PPP schools were not superior to government schools at all, and sometimes performed worse.

A 2010 working paper from Felipe Barrera-Osorio and Dhushyanth Raju examines the results of Foundation-Assisted Schools (FAS) program in Punjab using five rounds of standardised data over three academic years. In this program, schools are permanently excluded if at least two thirds of the tested students don't score 40% or higher in two consecutive attempts. Estimates reveal a large change in learning between the first two rounds of testing, pointing that the accountability mechanisms and the threat of sanctions work as a key factor in inducing better learning outcomes.

There is a wide range of models under the umbrella of PPPs, which are run by vastly different institutions in places with many different types of challenges, so it is likely that the range of outcomes observed in the best available studies is due to this variation. More rigorous research is necessary to obtain more clarity on the impacts of PPP in foundational learning outcomes in developing countries.

# Education and Public-Private Partnerships in Sindh

In Pakistan, the provincial level is responsible for providing education at all levels, and our focus will be on the province of Sindh, located in the south-eastern region of the country. Sindh has 47 million inhabitants who are almost equally divided among rural and urban areas<sup>xxviii</sup>. Sindh is relatively wealthy (its GDP per capita is three times that of the rest of the country) and hosts the largest city and most important economic centre of the country, Karachi.

Sindh has approximately 42,000 primary schools<sup>xxix</sup> and spends around 20% of the provincial budget on education<sup>xxx</sup>. However, its schools are often in very poor condition: about half do not have drinking water or toilet facilities, and 63% do not have electricity. Despite advancements in access, nearly 7 out of the 12 million children aged 5-16 in the province remain out of school, equivalent to 56% of total.

To help address challenges like this, the federal government of Pakistan has, since the early 1990s, established semi-autonomous education foundations in each of its four provinces responsible for making education interventions including but not limited to

PPPs. The Sindh Education Foundation (SEF) is currently in charge of 2,620 schools with 865,000 students and more than 23,000 teachers, and is vastly expanding its portfolio, building around 1,000 new schools<sup>xxxi</sup>. It was followed, within the provincial government, by the establishment of a PPP Policy Board to approve PPP projects<sup>xxxii</sup>, led by the chief minister's house, and a PPP unit within the Finance Department to assist the Policy Board in promotion and development of PPPs<sup>xxxiii</sup>.

This bureaucratic structure is supported by a set of regulations governing the use of PPPs. The Sindh Public-Private Partnership Act of 2010\*\*\*, which was written primarily with infrastructure projects in mind, outlines at least 14 categories of PPPs, from simple "build and transfer" models (when the private sector finances and builds education infrastructure and then hands it over to the public sector to operate) to joint ventures, (in which a company is co-owned and operated by the public and private sector partners) and many others\*\*. In 2015, an amendment was passed to incorporate a broader set of PPP services into this legal framework.

In 2017, Sindh became the first province in Pakistan to produce a comprehensive document outlining all the processes and practices involved in becoming a PPP partner, the PPP Guide and Toolkitxxxvi. This document indicates, for example, that operators selected to run a PPP in partnership with the Sindh government have management independence but must achieve certain key performance indicator (KPIs). These are tied to the level of financial compensation that the private sector receives and are monitored by the public sector to ensure that the agreed objectives are being met.

Though there is no standard template for these KPIs, the School Education & Literacy Department has evaluated schools being handed over through PPPs under EMOs (Education Management Organisations) Reform Project, for example, through three pillars: Management and Organisation, Learning and Teaching, and School Ethos and Community Engagement. SEF then conducts its own assessment of the schools by outsourcing to a specialised company.

Two types of PPP structures of the "build and operate" type are by far the most common in Sindh. The first is the Foundation-Assisted Schools (FAS) program, run by

SEF, a result of the integration of the Foundation's four previous programs<sup>xxxvii</sup>, (i) the SEF Assisted Schools (SAS), (ii) the Promoting Private Schools in Rural Sindh (PPRS) program – to be further explained later in this document – (iii) he Existing Schools Support Program (EESP), and (iv) the SEF Middle and High School Program (SMHSP).

FAS works through a per-child subsidy model paid by the government to private operators, which are selected through a transparent bidding process. When selected, they must commit to ensuring a certain level of educational indicators.

The second common PPP structure in Sindh is the Education Management Organisations (EMO) programxxxviii, similar to the Concession Schools model in Colombia. It has been used in several schools in Sindh since 2016, including some built with funds from the United States Agency for International Development (USAID). Under this program, the School Education & Literacy Department outsources the management and administration of certain public schools in Sindh to EMOs under a public-private partnership contract with substantial public financing.

