PARTNERSHIPS FOR MANAGEMENT IN EDUCATION: EVIDENCE FROM PUNJAB & SINDH

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PARTNERSHIPS FOR MANAGEMENT IN EDUCATION EVIDENCE FROM PUNJAB AND SINDH

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Research Report

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EXECUTIVE SUMMARY

This report presents findings from a year-long mixed-methods policy research study on Public Private Partnerships in Education funded by Ilm Ideas. Public Private Partnerships (PPPs) are a set of policy tools available to governments with the potential to deliver on the goals of universal coverage and quality. PPPs refer to a variety of formal arrangements whereby the state contracts services of the private sector to support the achievement of policy goals. Examples of PPPs include vouchers, subsidized private schools, and privately-managed state schools. This study is focused on the latter: Partnerships for Management (PfM), where private actors are contracted by the state to manage state schools.

A form of a PfM – the adopt-a-school mechanism – has been in operation in provinces of Punjab and Sindh since the mid-1990s. Through this mechanism non-state actors – individuals and corporations – have been assigned management and reconstruction responsibilities for select schools. Envisioned originally as a mechanism for injecting additional resources into state schools for infrastructural development, over the years the partnership has evolved to incorporate elements of management and capacity development, albeit in an ad hoc manner.

This study is the first empirical evaluation of the PfM mechanism in Pakistan; with the objective of assessing the contribution of PfMs towards achieving goals of access, governance and quality; understanding factors that inhibit the operation of this mechanism at scale; and proposing recommendations and policy actions that the provincial governments can take to improve operations of the mechanism at scale. Our analysis also offers a system diagnostic for the readiness of two provincial governments – Punjab and Sindh – to engage with PfMs. This mechanism is addressing the following challenges of governance and service delivery in the state sector: infrastructural deficits; the low capacity for governance at the school level; inefficient resource management, and weak coordination between the school and local education departments.

The study provides evidence of significant improvements in 'adopted'/PfM schools in Punjab and Sindh. These have higher enrollments, better infrastructure facilities, and higher levels of learning outcomes (particularly in Punjab). Increases in enrollments are higher for longer periods of adoption. Teachers and head-teachers in PfM schools are receiving better capacity building support.

We identify two sets of factors that inhibit the partnership mechanism from functioning at scale in Pakistan, which we categorize as demand and supply side factors. Demand side factors include: lack of a clear policy position on PfMs by provincial governments; (which leads to) an absence of an enabling policy environment that can structure and support an effective implementation and scale-up of PfMs in a systematic way (including an identification strategy for schools most in-need); and weak, non-specific and limited contractual agreements. Supply side factors include: a limited supply of not-for-profit actors with the capacity to manage schools (particularly in geographically distant and economically challenged regions); varying capacity of adopters to generate funds; and the limitations of the philanthropy model of financing to support the expansion of operations.

We recommend steps that provincial governments can take in order to ensure gains from partnerships in education are realized for State sector reform. The recommendations relate to three key areas of policy design for PfM mechanisms: a) political and structural reform (which require clarity in policy positions taken on PfMs); b) redefinition of terms and conditions (which would involve redesigning the terms of contract, authority transfers, and designing financing mechanisms); c) engaging in substantive reform of operating procedures (including designing a framework for identification of schools, and exit strategies).

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ACRONYMS

AAS	Adopt-a-School
AEO	Assistant Education Officer
ASER	Annual Status of Education Report
CDG	City District Government
CM	Cluster Manager
CT	Certificate in Teaching
DDEO	Deputy District Education Officer
DEO	District Education Officer
DSD	Directorate of Staff Development
DTE	District Teacher Educator
EDO	Executive District Officer
EFA	Education For All
ELD	Education and Literacy Department
EMIS	Education Management Information System
EMO	Education Management Organization
ePPP	Public Private Partnership in Education
FTF	Farogh-e-Taleem Fund
GDP	Gross Domestic Product
HT	Head Teacher
IA	Independent Auditor
IC	Internal Coordinator
ITA	Idara-e-Taleem-o-Agahi
KPI	Key Performance Indicator
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
NGO	Non-Governmental Organization
NRSP	National Rural Support Programme
PEC	Punjab Examination Commission
PEF	Punjab Education Foundation
PEN	Progressive Education Network
PESP	Punjab Education Sector Plan
PfM	Partnership for Management
PKR	Pakistani Rupee
PPP	Public Private Partnership
PPRA	Public Procurement Regulatory Authority
PTC	Primary Teaching Certificate
REST	Ravians Educational Services Trust
SEF	Sindh Education Foundation
SEMIS	Sindh Education Management Information System
SESP	Sindh Education Sector Plan
SMC	School Management Committee
TEF	Tareen Education Foundation
WSIP	Whole School Improvement Program

