The Impact of Private Schools, School Chains, and Public-Private Partnerships in Developing Countries

Lee Crawfurd and Susannah Hares

Abstract

How should governments and donors engage with the growing private sector in education in developing countries? Enrolment in private schools now exceeds 50 percent at the primary level in many major urban centres across Africa and Asia. Whilst the majority of these schools are small and independently owned and operated, much policy attention has focused on chains or networks of private schools, and on public-private partnerships, as routes for public and philanthropic engagement. In this paper we review the evidence on the effects of individual private schools, private school chains, and public-private partnerships (PPPs) on learning, equity, and efficiency. We adopt a comprehensive search strategy for eligible studies, with transparent search criteria. We build on and update prior reviews by Ashley et al. (2014) and Aslam et al. (2017). The search resulted in over 100 studies on low-cost private schools and PPPs, with a large majority being on low-cost private schools. We also provide original analysis of five datasets on school chains. Though some private school students do achieve better learning outcomes, much of this advantage is due to selection of wealthier or better motivated students. What true positive value-added remains is typically small and insufficient to help children achieve meaningfully better learning goals or life outcomes. The very poorest children do not access private schools. School chains are not a major part of education systems and have limited growth potential, making them peripheral in solving the twin challenges of enrolment and learning. Public-private partnerships have shown limited value in improving quality but may represent a low-cost means of increasing access to school. Given the reality that private schools educate a large share of students in many countries, more evidence is needed on how governments can best support these children.

Keywords: private schools, chains, PPPs, developing countries

JEL codes: I25, I28, H52, O15

Center for Global Development
www.cgdev.org

Working Paper 602
December 2021

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This work was supported by the UNESCO Global Monitoring Report and was first released as a Global Monitoring Report background paper.

Lee Crawfurd and Susannah Hares. 2021. "The Impact of Private Schools, School Chains, and Public-Private Partnerships in Developing Countries." CGD Working Paper 602. Washington, DC: Center for Global Development. https://www.cgdev.org/publication/impact-private-schools-school-chains-and-public-private-partnerships-developing

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1. Introduction

Nearly 100 million children attend private primary schools, the majority of whom live in low- and middle-income countries. Overall, this equates to 19 percent of primary school students in low- and middle-income countries. This compares with 12 percent in OECD countries, 14 percent in sub-Saharan Africa, 19 percent in Latin America, and 38 percent in South Asia—up from under 20 percent in 2000.[1] Across urban India and major urban centres in Africa and Latin America, the share of pupils in private schools is over half. Private enrolment in low- and middle-income countries is even higher at secondary school (28 percent) and preprimary school (41 percent). Growing enrollment in fee-charging institutions comes amid a renewed focus by policymakers on school effectiveness at reaching learning goals. Thus, the question of the effectiveness of different school types in reaching these goals is critical. As the private sector does play a substantial role in most education systems, it is important to better understand what policy levers can improve outcomes and wellbeing for children attending private schools. Since millions of children now attend them, governments must grapple with the question of what should be done—how should existing private schools be regulated and should further growth be supported or discouraged.

To what extent should governments partner with private schools to meet education goals? There is still much to learn about Public-Private Partnerships. Partnering with existing private schools may in some cases be a viable strategy to rapidly increase access at lower cost than expanding access through the public sector (Barrera-Osorio et al., 2017, 2016). This may be particularly attractive for secondary education or pre-primary education where enrolment is still low. Some supporters of PPPs also suggest they can improve performance through better management or increased competition, with the public sector incentivized to react in education systems funded through per-capita payments (Friedman and Friedman, 1962). Others highlight risks, including the challenge for governments to supervise a mixed sector and the potential for PPPs to further segment education systems leading to increased inequity (Patrinos et al., 2009).

In this paper we review three strands of recent literature on private schools. First, we review the evidence on the effectiveness of private schools in developing countries at improving student outcomes, updating a prior review (Ashley et al., 2014). Second, we focus on those private schools that are part of a chain or network. Third, we consider the effectiveness of private schools that receive public funding as part of a public-private partnership (PPP) arrangement, updating another earlier review (Aslam et al., 2017).

The recent studies on private school effectiveness are broadly in line with earlier studies—the private school advantage over public schools is small if at all positive. Where private school students do perform better than public school students on learning assessments, this gap drops sharply after controlling for family background and important unobserved factors.

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[1] UNESCO Institute for Statistics via World Bank Open Data https://data.worldbank.org/indicator/SE.PRM.PRIV.ZS

We find just five studies that compare the performance of private schools in developing countries that are members of chains or networks with other private or government schools. We complement this literature review with new analysis of five different datasets on school chains. Overall, the evidence suggests that schools in chains or networks achieve similar outcomes to independent private schools. Neither are schools more consistent than independent schools. Finally, we see little scope for any particular chain to reach sizable scale, ultimately therefore remaining peripheral to public education systems.

Turning to public-private partnerships, we find just five additional rigorous studies since the 2017 review. Two of these are on contract schools in Liberia, two on the province of Punjab in Pakistan, and one on Chile's voucher programme. The new evidence is consistent with the conclusions of the earlier review—it is inconclusive and context specific. In their evaluation of Liberia's contract schools programme, Romero et al. (2020) and Romero and Sandefur (2019) highlight the risks of undertaking a PPP in fragile states, and show how challenging it is for a government to successfully and sustainably partner with the private sector. The design of the PPP contract matters, but so does the government's ability to enforce the terms of the contract.

In section 2 we discuss results on private school effectiveness, in section 3 on school chains, in section 4 on public-private partnerships, and conclude in section 5.

2. Private schools

2.1. Study selection

We review empirical studies on the effectiveness of private schools in developing countries published since the last major review in 2014. We began by searching Google Scholar, using a set of defined terms covering types of schools, combined with the name of each low- and middle-income country. The search terms were; Private schools; privatization; school competition; low-fee private schools. We supplement these papers with searches of the Africa Education Research Database,[2] the NBER working paper series, and the Evidence Hub produced by the University of Cambridge REAL Centre and the Education Partnerships Group (EPG).[3] The search was conducted between September and October 2020. We classify papers according to the framework laid out in (Hinton et al., 2015) and used by Ashley et al. (2014). Studies are first categorised as a) primary and empirical, b) secondary, or c) theoretical and conceptual). In this paper we focus on those that are primary and empirical, and within this category those that are experimental or quasi-experimental. A full listing of studies from all categories is included in the appendix.

[2] https://essa-africa.org/AERD
[3] https://edpartnershipsevidence.org

Our initial search yielded 328 studies. Of these, we exclude 43 studies that are duplicates or out of scope. We focus first on the 18 studies that are experimental or quasi-experimental. The 17 quasi-experimental studies include nine using value-added models, three using propensity score matching, two allowing for proportional selection on unobservables (Oster, 2016), one using an instrumental variable, one using difference-in-difference, and one using regression discontinuity.

We find 14 studies that estimate the effect of attending a private school on learning outcomes with a credible counterfactual. Of these, two are randomized control trials, nine use value-added models, and three assess the sensitivity of observational estimates to selection on unobserved variables (following Oster, 2016). This represents an improvement in the overall rigour of the evidence base since Ashley et al. (2014).

Six studies are in South Asia, five in sub-Saharan Africa, one in Latin America (Peru), and one in various countries from the PISA, TIMSS, and PIRLS samples.

2.2. Effectiveness of private schools

Seven studies find a positive overall effect, and six find mixed or zero effects. This is in line with the 2014 review that found "moderate evidence" that children in private schools learn more than their peers in government schools.

Two papers report on a randomized controlled trial in Delhi in which children were offered vouchers to attend low-cost private schools. Vouchers amounted to around $117 per year, and participating private schools were in the low end of the fee distribution. Dixon et al. (2019) use the lottery as an instrument to estimate the effect of attending low-cost private schools (compared to nearby government schools) after four years, finding positive impacts on English but negative impacts on Hindi. Crawfurd et al. (2021) revisit the same students after six years, finding that the positive impact on English is no longer statistically significant and the negative effects on Hindi have strengthened. This may be explained by differing effects for different students, with some positive private school effects remaining for those mostly likely to have otherwise attended a government school.