Institutions partnered with the government in the EMO program, which can be forprofit or non-profit, are responsible for every aspect of the school's operation, from infrastructure maintenance to delivering the curriculum while the government maintains ownership of the land and buildings. Teaching involves both government teachers and teachers hired on contract by the EMO.

In other words, in both programs the schools are owned by government and no fees can be charged. But in an EMO, the school is outsourced to a non-profit or profit organisation through a competitive process and is paid the price in the bid. For the FAS, the school is adopted voluntarily by a private individual or organisation, who then becomes responsible for improving management and operations.

#### The stakeholders

- The Sindh Education and Literacy Department (SELD) is the provincial government arm responsible for education and has an established "PPP node" to identify and manage these types of projects.
  - The Sindh Education Foundation (SEF), established under the Sindh Education Foundation Act of 1992, is a semi-autonomous organisation with a mandate to support education in the province through a range of interventions.
- Private schools are major stakeholders in achieving learning outcomes for Pakistani children. Pakistan has a high share of private enrolment in education, which has grown exponentially since the 1990s.
- Private partners in PPPs are diverse. Some are individual entrepreneurs
  (in the case of SEF programs), others may be large organisations (in
  the case of the EMO model in Sindh).
  - Major non-governmental organisations, such as The Citizen's
     Foundation (TCF), Indus Resource Center (IRC), HANDS, Hari Welfare and Idara-e-Taleem-o-Aagahi (ITA), are active in education in Pakistan and are frequently partners in PPPs.

# Evidence on the PPRS (Promoting Low-Cost Private Schooling in Rural Sindh) program<sup>xxxix</sup>

The PPRS program, designed and administered by SEF and now under the FAS umbrella previously mentioned, consists of the establishment and operation of new schools by private providers in rural villages in the province. Schools are required to admit all children free of charge, and in turn received a subsidy per student, with compensation based on a formula using verified attendance. They also receive free

school leadership and teacher training, as well as free textbooks, other teaching and learning materials and stationery.

SEF selected districts to participate in the program based on a few criteria that underscored where they could achieve maximum gains: where the size of the out-of-school children population, the gender disparity in school enrolment, and the percentage of households located at least fifteen minutes away from the nearest primary school were largest.

In the first stage, 263 villages were identified as fitting the criteria for the program. Then, they were randomly assigned to three groups. In the first group, with 100 villages, the program was established with a subsidy per student that was the same for girls and boys: 350 rupees per student per month, equivalent to 5 dollars. In the second group, with 100 separate villages, the subsidy per student was 350 rupees for boys and a larger one, 450 rupees, for girls. The remaining 63 villages did not receive any intervention: the idea was that they would serve as control group, a basis of comparison to understand what would have happened without the program.

The first schools were established in the summer of 2009. Their management is highly decentralised, with operators experiencing wide discretion in how they choose teachers, for example, with lower qualifications required than the rule for government teachers.

The study shows that after 1.5 school years, the program increases enrolment by 30 percentage points in both treatment groups when compared to the control group. The controlled villages had a percentage of correct answers of 46.9%, while the treated villages exhibited a higher percentage of correct answers at 66.7%. In other words, students from program schools scored higher in tests than students from government schools, despite coming from more disadvantaged backgrounds. Enrollment and test scores, as compared to baseline, did not differ by gender or subsidy treatment.

Though there is no clear or single explanation for these positive results, and especially for the absence of any differences in outcomes for boys and girls, the authors

conclude that "program schools selected inputs similar to those of a social planner who internalises all the education benefits to society".

In other words, this means that school operators in both treatment groups did what the government expected them to do and is best for the public interest: they hired teachers, made sure school infrastructure was appropriate and so on, which led to higher levels of attendance and learning. The study has its limitations in terms of the time horizon and the aspects of education it covered, and its results cannot be necessarily extrapolated. However, it shows promising signs of how PPPs can improve learning in very underprivileged contexts.

#### Themes of attention in education PPPs

Now that we have a better understanding of the institutional scenario and the existing programs in Pakistan, as well as the best available evidence about PPPs in education, we can consolidate lessons on best practices and draw some general guidance.