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I.INTRODUCTION

This research on Public Private Partnerships in education has been commissioned, by Ilm Ideas, at a time where there is greater focus on quality of service provision and alternative service delivery mechanisms to generate policy prescriptions to help Pakistan achieve goals of universal access and equity. Recent amendments to the Constitution, specifically Article 25A, have codified the right to education as a basic human right (Pakistan, Constitution: Article 25A) and established the responsibility of the state as the primary provider. This change increases the need to engage with state sector reforms that can strengthen service delivery mechanisms. Public Private Partnerships (PPPs) area set of policy tools available to governments with the potential to deliver on the goals of universal coverage and quality. PPPs refer to a variety of formal arrangements whereby the state contracts services of the private sector to support the achievement of policy goals. These goals can include infrastructural provision, schooling services, management or capacity building services. Examples of PPPs include vouchers, subsidized private schools, and privately-managed state schools. This study is focused on the latter: Partnerships for Management (PfM), where private actors are contracted by the state to manage state schools.

A form of a PfM – the adopt-a-school mechanism – has been in operation in provinces of Punjab and Sindh since the mid-1990s. Through this mechanism non-state actors – individuals and corporations – have been assigned management and reconstruction responsibilities for select schools. Envisioned originally as a mechanism for injecting additional resources into state schools for infrastructural development, over the years the partnership has evolved to incorporate elements of management and capacity development, albeit in an ad hoc manner. Despite the potential of partnerships to generate insights for education sector reform, there is little or no systematic evidence available for Pakistan to inform policy debate about the relative merits of alternative service delivery mechanisms.

This study is the first empirical evaluation of the PfM mechanism in Pakistan. The main objective of the study is to assess the contribution of PfMs in the form they exist in Pakistan today; understand factors that inhibit the operation of this mechanism at scale; and propose recommendations and policy actions that the provincial governments can take to improve operations of the mechanism at scale. This report presents findings of the study, sharing results of an empirical evaluation, and a qualitative policy and operational mapping exercise.

This study also offers a system diagnostic of sorts for the readiness of two provincial governments – Punjab and Sindh – to engage with PfMs. The PfM mechanism is addressing the following failures in governance (including resource management) and service delivery in the state sector: infrastructural deficits; the low capacity for governance at the school level; inefficient resource management; and a failure of coordination between the school and local education departments.

Findings of the report indicate that PfMs have the potential to provide solutions for some of the most long-standing challenges faced by State run schools, including access, quality of provision and governance. The report explores the factors inhibiting PfM mechanisms in the two provinces from functioning at scale. In doing so, the report sets out the main issues relating to the prevailing policy deficit on the subject of PPPs, specifically PfMs. It underscores the urgent need for deepening the dialogue on the PfMs and their potential role in developing the capacity of the State for meaningful, widely accessible, and scalable education provision. Finally, it seeks to provide a broad policy framework for the institutional reform of PfMs. The objectives of this framework are two-fold: to bring the State back into the processes of education reform and provision on the one hand, and to create demand and generate positive incentives for civil society actors to invest their capacities, know-how and resources, and to expand their involvement, in public schools on the other.

The report begins by laying out the challenges facing the state sector in Pakistan. Section III describes partnerships and discusses their potential to address these challenges, and international examples. Sections IV, V and VI present

findings from the empirical research undertaken as part of this study. These sections include a description of the ways in which PfMs are contributing to improvements in access, quality and governance of state schools. A number of interventions make up the broad spectrum of PfM models operating in Pakistan. Section V describes the elements of these interventions using the models in Punjab as the template. Unit cost estimates of the models facilitate a discussion around cost effectiveness of the intervention, and give a sense of what it would cost the provincial governments to finance PfMs. Section VI presents findings from qualitative work undertaken as part of the study; regarding the changes in processes of management at the school level, and in the process of interaction between the school and the local education department. Section VII discusses factors inhibiting the operation of this mechanism at scale; and section VIII recommends steps provincial governments can take to realize the potential of PfMs.