Eight studies report estimates from value-added models. Of these, five find positive effects. Eigbiremolen (2019) finds positive effects using data from the Young Lives survey project in Ethiopia. Around 10 percent of primary children attend private schools in Ethiopia, making this a relatively high-income population, though the paper does not report information on fees or costs. Rolleston and Moore (2018) use Young Lives data from Andhra Pradesh, India, finding positive estimates (this is also the site of an earlier study by Singh, 2015). Kumar (2016) also uses data from Andhra Pradesh, India, finding that positive effects are only apparent in procedural mathematics questions, and not more challenging reasoning-based questions. Gupta (2020) uses data from Pratham on pre-schools in India. 24 percent of pre-school children in her sample are in a private pre-school. Crawfurd (2017) uses administrative data from Ugandan secondary schools. Private secondary schools charge fees that are 37 percent higher than fees charged by public schools. As public schools also

receive substantial government funding, the cost of public schools is higher than private schools. Private schools perform 0.276 standard deviations better than public schools. Brandt (2019) uses a similar approach in Tanzania. He compares private secondary schools that charge similar fees to the average level of government spending per pupil in public secondary schools. He finds that after two years of secondary education pupils perform 0.54 standard deviations better.

Two papers using value-added models show students making no more progress in private schools than public schools. These are Eigbiremolen et al. (2020), using Young Lives data from Peru, and Zuilkowski et al. (2020) in Nairobi, Kenya. 26 percent of pupils attend private school in Peru, and around half in Nairobi.

Three papers adjust for both selection into private schools on observed characteristics, and a proportional amount of selection on unobserved characteristics. Patel and Sandefur (2020) use data for 30 low and middle-income countries from TIMSS and PIRLS, showing that the estimated effect of attending private school drops by half to two-thirds after adjusting for household wealth and proportional unobserved selection. Azam et al. (2016) use propensity score matching and proportional selection on unobservables to show a positive effect in Rajasthan but a null effect in Orissa state, India. Using PISA data, Sakellariou (2017) finds public and private schools achieve equivalent mathematics results in most of the 40 countries analyzed (including Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru, Uruguay, Indonesia, and Jordan).

How big are all of these (relative) effect sizes in absolute terms? Few papers report outcomes on a more tangible scale than "standard deviations of learning". In Delhi, where a negative effect on learning was found, a 0.09 standard deviation reduction in test scores due to winning a voucher was equivalent to being able to read 4 fewer words per minute—compared to an average of 47 words (Crawfurd et al., 2021). One observational study (Alcott and Rose, 2016) reports that children who attended private school were 6–8 percentage points more likely to have learnt 'the basics'—defined as being able to read a paragraph and do basic multiplication—by the end of primary school. This still leaves a large share of students, particularly poorer ones, unable to complete the basics.

The findings from these 13 studies published since 2014 are broadly consistent with the findings of an earlier review summarising 59 studies published between 2008 and 2014 (Ashley et al., 2014). That review concluded that there is moderate evidence that children attending private schools achieve better learning outcomes. But since many studies do not fully account for the social and economic background of children, there are ambiguities about the true effect of private schools. This recent evidence reinforces the earlier findings. In some places students in private schools do achieve better learning outcomes, but much of this advantage is due to selection of wealthier or better motivated students. What true positive value-added remains is typically small, and insufficient to help children achieve meaningful learning goals or improved life outcomes.

The Ashley et al. review suggested that private schools have better learning outcomes, but their causal effect is unclear due to inadequate controls for family background. The more

recent evidence reinforces that conclusion. More importantly, any difference between public and private schools is marginal at best and learning outcomes across both sectors are woefully low.

2.3. Implications for equity

Private schools may not be a viable route to reach the poorest children, even when they are "low-fee". Perhaps the most serious concerns about private schooling in the developing world are unrelated to any learning differentials between public and private schools, but about whether private schools exacerbate gaps between rich and poor and increase socio-economic segregation. Ashley et al. (2014) found weak and inconclusive evidence about equity, accessibility, and affordability of private schools for poor children. They did however find evidence in some contexts (particularly India and Pakistan) that boys are more likely to attend private schools than girls.

We found seven studies that focus on the geographical and financial accessibility of private schools for children from poorer households. Nguyen and Raju, (2015) show that private schools are geographically concentrated in Pakistan, with just a few districts mainly in northern Punjab accounting for most of the private school students. While one third of all students attend private schools, they tend to come from urban, wealthier, and more educated households. Another study from Pakistan (Siddiqui, 2017) shows that segregation by poverty is higher in the private sector compared to government schools. In rural Nigeria, fewer than 5 percent of children in the poorest 40 percent of the population attend private school (Harma, 2016).

Srivastava and Noronha (2016) study household costs in one Delhi slum under India's Right to Education Act. The Act is intended to cover the cost of going to private school for children from disadvantaged backgrounds. They find very low instances of children with free access to private schools. Those children who did have "free" private school seats nevertheless incurred high costs of accessing schooling. Similarly in Kenya, Zuilkowski et al. (2020) find that fees charged by "low-cost private schools" are often a heavy burden on poor families.

Baum et al. (2018) show that while the private education market has helped expand access to schooling in Lagos, access to higher-quality education services in the private sector is primarily available only to students from the upper ends of the income distribution. Similarly, Endow (2018) shows that while low-cost private schools are largely attended by children from poor households, they offer little in terms of learning achievement.

Analysis across countries using PASEC, ASER, SACMEQ and LLECE data, shows that with a few exceptions, very few children in the poorest economic quintile are enrolled in private schools (Patel and Sandefur, 2020).

Apart from geographical and financial accessibility concerns related to private schools, there are also concerns about whether private schools are equally accessible for both boys and girls.

Households in India (Datta and Kingdon, 2019) and Indonesia (Asadullah and Maliki, 2018) are more likely to enrol boys than girls in private schools. To the extent that private schools do provide better quality, then girls' disadvantage in access is problematic for equity.

Finally, new evidence from Nepal (Joshi, 2020) supports earlier research from India (Muralidharan and Sundararaman, 2015) showing that there are few spillovers from expanding private schools to students in public schools, though this is a concern that bears continued monitoring.

Overall, the newer research supports the earlier conclusion that the poorest children are unlikely to be able to access private schools. Ashley et al. (2014) suggested private schools have a neutral or negative effect on equity, based on evidence largely classified as weak. The recent evidence on equity is small and draws largely from descriptive studies. As things stand, there is not sufficient evidence to suggest that the private sector is a viable route to reach the poorest children.

In summary, it is not possible to conclude that private schools are worse or better than public schools and the evidence base is broadly similar to what it was back in 2014. Millions of children—including some very poor ones—are enrolled in low-cost private schools and so it makes sense to investigate how to make those schools better. But the greatest efforts surely must be invested in improving public schools, where the vast majority of kids are enrolled, to support them to deliver on education's promise to build a more equal and more prosperous society.