Here are nine areas of attention within education PPPs that have been arisen in interviews and research, and that education policymakers should be attentive to when considering implementing PPPs in their own context:

# Institutional capacity

One paradox of introducing an education PPP in the Global South is that it is often triggered by a lack of capacity in the public sector – financial, technical, and otherwise – to provide access and quality. However, the successful implementation of PPPs requires the existence of a public sector able to run, for example, a fair bidding process based on merit, with capacity to assess learning outcomes and the ability to ensure enforcement of rules – both complex tasks. To put it another way:

"The finding that the private sector can run schools better than an under-funded, under-staffed Ministry in a hypothetical developing country (clearly a contested premise) is no indication that that same developing country Ministry can run the procurement, monitoring and evaluation, and overall governance of a public-private partnership more effectively than it manages its own schools"xl.

Similarly, successful PPPs require a private sector and/or a civil society and non-governmental sector with considerable management and financial capacity, which is not present in many contexts. But even when starting from a relative lack of capacity, a positive, self-reinforcing loop of incremental capacity building in public, private and civil society organisations<sup>xli</sup> can be produced when good incentives are introduced in each of these spheres and their interactions are enhanced.

"Capacity development is achieved as much by managing the relationships and interactions between and amongst organisations as it is increasing the efficiency of individual organisations. Such an approach gives added importance to the need for co-ordination, the management of diverse perspectives and conflict resolution".

#### Institutional resistance

PPPs are often not fully understood or embraced even in contexts when they have been a familiar presence for some time, like Pakistan. As in other education reforms, the difference between failure and success in PPPs may be due to stakeholder buyin and ownership across the system, so clearing up misconceptions and working through institutional resistances is usually an important aspect of making PPPs work.

# Regulatory framework

A sound and robust legal and regulatory framework are a pre-requisite for successful PPPs<sup>xlii</sup>. Sindh has put in place legislation and regulation which, according to both government and private actors, gives PPPs greater regulatory certainty and a more stable framework in which to set responsibilities and obligations, making it more likely that projects will achieve their declared goals.

Anyone looking to implement PPPs in their context should identify the laws and regulations governing PPPs that are currently in place and engage with political actors and technical staff to make sure they can build and support the required legal and regulatory framework to allow PPPs to thrive.

# > Accountability mechanisms

Accountability frameworks should be a key part of any PPPxiiii and aim to hold private actors to account, making it more likely that these private actors will be aligned with the public purpose. Strong accountability systems can help deliver successful outcomes and avoid the risky and lengthy avenue of litigation in the event of non-compliance, underperformance, or a breach of contract. Beyond the relationship between government and private actors, accountability should incorporate the concerns of communities in which projects are being implemented, and mechanisms should be put in place to inform and engage these communities regularly.

# Measurement and assessment

Assessment is a key pillar of any educational system and allows teachers, schools, and administrators to monitor learning and adjust accordingly. As previously stated, financial compensation for PPPs in Sindh is often tied to the achievement of certain key performance indicators (KPIs), and this measurement is executed by a third-party (in 2022, through a company named SIBA Testing Services). Those interested in creating PPPs in their own contexts should take special care in guaranteeing the quality, reliability and frequency of the data being provided.

# Private regulation

The question of who holds de facto political power over regulations pertaining to PPPs affects the way those will develop. Private providers with stronger political representation, for example, may be able to push for terms that are more favourable to them. Issues of monopoly power, for example, can arise when there is only one provider in a particular area, creating an imbalance in the public-private relationship.

# > Scalability of best practices

One commonly used rationale to justify PPPs in any policy area is the supposed greater ability of the private sector to innovate. However, private actors may resist sharing their innovations to maintain their competitive advantage, or simply due to a lack of

communication channels and the fragmentation of the system. Education policymakers must be aware of these risks and put in place transparency requirements and mutual learning mechanisms to ensure that best practices are shared widely across the educational system.

# > Equity concerns

Market mechanisms may exacerbate pre-existing inequalities, and this is often a concern in the private provision of public services. Private actors seek efficiency, and achieving greater returns may tend to mean reaching those easiest to reach. In a country like Pakistan, where regional, social and gender gaps in education are substantial, this concern needs to be incorporated into the PPPs' design and contract.

# Contract flexibility

PPP contracts should make room for constant improvement and the incorporation of mutual learning as the partnership progresses. Unexpected issues as varied as the pandemic and extreme inflationary pressures may arise during the contract period and affect its provisions. Even though no contract will be able to anticipate every issue, some in-built flexibility may diminish the risk of sub-par delivery but needs to simultaneously avoid the wiggle-off of responsibilities.