II.THE CHALLENGES OF EDUCATION REFORM IN PAKISTAN

Pakistan faces major challenges in the areas of access, quality, and governance. There are demand-side as well as supply side constraints holding back progress towards universal access. A significant number of children are out of school. A majority of these are girls and children from low-income households. Those that are in school are not learning, indicating a significant quality deficit. Low learning outcomes, particularly in state schools, are linked with persistent challenges of low teacher effort, inadequate levels of teacher knowledge, and prevalence of pedagogical practices that are not conducive to promoting learning. Both access and quality deficits are an outcome of, and interlinked with, governance issues faced at multiple levels within the education system, most significantly at the school and district level.

ACCESS

Despite considerable improvements in enrollments in recent years, a significant number of children- close to 6.5 million at the primary level - remain out of school. When taking children of high-school age into account the number rises to nearly 25 million by some estimates (AlifAilaan, 2014). Access to schools is further exacerbated as children transition from the primary to secondary schools. Poverty, gender and location intersect to create multiple constraints and lower effective demand for education.

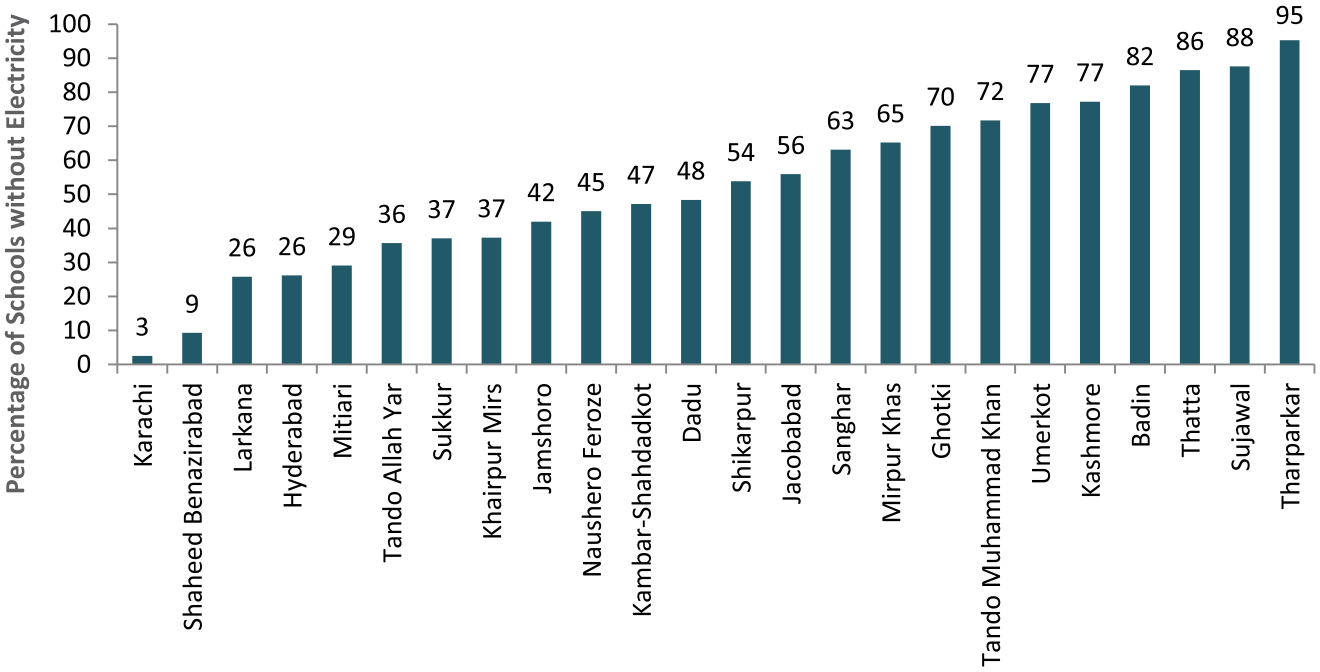
On the supply side, access is compromised due to the lack of appropriate infrastructure provision. Out-dated administrative rules mean there are far fewer high schools than are needed to absorb demand [1].With middle and high schools unable to absorb graduating cohorts from primary schools a large number of children are necessarily forced out of the school.