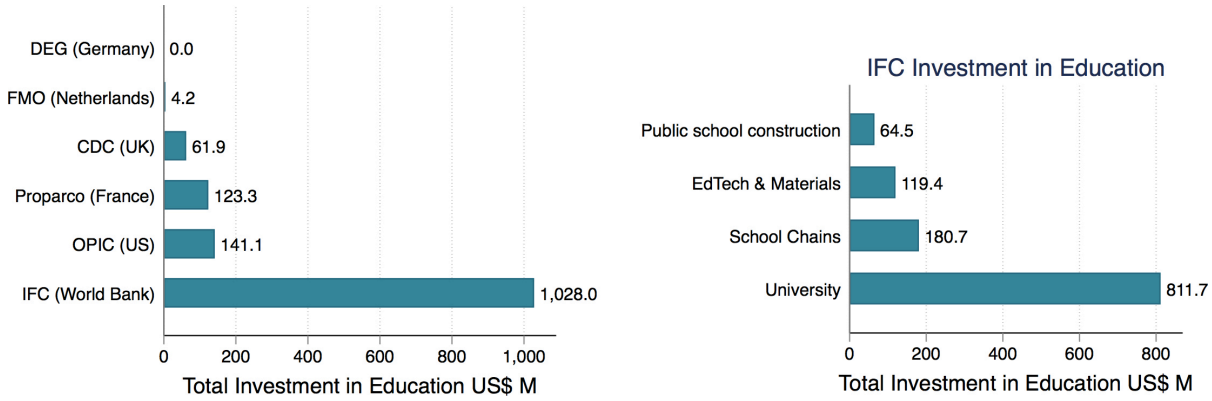
3. Private school chains

In this section we review the evidence on the potential for growth, quality, and consistency of school chains. We define chains broadly, to include both for-profit corporate groups, and non-profit charitable networks of schools. The literature on the effectiveness of private school chains is limited.

Philanthropists and official Development Finance Institutions often invest in private school chains and some argue that private school chains may prove to be valuable supplements to public education, with real potential to scale (Istance and Paniagua, 2019). A recent report by (Abdo et al., 2019) considers what private schools can do for public goods, but focuses primarily on case studies of eight private school networks. Featherston and Ferreira (2017) (Caerus Capital) argue that the biggest opportunities for investors in education in sub-Saharan Africa are in low-cost K-12 schools, whereas ancillary services are less likely to have the key positive attributes (Assomull et al., 2015). Of the Development Financial Institutions, the World Bank's International Finance Corporation (IFC) is by far the largest investor in education, with over $1 billion invested. The majority of IFC investments on education—$811 million—have been in higher education or adult training. Within the school sector, around half ($181 million) has gone on school chains (Figure 1), with this number rising in recent years (Smith and Baker, 2017). Most of these investments are

however targeted at elite institutions that are out of the reach of most parents in low-income countries (Mundy and Menashy, 2013).

Figure 1. Development finance institution investments in education



Note: The figure on the left shows total education investments by six major Development Finance Institutions between 2012 and 2016. The figure on the right shows the distribution of investments by the largest DFI in education—the World Bank IFC. The source for the figure on the left is Kenny et al. (2018). The source for the figure on the right is our analysis of IFC submissions to IATI.

The UK's development finance institution the CDC made five education investments between 2012 and 2017, of which two were in Bridge International Academies, one in the low-cost brand from elite private school chain GEMS, and two in the private university UNICAF.[4]

Critics on the other hand argue that the 'commercialisation' of education is highly dangerous. For example the UN Special Rapporteur on the right to education wrote that "commercial school chains thus threaten not only to impair the realization of the right to education, but also to damage democracy, social cohesion and stability in developing countries" (Barry, 2019).

Despite this attention from funders and investors and critics, we conclude that school chains have low overall market shares in developing countries, with a low likelihood of substantial growth (with a few exceptions, such as BRAC in Bangladesh and The Citizens Foundation (TCF) in Pakistan who both educate more than 200,000 children).

Detailed data on the amount of funding provided to school chains is not available. However, it's likely that the funding they receive is disproportionately large given that the vast majority of children who attend private schools do not attend one run by a chain.

[4] https://www.cdcgroup.com/en/our-impact/key-data/, Accessed 5 October 2020.

3.1. Study selection

We begin by following the same search protocol as outlined in section 3.1, with the search keywords "school chain; school network; school franchise", in the period since 2000. This search returns just two quasi-experimental studies that consider the role of private school chains, and so we also consider three observational studies. We then complement this review with new analysis of data on school chains from the UK, USA, Bangladesh, India, Pakistan, Nigeria, and Uganda.

3.2. Effect of chains on average learning outcomes

We know little about whether chains outperform individual private schools in test scores, since few studies have made this comparison directly. For those that have, there is no indication of consistently better results from chain schools.

We find just five studies that compare the performance of private schools in developing countries that are members of chains or networks with other private or government schools. Four of these are international chains, with just one paper covering national chains in Chile. A UK-based NGO which runs 28 secondary schools in Uganda ("PEAS") in Uganda performs slightly better than other (local) public-private partnership schools in terms of test score value-added (Crawfurd, 2017), and similarly to other low-cost private schools (Economic Policy and Research Centre, 2016). Rising Academies, a network of 39 schools educating 7,800 pupils performs significantly better than other private schools in Sierra Leone in both reading and maths (Johnson and Hsieh, 2019). In Lagos, Nigeria, Bridge schools perform better than similarly priced local private schools in reading, but no better in mathematics (Crawfurd and Lipcan, 2018). Franchises in Chile get better results than independent private schools (Elacqua et al., 2011). As described in more detail in section 5, outsourced schools run by chains in Liberia (Romero et al., 2020) perform slightly better than government schools but at high cost and with some harmful effects. It is difficult to compare the cost of educating a child in, for example, a PEAS school with other low-cost private schools, government schools or PPP schools since NGOs generally do not factor in UK-based management costs and their "back office" into these calculations.

There are also six studies from the US and UK. US charters in chains do only very slightly better (Woodworth et al., 2017), and in the UK, academy chains do no better in aggregate than government schools (Andrews, 2016; Hutchings and Francis, 2017). Other studies have shown that some individual charter management organisations in the US can improve student outcomes relative to a counterfactual, but these are not necessarily representative of all charter management organisations (Abdulkadiroğlu et al., 2016; Angrist et al., 2010). A related study does show that charter schools that practice the "No excuses" philosophy have better test scores than those that do not (Angrist et al., 2013).

3.3. Effect of chains on variation in school quality

Whilst performance on average test scores is inconclusive, an attractive feature of private school chains could be their back office. In theory, the support provided by functions such as curriculum development, teacher training, and finance, could provide better efficiency and more consistent quality—a function analogous to that played by government districts. However in a similar fashion to Pritchett and Viarengo (2015) who find that public schools are no more consistent than private schools, our analysis finds that private schools that are part of a chain or network are no more consistent than independent private schools in the same markets.

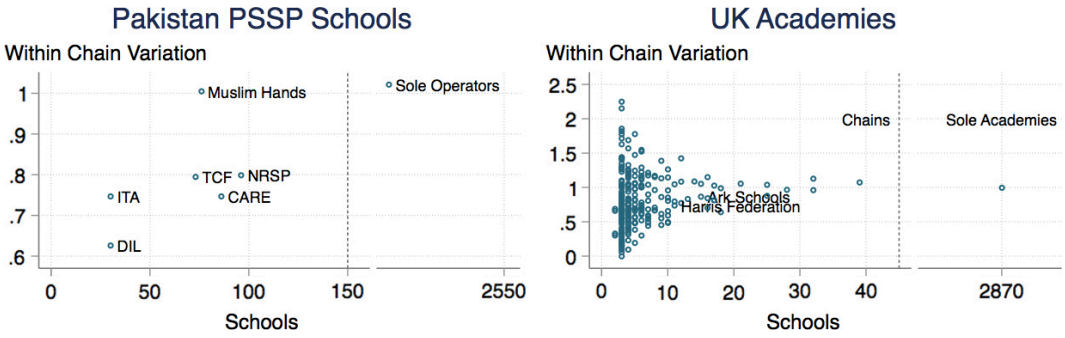
Table 1. Consistency in quality of private school chains

	Standard Deviation of Performance	
	Chains	Individual Schools
Nigeria (Bridge)	0.51	0.89
Uganda (PEAS)	1.19	0.89
Pakistan (Various)	0.80	1.02
UK (Various)	0.80	0.92

Note: This table shows the standard deviation of school-average mathematics test scores. In Uganda and the UK, school performance is estimated using longitudinal student test scores, adjusting for prior performance. Due to data limitations, for Nigeria, school quality is estimated controlling only for parental income, and for Pakistan average test scores are used with no controls. Data for Nigeria is from Crawfurd and Lipcan, and compares the variation in average performance of Bridge schools with the variation of performance in a matched set of private schools. For Uganda data comes from Crawfurd (2017), and compares variation of PEAS schools with other individual PPP schools. For Pakistan, data is from Crawfurd and compares variation within PPP school chains with variation of individual PPP schools. Finally, data for UK academies is from www.compare-school-performance.service.gov.uk and compares variation in performance of multi-academy trusts with variation across individual academy schools.