# **Learning tasks**

We encourage readers to reflect on the themes of this document by completing the learning tasks available in the <u>library of Global Public Goods</u>.

#### **Endnotes**

Tabassum, R., Zahid, J., & Saleem, K. (2017). Gaps and Challenges in Public Financing of Education in Pakistan. Journal of Education and Practice, 8(1), 18-28. Retrieved from <a href="https://www.researchgate.net/publication/314065681">https://www.researchgate.net/publication/314065681</a> Gaps and Challenges in Public Financing of Education in Pakistan.

- Own estimate based on official data from SEF and PEF
- Pakistan Bureau of Statistics. (n.d.). Pakistan Social and Living Standards Measurement. Retrieved from <a href="https://www.pbs.gov.pk/content/pakistan-social-and-living-standards-measurement">https://www.pbs.gov.pk/content/pakistan-social-and-living-standards-measurement</a>
- № Dawn News. (2021, September 9). The missing third: An out-of-school children study of Pakistani 5-16 year-olds. Dawn. Retrieved from <a href="https://www.dawn.com/news/1643918">https://www.dawn.com/news/1643918</a>
- v UNICEF Pakistan. (n.d.). Education. Retrieved from <a href="https://www.unicef.org/pakistan/education">https://www.unicef.org/pakistan/education</a>
- vi UN Women. (n.d.). Pakistan. Retrieved from https://data.unwomen.org/country/pakistan
- vii World Bank. (2019). Learning Poverty Brief. Retrieved from <a href="https://thedocs.worldbank.org/en/doc/214101571223451727-0090022019/original/SASSACPKPAKLPBRIEF.pdf">https://thedocs.worldbank.org/en/doc/214101571223451727-0090022019/original/SASSACPKPAKLPBRIEF.pdf</a>
- viii UNICEF UK. (2011, October 20). Schools for more than 2 million children in Pakistan remain inaccessible due to devastating floods. Retrieved from <a href="https://www.unicef.org.uk/press-releases/schools-for-more-than-2-million-children-in-pakistan-remain-inaccessible-due-to-devastating-floods/">https://www.unicef.org.uk/press-releases/schools-for-more-than-2-million-children-in-pakistan-remain-inaccessible-due-to-devastating-floods/</a>
- № Shah, N. (2020, July 30). COVID-19 School Closures Hit the Poorest Hardest in Pakistan. Center for Global Development. Retrieved from <a href="https://www.cgdev.org/blog/covid-19-school-closures-hit-poorest-hardest-pakistan">https://www.cgdev.org/blog/covid-19-school-closures-hit-poorest-hardest-pakistan</a>
- ×VOA News. (2011, October 20). Pakistan Floods Have Kept Over 2 Million Children from School, UN Says. VOA News. Retrieved from <a href="https://www.voanews.com/a/pakistan-floods-have-kept-over-2-million-children-from-school-un-says/6818193.html">https://www.voanews.com/a/pakistan-floods-have-kept-over-2-million-children-from-school-un-says/6818193.html</a>
- xi Filmer, D. (2020, November 4). COVID-19 school closures fueled big learning losses, especially for the disadvantaged. World Bank Blogs Development Talk. Retrieved from <a href="https://blogs.worldbank.org/developmenttalk/covid-19-school-closures-fueled-big-learning-losses-especially-disadvantaged">https://blogs.worldbank.org/developmenttalk/covid-19-school-closures-fueled-big-learning-losses-especially-disadvantaged</a>
- xii Pakistan Institute of Development Economics (PIDE). (n.d.). Primary Education in Pakistan. Retrieved from <a href="https://pide.org.pk/research/primary-education-in-pakistan/">https://pide.org.pk/research/primary-education-in-pakistan/</a>
- xiii Bruns, B., Filmer, D., & Patrinos, H. A. (2011, August 31). Designing Effective Public-Private Partnerships for Education. World Bank Blogs: Education for Global Development. Retrieved from <a href="https://blogs.worldbank.org/education/designing-effective-public-private-partnerships-education">https://blogs.worldbank.org/education/designing-effective-public-private-partnerships-education</a>