The number of state schools has not kept pace with population growth rates; despite the population growth, adequate numbers of public schools have not been constructed in urban areas. Very often, the cost of commuting to the nearest government school exceeds the costs of studying at the nearest low-fee private school. Moreover, in the case of girls, safety and security issues add to the incentive to enroll in nearby private schools. A significant proportion of existing schools are dysfunctional. While the number of dysfunctional schools has been recently reduced in Punjab, it remains high in Sindh with 13% of all schools in this category (201 of these schools are in Karachi; 296 in Badin, and 360 in Thatta (Sindh EMIS, 2013).

The dismal state of essential facilities such as boundary walls, drinking water, and functioning toilets works against ensuring access. Lack of toilets for girls and boundary walls are cited by parents as reasons for not sending girls to school. In Sindh,43% primary schools are without boundary walls. In Badin 53% of schools are without boundary walls. Nearly half of all rural schools in Sindh (49%) lack toilets. Fifty-three percent rural and 34% urban primary schools lack drinking water facilities. In Thatta, the proportion is 82%. In Rajanpur, 71% of schools and 66% of schools in Dera Ghazi Khan are without electricity supply. Eleven percent of schools in Khushab and 9% of schools in Attock do not have access to drinking water. Sixteen percent of schools in Jhang and 14% of schools in Rawalpindi do not have a boundary wall (Sindh EMIS, 2013; Punjab EMIS, 2013).

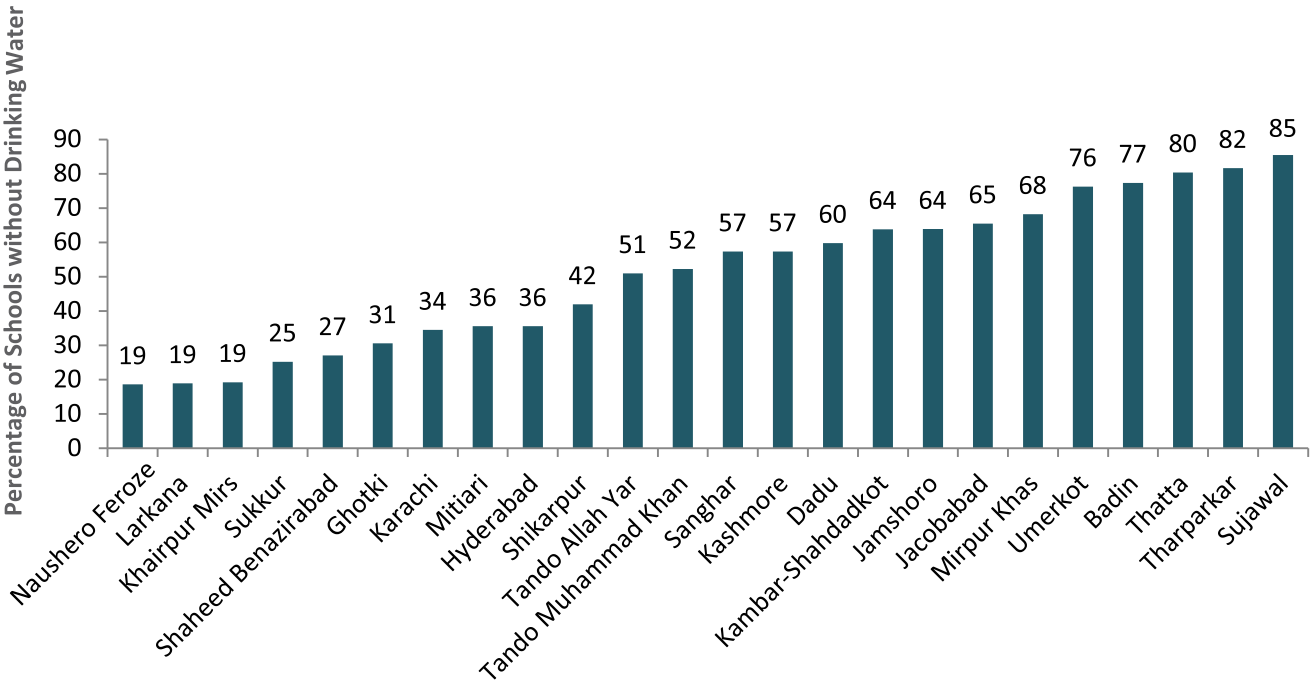
[1] Federal policy rules for establishment of new schools set a calculus for determining need for new high schools: one high school to four primary schools. This is true for all provinces, and continues to be the case even though 25A should have necessitated a rethink of this rule.