Table 1 compares the range of performance of schools in various chains with other nearby private schools. On first inspection, the chains do seem to have lower variance in performance than other schools. Bridge schools in Nigeria have less variance between them than a matched sample of nearby private schools. PEAS schools in Uganda have more variance than other publicly subsidised private schools. In the UK and Punjab, Pakistan, we have data on multiple chains. The average within-chain variation in performance is lower in both the UK and Pakistan than other similar privately managed public schools that are managed by sole operators. However, on closer inspection much of this difference can be attributed to the relatively small size of chains. As chains grow past 30 schools in the UK or 100 schools in Punjab, they converge on the same variation between schools as exists amongst sole operators (Figure 2).

Figure 2. Schools in chains vary in quality as much as independent schools



Note: The left panel shows variation in performance within school chains in Punjab, Pakistan, by size. As chains grow in size, their variability approaches the level of overall variation in the market. Similarly in the right panel, variation within multi-academy trusts in the UK converges on the overall level of variation in the market as networks grow in size. Data for Pakistan chains is from Crawfurd (2017). Data for UK academies is from www.compare-school-performance.service.gov.uk.

3.4. Potential for scale of chains

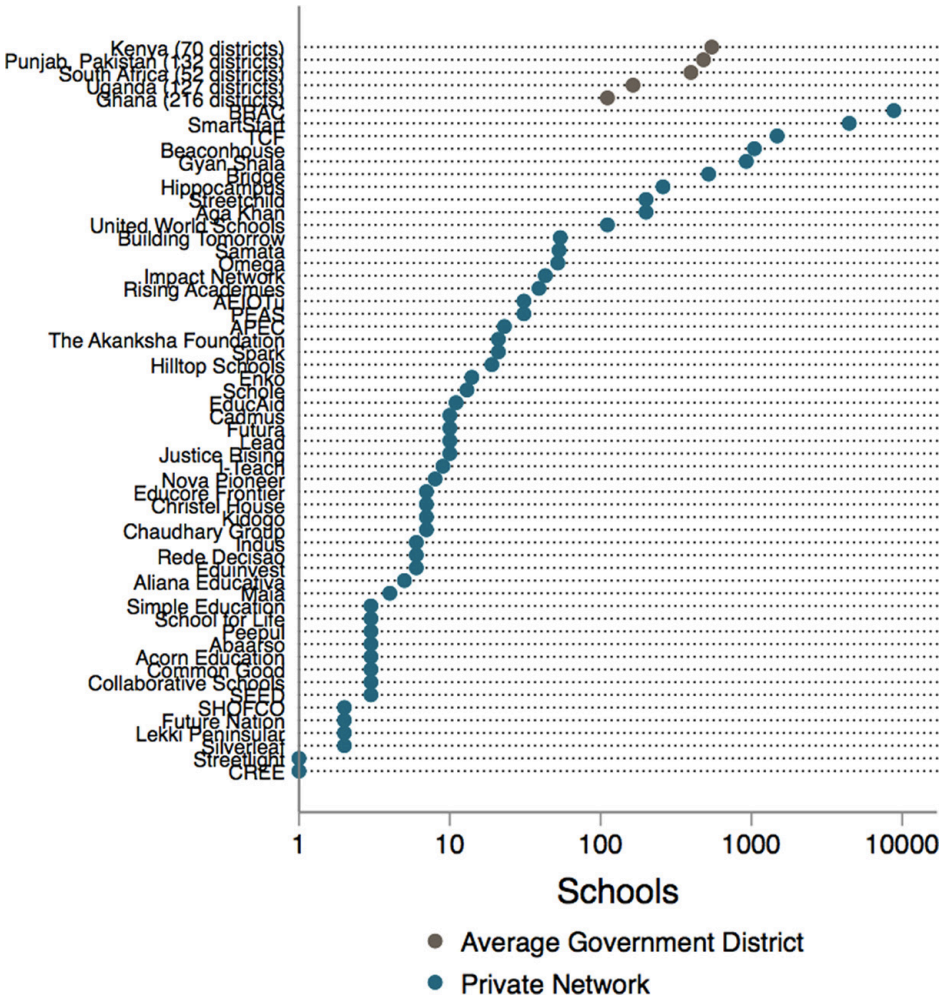
In this section we analyse the existing size of private school chains in developing and developed markets. The regularity in the distribution of chain sizes gives us an indication of the current scale of school chains, as well as what could reasonably be expected to develop in the future. That we see limits to the scale of any one chain even in mature markets (such as private preschools in the UK) suggests that the underlying economics are not conducive to large private organisations running a large proportion of schools in any single market—perhaps due to a lack of economies of scale in teaching and learning (Pritchett, 2014), or due to the presence of information asymmetries in the measurement of output.

Our data on the size of chains in developing countries comes primarily from the Global Schools Forum (GSF)—a member organisation for private school chains and other non-state organizations in developing countries.[5] According to 2021 data, it has 50 school chain members who run a total of 17,500 schools. The majority of these schools (9,000) are run by one member, BRAC.[6] We compare the number of schools in private school chains with the average size of public sector operating units (typically a district) in various developing countries. Unsurprisingly, school chains are dwarfed by government schools. Figure 3 compares private school chains with the average size of school districts in South Africa, Punjab (Pakistan), Kenya, and Uganda. The median GSF member runs just 10 schools. Only six chains can compete in size with the *average* school district in these countries (and there are hundreds of districts in each country).

[5] (Disclosure: one of us, Susannah, was part of the founding board of the Global Schools Forum.)

[6] In addition to these 9,000+ fee-paying schools, BRAC operates more than 40,000 no-fee community schools which are de facto a non-government parallel school system.

Figure 3. Few chains are larger than the *average* government school district



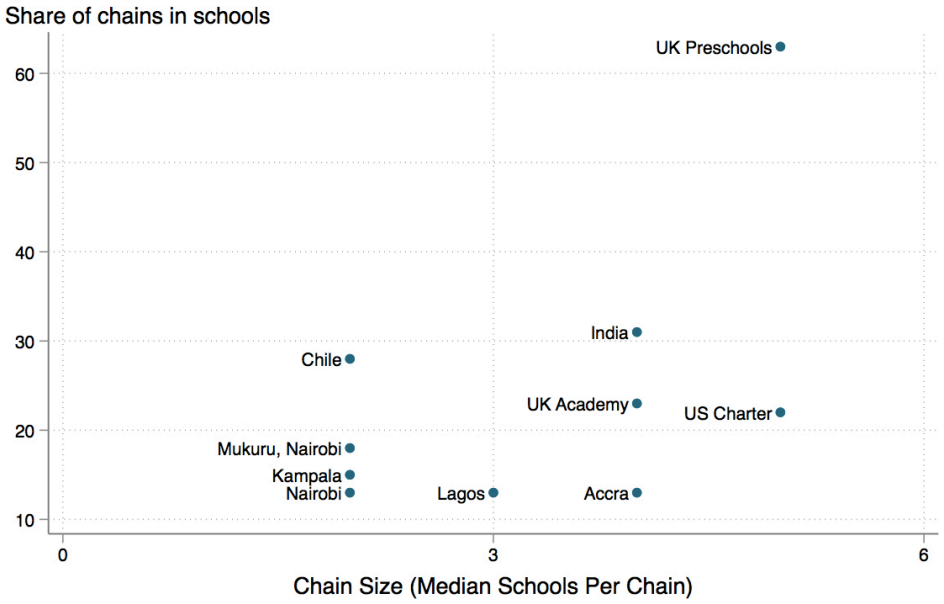
Note: The number of government schools per district was obtained for respective government websites. Data on schools for most private chains was obtained from the Global Schools Forum (GSF). We also added data on some non-GSF members—Samata and Chaudhary Group from Bhatta and Pherali (2017) and Beaconhouse from Alvi et al. (2013) and http://www.educators.edu.pk/ (accessed 5 October 2020).