- xiv Felipe Barrera-Osorio, David S. Blakeslee, Matthew Hoover, Leigh Linden, Dhushyanth Raju, Stephen P. Ryan; Delivering Education to the Underserved through a Public-Private Partnership Program in Pakistan. *The Review of Economics and Statistics* 2022; 104 (3): 399–416. doi: https://doi.org/10.1162/rest\_a\_01002
- \*\*The World Bank Group. (n.d.). About Public-Private Partnerships. Retrieved from https://ppp.worldbank.org/public-private-partnership/about-us/about-public-private-partnerships
- <sup>xvi</sup> Bruns, B., Filmer, D., & Patrinos, H. A. (2011, August 31). Designing Effective Public-Private Partnerships for Education. World Bank Blogs: Education for Global Development. Retrieved from <a href="https://blogs.worldbank.org/education/designing-effective-public-private-partnerships-education">https://blogs.worldbank.org/education/designing-effective-public-private-partnerships-education</a>
- xvii Levin, H. M. (2011). A Comprehensive Framework for Evaluating Educational Vouchers. Teachers College Press, Columbia University.
- World Bank. (n.d.). Primary education, private (% of total primary education) Pakistan. Retrieved from <a href="https://data.worldbank.org/indicator/SE.PRM.PRIV.ZS?locations=PK">https://data.worldbank.org/indicator/SE.PRM.PRIV.ZS?locations=PK</a>
- xix Carneiro, P., Das, J., Reis, H. (2019). The Value of Private Schools: Evidence from Pakistan. Institute for Fiscal Studies Working Paper, W19/17. Retrieved from <a href="https://www.ifs.org.uk/uploads/WP201917-The-value-of-private-schools-evidence-from-pakistan.pdf">https://www.ifs.org.uk/uploads/WP201917-The-value-of-private-schools-evidence-from-pakistan.pdf</a>
- xx Jhagra, K. W. (2015). Factors Affecting Learning Outcomes In Pakistan: An Analysis Of The Private School Premium. Lahore Journal of Economics, 20(1), 27-53. Retrieved from <a href="https://core.ac.uk/download/pdf/188775129.pdf">https://core.ac.uk/download/pdf/188775129.pdf</a>
- xxi Carneiro, P., Das, J. and Reis, H. 2022. The Value of Private Schools: Evidence from Pakistan. RISE Working Paper Series. 22/091. https://doi.org/10.35489/BSG-RISE-WP 2022/091
- Leckie, G., & Baird, J. (2019). Primary School Class Size Reduction: A Systematic Review. UCL Institute of Education. Retrieved from <a href="https://www.ucl.ac.uk/~uctppca/paper 20190711.pdf">https://www.ucl.ac.uk/~uctppca/paper 20190711.pdf</a>
- UNESCO. (2013). Role of non-state providers of education in Pakistan: who chooses, who loses? Retrieved from <a href="https://unesdoc.unesco.org/ark:/48223/pf0000383517">https://unesdoc.unesco.org/ark:/48223/pf0000383517</a>
- wiv Wodon, Q., & Ying, Y. (2009). Literacy and Numeracy in Faith-Based and Government Schools in Sierra Leone. Policy Research Working Paper, 4951. Retrieved from https://ideas.repec.org/p/pra/mprapa/16462.html
- xxx Barrera-Osorio, F., de Galbert, P., Habyarimana, J., & Sabarwal, S. (2015). The Impact of Public-Private Partnerships on Private School Performance: Evidence from a Randomized Controlled Trial in Uganda. International Growth Centre Working Paper, 15/0954. Retrieved from <a href="https://assets.publishing.service.gov.uk/media/57a09dce40f0b64974001a68/5">https://assets.publishing.service.gov.uk/media/57a09dce40f0b64974001a68/5</a> PPP Uganda Barre raetal.pdf
- xxvi Education Partnerships Group & Ark. (2017). Public-Private Partnerships in Education in Developing Countries: A Rigorous Review of the Evidence. Retrieved from <a href="https://epg.org.uk/wp-content/uploads/2021/06/EPG-PPP-Report.pdf">https://epg.org.uk/wp-content/uploads/2021/06/EPG-PPP-Report.pdf</a>
- <sup>xxvii</sup> Ali, M., & Andrabi, T. (2014). Private versus public schooling in urban Pakistan: A comparative analysis. International Journal of Educational Development, 34, 25-36. https://doi.org/10.1016/j.ijedudev.2013.11.005
- Pakistan Bureau of Statistics. (2017). Sindh Population Table. Retrieved from https://www.pbs.gov.pk/sites/default/files/population/2017/tables/sindh/Table01p.pdf