Figure 1: Schools without Electricity in Sindh



Source: Sindh EMIS Data 2013

Figure 2: Schools without drinking water in Sindh



Source: Sindh EMIS Data 2013

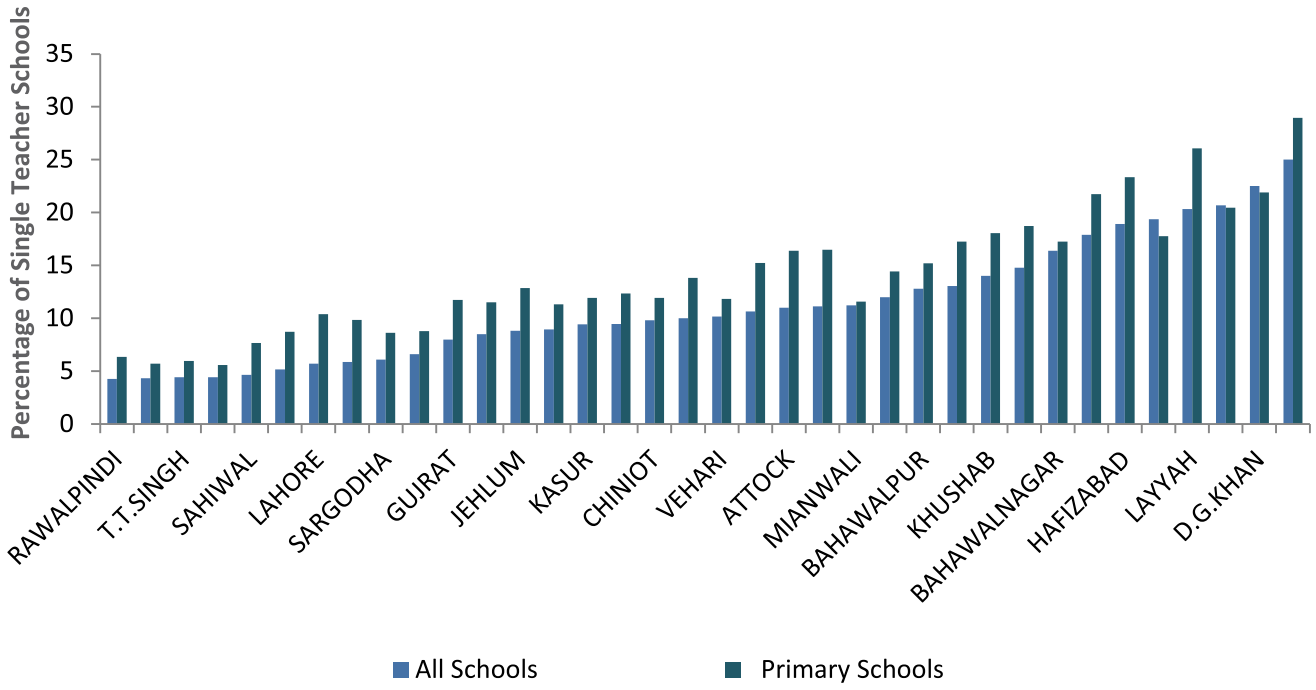
GOVERNANCE

Pakistan has a longstanding target of 4% GDP allocations to education, but has only been able to spare 2% of its GDP for the task. This is lower than the regional allocations for education. According to the Education For All(EFA) Global Monitoring Report 2013, this amount is significantly lower than what is required to meet the goals of universal access and quality education (UNESCO, 2014). Shortage of resources has resulted in significant governance issues.