Though most GSF chains are currently small, do they have substantial potential to grow? First, we look at how fast chains have grown in the past. The median GSF member is 11 years old and has grown by 1.2 schools each year. This is skewed by some very large chains that grow fast (BRAC has grown at an average of 244 schools per year; TCF at 57 schools) and, at the other end, by chains that have been around for some time but never grew beyond their initial one or two schools. By comparison, in India alone the overall number of private schools grew by over 15,000 per year between 2011 and 2016 (Kingdon, 2020).

Second, we look at chain size in more developed markets. The market for preschool in the UK is mostly private. Here, 60 percent of preschools are part of a chain, but the median chain size is only around five preschools. For UK primary and secondary academy schools and US charter schools, less than one in four are part of a chain, and the median chain has

four schools. So even in healthy, developed markets with good rule of law and good access to credit, land, and skilled labour, very few chains grow very large. Similarly in developing countries, a study of the private pre-school market in four African cities found that more over 80 percent of private schools in Accra, Lagos, Johannesburg, and Nairobi are independent (Bidwell and Watine, 2014). Of the 20 percent that are in a chain, the median chain has only three or four schools (Figure 4).

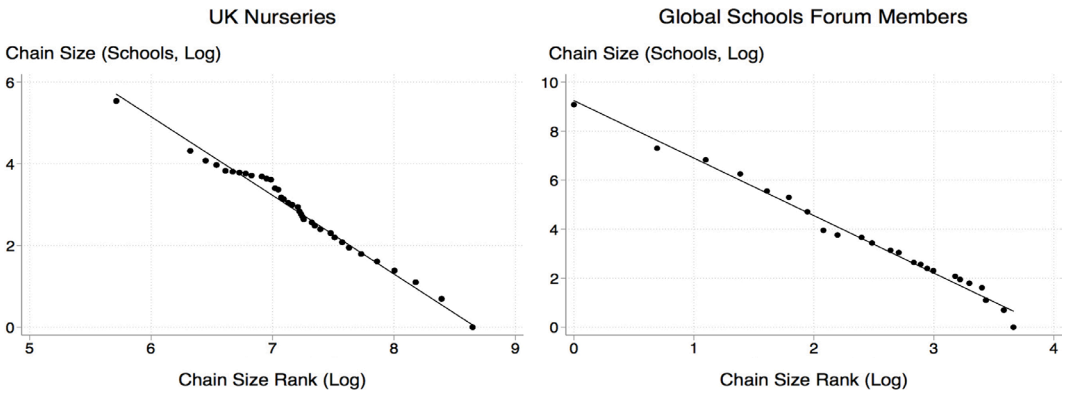
Figure 4. In most systems, the median number of schools in chains is very small and the percentage of schools that are part of a chain is also small



Note: Data for UK preschools is from daynurseries.co.uk. For US charter schools from CREDO. The mean chain size is reported rather than the median for US charters. Data for UK academies is from gov.uk. For India is from Gray Matters Capital. For Chile from datos.mineduc.cl. For Nairobi from IPA (Mukuru) and CapPlus. For Kampala from CapPlus. For Lagos and Accra, from IPA.

Third, going beyond average size, we can also look at the full distribution of chain sizes, to see to what extent that distribution is 'normal.' Economists have extensively documented the existence of "power laws" in the distribution of economic activity (Gabaix, 2009). Across time and space, there is a strong empirical regularity in the size distribution of firms, with just a few very large units and a long tail of smaller ones. Graphically, this can be seen by plotting the logarithm of a unit's rank against the logarithm of its size (Figure 5). We see the same clear pattern for UK preschools, and for GSF members. The precise mechanism driving this distribution is unclear, but it is consistent with the growth of any individual unit being as good as random. All of this gives us little reason to believe that there will ever be more than a few very big global chains.

Figure 5. School chains follow a "power law"



Sources: Data for Global Schools Forum is from globalschoolsforum.org. Data for UK Preschools is from daynurseries.co.uk.

Overall, the data suggest that school chains are not, and will not become, a substantial component of public education systems and will be peripheral to solving the twin challenges of getting kids into school and getting them learning. There are exceptions, notably TCF and BRAC, two local organisations in Pakistan and Bangladesh respectively, which are running large networks of schools either in parallel to government systems or as part of the government system. Their contribution to, and stake in, education in those countries is substantial and—as they become "too big to fail"—attention needs to be paid by the government to their performance and compliance with regulation.

Beyond BRAC and TCF, most chains show limited potential to scale. In contrast, tens of millions of kids are enrolled in individual low-cost private schools across the developing world—a sector that has already scaled.

4. Public-private partnerships

Public-Private Partnerships (PPPs)—government funding for places in privately-run schools—are common in every region of the world. In this section we review the evidence of the impact of PPPs and discuss whether they have the potential to improve learning and equity at scale. We focus on PPPs in which governments provide funding for children to attend privately operated schools, rather than provisions of ancillary services in schools.

To understand whether there is a strong evidence basis for undertaking a PPP in education, it is important to be able to provide evidence that addresses two questions.

First, whether better outcomes delivered by private schools represent a causal effect or whether these are a result of socio-economic or other unobservable advantages of children

who attend them. The previous section of this paper addressed that question and concluded that causal effects are unclear and any difference in learning outcomes between the public and private sector is marginal at best. Therefore, from the start governments considering contracting the private sector to run public schools should be aware that the "private school factor" is marginal and may not lead to substantially better learning gains for poor children.

Second, and the focus of this section, *if* positive causal effects can be claimed (and, as discussed in the previous section it is not clear they can be) it's necessary to know whether these better outcomes are replicated in a PPP arrangement at a cost that is affordable to the government. If governments cannot successfully and sustainably partner with the private sector—which includes running the procurement, monitoring and evaluation, and overall governance of a public-private partnership more effectively than it manages its own schools, PPPs are not a viable policy option. While the promise of PPPs is attractive, the reality of implementation in weakly governed states is challenging and governments may struggle to finance, monitor, and oversee private operators effectively, and may be unable to sanction or terminate contracts on the basis of poor performance.

4.1. Study selection

To answer these questions, we build on three previous reviews. Patrinos et al. (2009) and LaRocque (2008) summarised the evidence on PPPs prior to 2009. Aslam et al. (2017) then summarised evidence on PPPs from 2009–2016. We begin by following the same search protocol as outlined in section 3.1, with the search keywords: "public private partnerships; PPP; voucher schools; contract schools; concession schools; subsidy schools". We focus on the period since the last major review in 2017.

4.2. Effects on learning

The earlier two literature reviews found relatively few empirical studies examining the impact of Public-Private Partnerships (PPPs) on learning. They found some evidence that contract schools have a positive impact on student test scores, using studies from the US, Venezuela and Colombia, although the drivers of that success were unclear. The number of studies had grown by 2017, but remained context-specific and design-specific. Aslam et al. (2017) identified 22 new rigorous studies on PPPs; three on contract schools and nine each on vouchers and subsidies. The limited available evidence on contract schools suggests that they may be able to reach disadvantaged students and their better management practices could lead to better outcomes. The evidence from the nine studies on subsidies suffers from methodological limitations but somewhat supports the claim that these programmes can reach poorer children and have the potential to improve learning outcomes. Six of the

nine studies on voucher programmes are on Chile, from which the evidence is mixed and highlights the risk of increased inequity. Evidence from other contexts (India and Pakistan) is also inconclusive. Aslam et al. summarise the body of evidence on voucher provision as mixed, inconclusive and insufficient.

Rigorous evidence since 2017 is also limited. We find five rigorous studies since then. Three are on contract schools, one on vouchers and one an evaluation of Punjab (Pakistan)'s PPP's, which includes contract, voucher and subsidy arrangements (Table 2).