- xxix H.A.R.I. Foundation. (2022). The Political Economy of Education in Sindh in 2021. Retrieved from <a href="https://hariwelfare.org/wp-content/uploads/2022/05/The-Political-Economy-of-Education-in-Sindh-in-2021.pdf">https://hariwelfare.org/wp-content/uploads/2022/05/The-Political-Economy-of-Education-in-Sindh-in-2021.pdf</a>
- xxx Asian Development Bank. (2017). Education Management Organizations Program in Sindh, Pakistan: Public–Private Partnership Profile. Retrieved from https://www.adb.org/publications/sindh-pakistan-education-management-ppp-profile
- xxxi Sindh government presentation
- https://www.canva.com/design/DAE4gddtrgk/KnlCpMSOelYpvRnryBbsAA/view?utm\_content=D AE4gddtrgk&utm\_campaign=designshare&utm\_medium=link&utm\_source=publishsharelink#6
- Asian Development Bank. (2021). Sindh Education Sector Plan Support Program. Retrieved from https://www.adb.org/projects/46538-002/main
- Finance Official Website: <a href="https://finance.gos.pk/SpecializedUnits/PPP">https://finance.gos.pk/SpecializedUnits/PPP</a>
- wxiv Government of Sindh. (2018). Public-Private Partnership Act 2018. Retrieved from <a href="http://seld-pppn.gos.pk/uploads/resources/PPP%202018%20act\_updated.pdf">http://seld-pppn.gos.pk/uploads/resources/PPP%202018%20act\_updated.pdf</a>
- www.Government of Sindh. PPP Guide and Toolkit. November 2017. Retrieved from <a href="http://www.sindheducation.gov.pk/Contents/Menu/Final-PPP%20Guide%20Toolkit%20141117.pdf">http://www.sindheducation.gov.pk/Contents/Menu/Final-PPP%20Guide%20Toolkit%20141117.pdf</a>
- www.Government of Sindh. PPP Guide and Toolkit. November 2017. Retrieved from <a href="http://www.sindheducation.gov.pk/Contents/Menu/Final\_PPP%20Guide%20Toolkit%20141117.pdf">http://www.sindheducation.gov.pk/Contents/Menu/Final\_PPP%20Guide%20Toolkit%20141117.pdf</a>
- xxxvii Sindh Education Foundation. (n.d.). Foundation Assisted Schools. Retrieved from <a href="https://www.sef.org.pk/foundation-assisted-schools/">https://www.sef.org.pk/foundation-assisted-schools/</a>
- Asian Development Bank. (2019). Education Management Organizations Program in Sindh, Pakistan: Public–Private Partnership Profile. Retrieved from <a href="https://www.adb.org/publications/sindh-pakistan-education-management-ppp-profile">https://www.adb.org/publications/sindh-pakistan-education-management-ppp-profile</a>
- xxxix Felipe Barrera-Osorio, David S. Blakeslee, Matthew Hoover, Leigh Linden, Dhushyanth Raju, Stephen P. Ryan; Delivering Education to the Underserved through a Public-Private Partnership Program in Pakistan. The Review of Economics and Statistics 2022; 104 (3): 399–416. Doi: <a href="https://doi.org/10.1162/rest-a-01002">https://doi.org/10.1162/rest-a-01002</a>
- <sup>xl</sup> Public-Private Partnerships in Education in Developing Countries. A rigorous review of the evidence (June 2017) Education Partnerships Group and Ark) <a href="https://epg.org.uk/wp-content/uploads/2021/06/EPG-PPP-Report.pdf">https://epg.org.uk/wp-content/uploads/2021/06/EPG-PPP-Report.pdf</a>
- Morgan, P. (2012). Capacity Development and Public Private Partnerships. United Nations Development Programme. Retrieved at: <a href="https://www.gdrc.org/uem/undp-capacity.html">https://www.gdrc.org/uem/undp-capacity.html</a>
- World Bank. (2019, April 29). Designing Effective Public-Private Partnerships in Education. Retrieved from <a href="https://blogs.worldbank.org/education/designing-effective-public-private-partnerships-education">https://blogs.worldbank.org/education/designing-effective-public-private-partnerships-education</a>
- World Bank. (2019, April 29). Designing Effective Public-Private Partnerships in Education. Retrieved from <a href="https://blogs.worldbank.org/education/designing-effective-public-private-partnerships-education">https://blogs.worldbank.org/education/designing-effective-public-private-partnerships-education</a>