Where there are schools present, significant facilities and resources (including teachers are missing). Punjab has the lowest proportion of single-teacher schools amongst the four provinces, but the highest proportion of two teacher schools. One-third of primary schools in the province are single-class room schools, and 35% have two class rooms only(Sindh EMIS, 2013). 48% of schools in Sindh have one teacher. According to SEMIS data for the year 2013-14, there are more than 400 such schools in Karachi alone, close to 2000 single teacher schools in Badin (65% of all schools), and 57% of all schools in Thatta(Sindh EMIS, 2013).

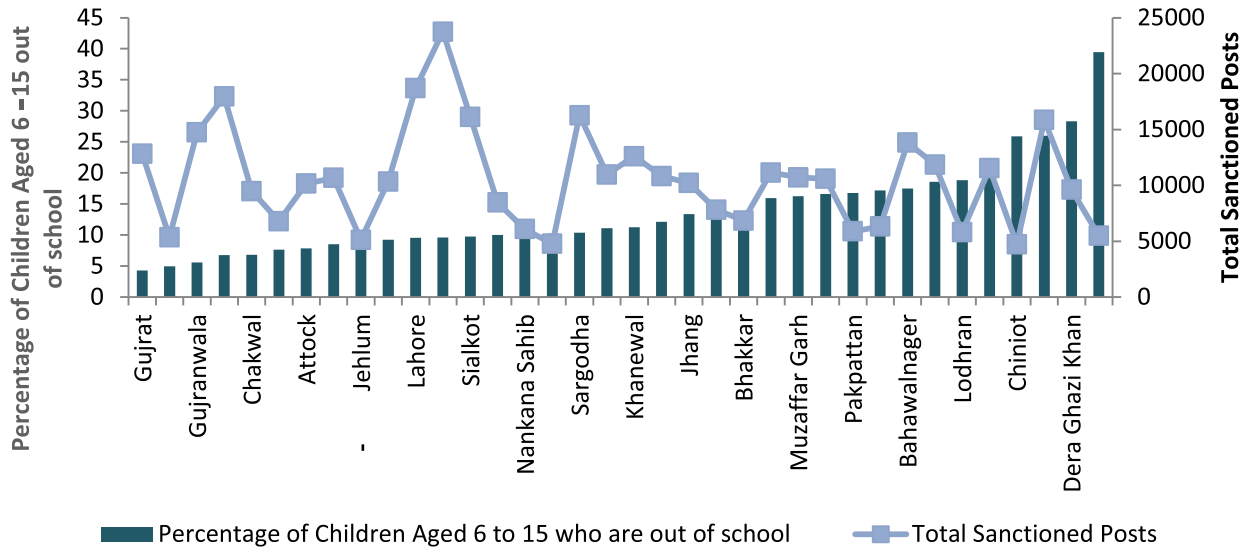
In Punjab, 14% of schools in Rajanpur and 19% of schools in D.G. Khan are single-classroom schools. More than 17% of the government schools in Okara, Bahawalnagar, Chiniot, Rahimyar Khan, Layyah, Rajanpur, Muzaffargarh, D.G. Khan and Hafizabad are single-teacher schools. The figure below shows the prevalence of single teacher schools in Punjab – in some districts as many as 30% of primary schools are single teacher schools. A recent study for Pakistan has shown that nearly a quarter of school children are sitting in class rooms that are taught by a single teacher (Aslam, Jamil, Rawal, 2011). Multi-grade teaching is widely prevalent in both Punjab and Sindh, and teachers are not duly capacitated to deal with multi-grade class rooms.

Figure 3: Prevalence of Single Teacher Schools in Punjab



Source: Punjab EMIS Data 2013

Figure 4: Out of school children are higher in districts with lower number of sanctioned posts



Source: Punjab EMIS Data 2013

While shortage of resources is one issue, another is the efficiency and effectiveness of spending. The State system is unable to spend the allocated amounts, particularly for development funds. Regions and schools that are the most in need of funds do not receive adequate resources either.