Table 2. Studies on different PPP types

	Aslam et al. (2017) [2009–2016]	This Review [2017–2020]
Contract	3	3
Subsidy	9	
Voucher	8	1
Other	2	1
Total	22	5

Note: This table shows the number of studies on different types of public-private partnerships included in the earlier review (Aslam et al., 2017) and in this review.

What is clear from both the recent and older literature is that design matters. Operators within Public-Private Partnerships are not heterogeneous and PPPs themselves are not heterogenous. Table 3 shows the range of design features in PPPs, from contract schools that tend to use government teachers and government buildings through to voucher and subsidy programmes that are much more "private." Programmes that involve paying existing private schools to educate children are generally cheaper for the government, since teacher salaries are typically lower. Beyond this, the PPPs in Sindh (Pakistan) and Uganda have successfully increased enrolment without having a negative effect on other outcomes and successfully incentivised private entrepreneurs to start schools in under-served areas.

Table 3. Design features and impact of different PPPs

	Liberia PSL	Colombia Concessions	UK Academies	USA Charters	Punjab PSSP	Sindh PPRS	Chile SEP	India RTE	Uganda Secondary
Year started	2016	2000	2001	1991	2016	2007	2008	2012	2007
Number of schools	194	25	7,500	7,000	4,300	2,314	7,500	c. 91,000	800
Type of PPP	Contract management	Contract management	Contract management	Contract management	Contract management	Subsidy	Voucher	Subsidy	Subsidy
Design									
No fees /or top ups	Yes	Yes	Yes	Yes	Yes	–	–	Yes	–
Non-profit	–	Yes	Yes	Mixed	–	–	–	–	–
Non–selective	Yes	Yes	Yes	Yes	Yes	Yes	Yes	–	–
Teachers on Govt contracts	Yes	–	Mixed	–	–	–	–	–	–
Unionised teachers	Yes	–	Yes	–	–	–	–	–	–
Accountable for outcomes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	–	–
National curriculum	Yes	Yes	–	Mixed	Yes	Yes	Yes	Yes	Yes
Government buildings	Yes	Yes	Yes	Mixed	Yes	–	–	–	–
Impact									
Cost compared with govt schools	Higher	Equivalent	Equivalent	Equivalent	Lower	Lower	Lower	Lower	Lower
Enrolment	Lower	Higher	No effect	No effect	Higher	Higher	No effect	No effect	Higher
Learning outcomes	Small effect	Small effect	No effect	No effect	Small negative effect	Higher	Higher	No effect	Small effect
Equity	Negative	Unclear	No effect	No effect	Unclear	Positive	Positive	Unclear	Positive
	More Public	←						→	More Private

Note: This table summarises the design features of different public-private partnership schemes. Sources include: Romero et al., 2020; Romero and Sandefur, 2019; Barrera-Osorio et al., 2016; Andrews and Perera, 2017; Cheng et al., 2017; Crawfurd, 2017; Barrera-Osorio et al., 2017; Neilson et al., 2019; Crawfurd et al., 2021; Damera, 2017.

4.3. Case studies: Liberia, Pakistan, Chile, Uganda

In the next section we discuss the design features of PPPs in Liberia and Pakistan and consider their long-term viability as part of the public education system. In particular, we discuss whether PPPs in weaker states are too risky for government, given their limited capacity to hold private operators accountable for their performance; and whether different types of PPP are a financially sustainable policy option for governments.

Liberia

Two papers document a randomised control trial of Liberia's PPP experiment, providing a sobering account of the challenges of outsourcing education through contract schools in a fragile state (Romero et al., 2020; Romero and Sandefur, 2019). In 2016, the Liberian government contracted eight private operators—a mix of local and international and non-profit and for-profit organisations—to manage 93 public primary schools under a PPP originally named Partnership Schools for Liberia (PSL) and now named the Liberian Education Advancement Programme (LEAP). LEAP schools remained fee-free and non-selective, and LEAP teachers remained on government teacher contracts. Some learning gains were made—0.18 SD after one year and 0.16 SD over three years (equivalent to four words per minute additional reading fluency for the cohort that started in first grade) across the eight operators. Costs were high. In typical Liberian public primary schools, approximately $50 is spent on each student each year. Under LEAP, costs after one year ranged from an additional $57 per pupil to more than $1,000 per pupil. After three years this reduced to an average of around three times the government's cost per child.

Some negative effects were detected. LEAP reduced enrollment, driven by mass expulsion by Bridge International Academies—a for-profit American company—who pushed excess students out of their schools and into other public schools. These students demonstrated a lower transition rate from primary school to secondary school. LEAP reduced corporal punishment from 51 percent to 46.4 percent but failed to reduce sexual abuse. Of the eight operators, some produced wholly positive results while others do not.

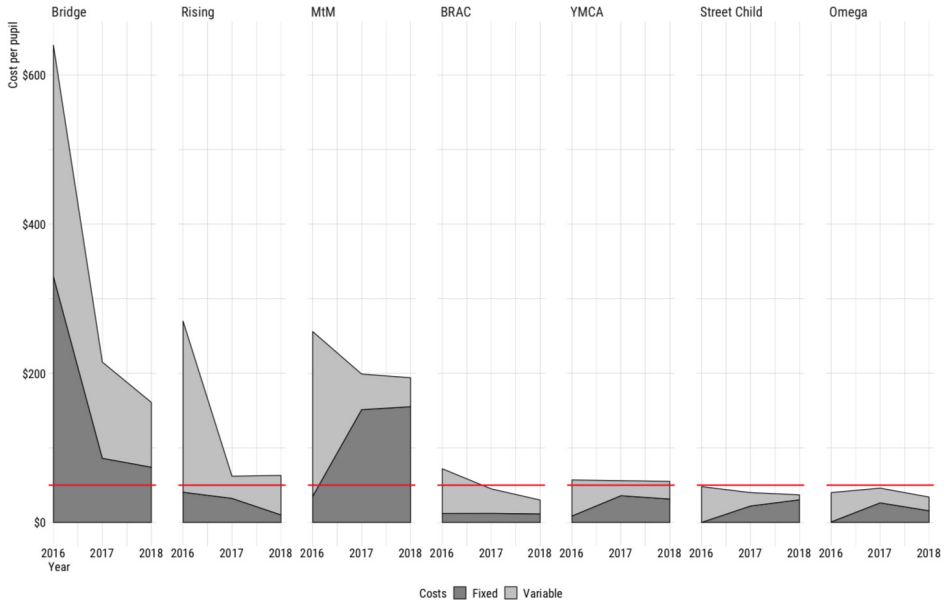
This study highlights the risks that policymakers in weak states should consider when minded to embark on a contract schools PPP. Many of the challenges that emerged were as a result of gaps in the contract between government and private operators, which in itself was a reflection of weak governance and limited capacity of the state to negotiate with external organisations. The multiple scandals relating to charter schools shows that effectively commissioning, monitoring and—where necessary—terminating private operators is challenging even for much better resourced governments and it may be impossible to fully capture all the mechanisms required. Beyond this fundamental challenge of contracting, the Romero et al. research shows risks relating to:

a) *financial sustainability*: contract school programmes may be simply unaffordable for governments. Since contract schools generally involve the private operator taking on public school teachers, payroll costs—well over half of the total cost of educating a child in almost every country—are unlikely to reduce. Figure 6 shows the

self-reported costs incurred by each of the operators in the Liberia PPP. While costs did reduce over time, schools run by the lowest-cost operators had approximately double the amount of money spent on them as typical government schools.

b) *promoting equity*: LEAP concentrated its additional resources on a narrow set of schools that were already advantaged. Schools were chosen to meet criteria named by operators, including number of teachers and distance from a road. Additionally, the allocation of more and better teachers to LEAP schools benefited those schools at the expense of other public schools.

Figure 6. Per-pupil cost in the Liberia PPP



Note: Data comes from budgets submitted to Social Finance, who managed the pool of funds that paid providers the per pupil subsidy. One operator (Stella Maris) did not provide budget data. Numbers do not include the cost of teaching staff borne by the Ministry of Education. The red line represents USD 50 per pupil. Source: Romero and Sandefur, 2019.

c) *heterogenous private operators*: the differential results achieved by the eight different operators is an important policy consideration. Selecting and commissioning private operators for school management under similar contracts and in similar settings does not generate consistent results. The identity of the operator matters a lot and ex-ante it is challenging to predict which will produce uniformly positive results and which will present stark tradeoffs between learning gains, access to education, child safety, and financial sustainability.

Punjab, Pakistan

Punjab, Pakistan has been a site of experimentation with PPPs for decades. The Punjab Education Foundation (PEF) was originally established in 1991 and subsequently revitalised in 2004 as a semi-autonomous organisation attached to the Punjab School Education

Department, tasked with promoting quality education through non-commercial public private partnerships. PEF deploys various PPP models (see Table 4) including voucher programmes, a new schools programme, and a contract management programme for public schools (which has since been moved out of PEF into the direct control of the School Education Department). This section describes recent evidence on Punjab's PPPs.

Crawfurd (2018) studies one of the largest single education outsourcing exercises ever to take place. In Punjab, Pakistan, 4,276 underperforming public primary schools (around 10 percent of the total number of public schools) were contracted out to private operators in a single school year through the Punjab School Support Programme (PSSP). Schools were defined as underperforming if they met a set of criteria primarily related to low enrolment or low standardised exam scores.

2,600 schools were contracted to organisations who ran at least ten schools each, and the remaining 1,700 schools were contracted to individuals who ran a single school. The organisations and individuals were paid substantially less than the government cost-per-child to run these schools. Unlike LEAP, Liberia, operators were able to hire their own teachers at wages set by the operators and existing public school teachers were given the option to transfer to other public schools. Crawfurd found a large increase in enrolment, concentrated in Katchi (Kindergarten), although was not able to say with confidence whether this was driven by children who were already enrolled in another school. In other words, it is not possible to conclude that PSSP increased overall enrollment. Overall, there was a decline in exam scores in converting schools, though this may have been partly driven by the entry of new lower performing students. So it is not possible to determine whether this decline is due to a negative treatment effect or the new composition of lower attaining students. Crawfurd notes that should the programme expand further, effort should be made to identify and track students who were enrolled in schools *before* transition, in order to estimate the actual treatment effect on learning outcomes.

Ansari (2020) also studies PPP programmes in Punjab, Pakistan, researching whether they are effectively targeting districts with low enrolment and what the household and parental characteristics are that predict whether a child attends a public school, a PPP school or a private school in Punjab. Rather than evaluating a single programme, Ansari considers all of Punjab's PPP programmes, which includes voucher, subsidy and contract schools. He finds that PPP schools appear to have been located in districts where high shares of children are out of school—with the Foundation Assisted Schools (FAS)—a subsidy programme—and the New Schools Programme (NSP) being located in districts with the highest shares of out-of-school children. Prior to the period of our review, two studies (Barrera-Osorio and Raju, 2015; Malik, 2010) also find that FAS has successfully increased access to education for poorer children, suggesting that the FAS programme design is somewhat effective in terms of reaching poor children—by removing fees at private schools near where poor children live—expanding their options.

Table 4. Public-private partnerships in Punjab, Pakistan

Programme	Year Launched	Main Features	No. Schools	Cost per Child ($)
Education Voucher Scheme	2006	Tuition vouchers for children in poor areas to attend eligible private schools	1,650	3.30–6.60
Foundation Assisted Schools	2005	Per student subsidies provided directly to private schools that meet criteria	3,700	3.30–9
New Schools Programme	2008	Establish new schools where there is no public school within 1km	2,404	3.30–9
PSSP	2016	Outsourcing public schools to private operators	4,276	4.20 (organisations) —3.30 (individuals)

Note: This table summarises key features of the four main public-private partnership schemes in Punjab, Pakistan.
Source: Punjab Education Foundation website (accessed 28/8/20) and Crawfurd (2018). Exchange rates as of 28/8/20).

Ansari (2020) finds no evidence that overall, children in PPP schools come from relatively more or less advantaged households than public school students. Children attending NSP schools and PSSP schools appear to be the most disadvantaged. While children attending EVS schools are more likely to be female, there is no gender differential in any of the other PPP programmes. He discusses the design objective of each PPP, noting that the FAS and NSP programmes are most successful in targeting poorer districts, while the EVS programme requires multiple private schools to be available in a locality, hindering its ability to reach rural, underserved districts. All the PPP programmes evaluated cost the same as or less than the government cost-per-child of $9 per month, potentially offering substantial cost savings to the state (see Table 4). None of the studies look in detail at the cost differences between government and PPP schools, but the most obvious one is teacher salaries, with civil service salaries being substantially higher than private school teacher salaries. Notably, all these PPPs were established under the Punjab Education Foundation (PEF), a quasi-independent statutory body, rather than the Ministry of Education itself (PSSP, however, was subsequently moved out of PEF and into the Ministry of Education).

Chile

Neilson et al. (2019) studies the voucher programme in Chile, leveraging an important change in the design of the programme. He highlights the importance of endogenous response by schools to policy in determining outcomes. The 2008 Subsidio Escolar Preferencial (SEP) law raised the school voucher amount and eliminated fees for the poorest 40 percent of students. This led to improved learning for the poorest students, in particular where schools faced greatest competition. Neilson shows that schools cut quality when they don't face competition and that PPP (voucher) policy design can influence school quality through its effects on competitive incentives. Specifically, he found that eliminating top-up fees and targeted vouchers for poorer communities contributed to improved academic outcomes.

The introduction of a higher-value voucher for poorer students raised competition in these neighbourhoods by giving poorer families choice of schools that were previously unaffordable to them. A review of voucher programmes by Baum (2018) further suggests that school vouchers can be an effective way of expanding education, particularly in underserved areas. He argues that vouchers make most sense where there are specific constraints to enrolment, such as household finance barriers, combined with an existing supply of private schools that have space to expand.

Case studies on *access*: Sindh, Pakistan and Uganda

In the context of recent findings from Punjab, Pakistan, Liberia and Chile, two earlier studies are important to discuss. Evaluations of the Uganda Secondary Education (USE) programme and the Private Schooling in Rural Sindh (PPRS) programme shed some light on how PPPs *could* be used by governments to increase access to education at a lower unit cost than the public sector can.

First, the Ugandan USE programme. Established in 2007, the Ministry of Education and Sports' USE programme offered state subsidies for pupils enrolled at eligible private schools. Schools were eligible if they were based in sub-counties in which there were no public secondary schools, where those government schools were overcrowded, or where pupils must travel very long distances to reach the closest government school. Any student scoring more than 28 in the primary leaving exam was eligible for the subsidy. By 2016, nearly a third of all secondary school students in Uganda were enrolled in PPP schools. The programme had a positive effect on enrolment and students in PPP schools performed better in English and mathematics than students in non-PPP private schools (Barrera-Osorio et al., 2016). The cost of the subsidy—47,000 Ugandan shillings per term—is much less than the cost of educating a child in a public school and did not require upfront infrastructure investment by the government. However, data are not available showing the full cost of the programme to the government.

Secondly, the PPRS programme. Unlike Uganda, PPRS is not managed directly by the government. Similarly to the Punjab PPPs described earlier, It is run by the Sindh Education Foundation (SEF), a quasi-governmental agency which provides pre-vetted private entities with a per-student subsidy to operate no-fee, non-selective primary schools along with additional educational resources. A rigorous study found that the intervention had a strong effect on enrolment and learning outcomes (Barrera-Osorio and Raju, 2015). While the subsidy paid to private schools is low—less than half the cost of government schooling—high start-up and administrative costs meant that after the first year the total cost to government was broadly equivalent to the cost of educating a child in the public system. Economies of scale meant that non-subsidy costs fell from 70 percent of total costs to less than 30 percent of total costs over three years.