Recent public expenditure tracking reviews have found that the most challenging districts are also ones that are receiving the least resources (World Bank, 2014; I-SAPS, 2013). There is little or no data available on dysfunctional schools, a policy drive to consolidate schools was undertaken and many schools were merged or upgraded in Punjab. District wise report cards in recent years have been very effective in highlighting missing facilities across various districts. The data presented in this section is taken from multiple sources.

The local bodies ordinance 2001 devolved decision making and planning to the school levels yet, effective authority has not been transferred. School Management Committees (SMC)were created as bodies for the school management and local communities to work together for management and oversight of schools. Financial resources in the form of SMC funds were stipulated to be transferred to head-teachers in an effort to grant them greater autonomy in matters related to the rebuilding and staffing of their schools and reducing the bureaucratic red-tape. However, there has been a tendency overtime to centralize decision-making within the provincial secretariats, rather than devolve authority (SAHE, 2014).

Many head-teachers report not receiving SMC funds on time. Under-spending of funds is another issue; head-teachers have reported reluctance of spending funds for fear of getting audited. While the threat of audit has been removed in recent years, the inertia persists. A majority of the head-teachers' time is spent in administrative reporting rather than focusing on the substantial task of improving teaching and school environments.

These challenges add up to a weak governance structure in state schools, where teacher effort is low, teacher absenteeism is high, and corruption is rife. Parental perceptions of these chronic issues have resulted in a complete lack of confidence in state sector schools.

QUALITY

While a significant number of children are not in school, those who are in school are not learning. The abysmal quality of teaching in state schools has caused a steady decline in learning outcomes of children in state schools. The downward trend is evidenced by the ASER datasets, which show that students enrolled in state schools across the country lack even the very basic competencies required at their respective levels of study. Fifty-one percent of Grade 5 children lack Grade 2 level competencies in their provincial languages, whereas 57% of Grade 5 students cannot read English sentences of Grade 2 level. A similar proportion of students – 57% – cannot perform basic two-digit division in Grade 5 (Jamil, 2013).

Learning outcomes also vary by province, rural/urban location and gender. Province-wise differentials in learning outcomes appear stark in some competencies. For instance, 25% of Grade 1 students tested in Punjab displayed English reading skills, as opposed to only 8% of students tested in Sindh (Bari, Khan, and Maqsood 2013). State school students from Punjab also take the lead in other skills tested through ASER; provincial differentials in outcomes accompanied with overall poor outcomes in all provinces should be a major cause for concern to policymakers. Learning levels fall even lower in the rural areas in comparison to the urban areas, regardless of the province. While the learning levels of Urdu and Sindhi are low throughout the urban and rural areas, there is a significant difference between English language competencies among children of rural and urban areas in both provinces; with urban children more proficient in reading and writing the language (ASER 2013).

A prime reason for such poor learning outcomes is the absence of acceptable quality teaching. Quality of teachers, although weakly affected by general qualifications, is positively correlated with professional teacher qualifications. Punjab and Sindh have similar percentages of M. Ed. and B. Ed. qualified teachers, whereas Punjab has a much higher percentage of *Certificate in Teaching* (CT) qualified teachers and Sindh has a comparatively higher percentage of *Primary Teaching Certificate* (PTC) qualified teachers (Bari, Khan, and Maqsood, 2013). Despite many teachers being "qualified" for their roles on paper, their skills hardly translate into their students' academic achievement. Such a failure of teaching arises due to negative factors specifically related to teachers but also, very importantly, in a context of the state provision of services both to the state school premises as well as to teachers in terms of skill transfer and employment matters. There is the ever-prevalent problem of teacher absenteeism across provinces; however, even when the teachers are present, their capacities are hindered due to external factors such as poor physical facilities, unfavorable student-teacher ratios, multi-grade teaching and student absenteeism. Moreover, there is the important question of whether state-provided professional qualifications equip teachers with the necessary skills required for the purpose and whether the teachers who perform satisfactorily are provided with reinforcements to create and/or increase motivation in order to be able to provide acceptable quality teaching.