Increasing access to education was a core goal of both programmes. Having announced free, universal secondary education the government in Uganda deployed three strategies to increase the number of places available to students: double-shifting in government schools;

a programme of construction of Government-aided 'seed' secondary schools in sub-counties without secondary schools; and the subsidy for private schools. One of the stated objectives of PPRS was to increase access to schooling in marginalized areas. In both cases, the subsidies paid to private schools to educate children are lower than the government cost per child. After high set-up costs, it seems likely that PPRS will deliver education at a lower cost than the government. Whether the total cost to the Ugandan government of the USE PPP is lower is more difficult to disentangle, as administrative costs are not readily available, although all indications suggest that it is. This cost-effectiveness is further increased by infrastructure savings: since both programme primarily aimed to increase access in under-served areas, double shifting and expansion of existing schools had limited potential. The cost to the government of building new schools is not included in this cost-effectiveness analysis and is likely to be substantial.

Finally, the different management arrangements of these two PPPs are interesting to note. PPRS was outsourced to the Sindh Education Foundation (SEF), a semi-autonomous organisation with a sizable management structure. The USE PPP was managed directly by staff at the Ministry of Education and Sports. Analysis on the benefits and drawbacks of outsourcing PPPs would be a valuable contribution to this debate.

The PPPs in Uganda and Sindh suggest that, where access to education remains a challenge, PPPs can be a cost-effective way to rapidly increase enrolment. However, despite some seemingly positive attributes, challenges remained. While PPRS continues, the USE PPP was terminated by the Government of Uganda, with reports that it did not have broad stakeholder buy-in (Aslam et al., 2017).

5. Discussion and conclusions

In this paper we have reviewed the latest studies on the effectiveness of private schools, private school chains, and public-private partnerships. There is now considerable evidence that the average effectiveness of private schools is not substantially higher than that of public schools, and that there is little scope for chains of private schools to play a major role in most school systems. The evidence on public-private partnerships is inconclusive and much more limited in volume, but sufficient to conclude that PPPs are no silver bullet for global education. The newer literature covered in this review gives us reason to be somewhat less optimistic about their role in improving quality in education systems than we were previously. However, evidence from Pakistan (Barrera-Osorio et al., 2017) and Uganda (Barrera-Osorio et al., 2016; Crawfurd, 2017) highlight the potential of forms of subsidy and voucher PPPs as a way of rapidly increasing *access* to education in a manner that is more affordable for governments. As countries grapple with SDG targets for universal secondary and universal pre-primary education, particularly in the wake of the COVID-19 economic crisis, counting these PPPs out as a policy seems to limit options where there are already very few.

A limit of this paper is our focus on learning outcomes in the definition of school effectiveness. The revealed preference of millions of parents for paid schools demonstrates

that they gain some value from private schools even if learning is no better, for example shorter travel distances.

The evidence reviewed on public-private partnerships suggests that in countries with universal access to primary education, a "contract schools" PPP aiming to improve quality is probably not a good policy choice, since costs are high and quality gains are minimal. But countries looking to rapidly scale up secondary education may consider that PPPs are an efficient policy option. In other words, perhaps the main reason to consider a voucher or subsidy PPP is the cost-saving to governments (compared with public schools). However, this cost-saving is typically driven almost entirely by lower teacher salaries and may not be a palatable political option: for example, in India, where a subsidy PPP is operating at massive scale, private school teachers are mobilising to be paid salaries at parity with their counterparts in public schools. Therefore, expecting teachers in private schools subsidised by the government to work at much lower wages creates great political tension and may not be feasible in the long term. A similar story has played out in Kenya with lower-paid contract teachers mobilising for equal pay.

The two papers from Liberia highlight the risks entailed in contracting private operators to run public schools, risks which may not be outweighed by relatively modest learning gains and risks which urge great caution. The government capacity required to commission, contract and monitor private operators is substantial and not easily within the capabilities even of much better resourced countries. The experience in Punjab, Pakistan, taken as a whole, paints a slightly more positive picture of the *potential* of PPPs. More research is needed to unpack whether the PSSP has actually increased enrollment or improved learning, but there is some evidence to suggest that the longer-standing NSP and FAS programmes have successfully targeted poor areas and enrolled poor children. All the PPPs in Punjab are cost-effective, in that they cost the government the same or—in some cases substantially—less than the cost of educating a child in the public sector. PPPs seem to lower per-unit costs of education through two mechanisms: Lower teacher salaries (Andrabi et al., 2008; Barrera-Osorio et al., 2017; Barton et al., 2017; Kim et al., 1999; Muralidharan and Kremer, 2009), which may not be a viable long-term strategy for political reasons; and a lower cost of establishing a PPP school compared to a government school (Kim et al., 1999). The 2008 reform in Chile, studied by Neilson et al. (2019) offers some further insights into how a voucher programme might be designed to mitigate risks of segregation and to improve outcomes—namely through eliminating top-up fees and targeting poorer children with higher vouchers.

For a PPP to succeed, the public side of the PPP needs to be strong. Good private sector performance in a particular country--where that exists--is no indication that that the Ministry of Education in that country can run the procurement, monitoring and evaluation, and overall governance of a public-private partnership more effectively than it manages its own schools. The government needs the capability to commission and regulate its private partners, and to hold them accountable for their performance. There are a range of conditions that must be in place to ensure these theoretical relationships actually work as expected. For instance, the actual PPP contracts themselves need to be well designed, and the government needs to have the capacity to ensure they can be implemented and enforced. In some instances, this has been achieved. Malik (2010) highlights strong monitoring and

evaluation through a clear framework as being the main mechanism through which the Punjab Education Foundation improved student outcomes. In contrast, the actions of some providers in LEAP in Liberia had negative consequences which may have generated negative spillovers for the broader education system. These consequences were only picked up in the RCT and, in the absence of an RCT, may have continued. Expensive RCTs cannot compensate for weak monitoring systems. The negative consequences of providers' actions in PSL underscore the need for robust monitoring by the government (Romero et al., 2020).

Finally, the politics of PPPs are challenging. As discussed above, cost-efficiencies driven by lower teacher salaries may not be sustainable in the long-term. And public perceptions of PPPs can be polarising. On the one hand, constituencies who believe that PPPs are a threat to public education may resist them. On the other hand, where the public do not perceive a PPP as a government intervention, lack of recognition for the government's role in the provision of public education can reduce political support. For example, Uganda's Secondary Education programme, a subsidy PPP, was phased out by the government. A factor in the decision to phase it out was that the important contribution the programme plays in helping to deliver secondary education in Uganda was not fully understood by many key stakeholders, from government to parents (O'Donoghue et al., 2018).

The role of private schools, chains, and PPPs in global education remains deeply controversial. The Global Partnership for Education (GPE) prohibits funding for "commercial" providers of education,[7] unless circumstances are exceptional, and the IFC recently announced a freeze[8] of all investments in for-profit K-12 schools. At the same time, unpublished research by the authors of this paper finds senior officials in developing country Ministries of Education are least content with the advice that they receive from donors on private schools, relative to other less politicised areas such as curricula, examinations, teachers, and textbooks.[9]

Important research questions remain. One argument around the reliance on private school provision is that they may undermine public support for public financing of education. This question is explored by Emmerich Davies in the wake of a voucher experiment in Andhra Pradesh, India. There is some limited evidence that attending private schools does not substantially change political engagement (Andrabi et al., 2010; Crawfurd et al., 2021; Davies, 2017), but further evidence on this question would be welcome.

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[7] https://www.devex.com/news/education-advocates-claim-groundbreaking-victory-on-latest-gpe-decision-95110

[8] https://financialservices.house.gov/news/documentsingle.aspx?DocumentID=406486

[9] This finding is from a survey of over 900 officials in 36 low- and middle-income countries conducted by the Center for Global Development from February—Crawfurd et al. August 2020.

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