THE STATE ALONE CANNOT MEET THE CHALLENGES

From the supply side, schooling quality is a function of basic inputs such as infrastructure, teachers and learning materials, a school environment conducive to learning. A basic minimum level of inputs is necessary for the process outcomes to build on. The scale of challenges faced in by the state with regards to ensuring adequate provision of basic inputs as well as substantive process improvements is enormous. There is recognition by the State in various education policy document of the enormity of the task, and the need for partnerships. If there is any hope in improving the existing condition of the state education sector and the academic outcomes of students enrolled in state schools, there is a need to "revisit the binary conceptualization" of public and private in schooling (Jamil 2014).

III.PARTNERSHIPS FOR MANAGEMENT

"Education is a human right, which states have the responsibility to ensure. But they need not be the sole provider. Private involvement can increase financial resources committed to education and supplement state capacity to absorb growing demand while assuring standards. While there are various ways in which the private sector can be involved, a strong regulatory framework is vital to ensure high quality and equity, at the same time encouraging investment and competition." -(Lusk-Stover and Patrinos, 2014)

WHY PARTNERSHIPS?

The State has a constitutional obligation to provide education. Particularly in view of the recently introduced right to education under the Pakistani Constitution (Pakistan, Constitution: Article 25 A), the State must formulate policies and take active measures to provide "free and compulsory" elementary and secondary education. The legal and constitutional duty lies squarely on the State to make the right to education effective and meaningful. This means that the State must directly commit to and invest in education through the best possible means that enable wide access to education, ensure sustainability and scalability of the methods for education provision, and are based on concrete target-based goals. Because of the historical and persisting lack of prioritization and development of capacity for public education provision, the State needs to partner with private actors in order to pool capacities and resources. The objective of this public-private partnership model of education provision is long-term, sustainable institutional reform. It is only by playing a direct institutional role in the development of education – with a capacity and resource enhancing contribution from civil society actors – that the State can own and hence fulfill its constitutional obligations to educate each and every child in the country.

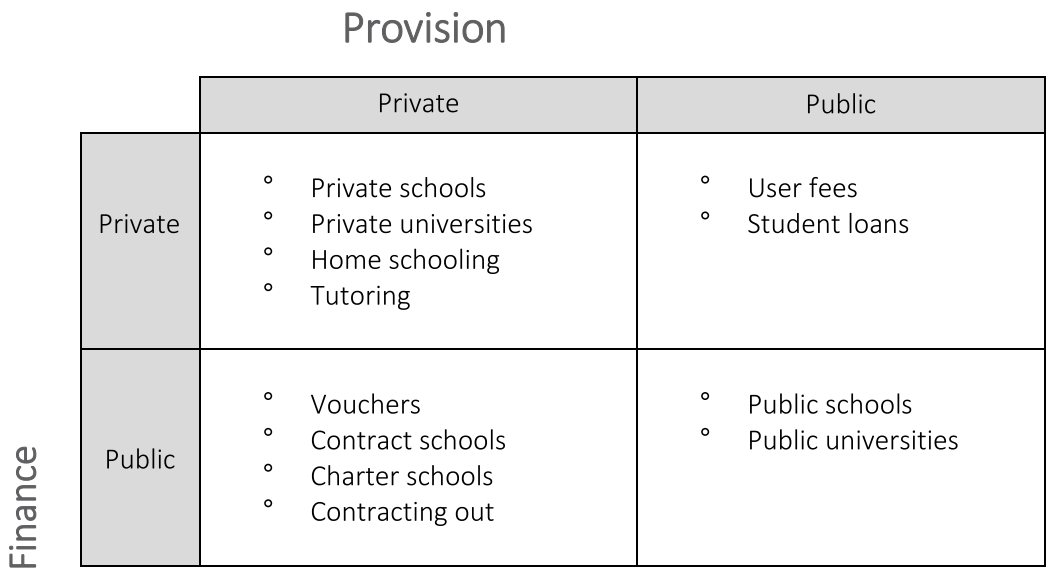
The state sector continues to be the largest provider of education services, and is catering to the poorest and the poor. The potential of the state to scale up and sustain good practices remains unparalleled. Whatever the public-private mix in education service delivery, the state sector needs reform. The question is not whether the private sector should be part of the education system, but how. Public Private Partnerships provide a policy tool for the state to channel private sector efficiencies and capacities towards state sector reform. Partnerships for Management (PfMs) offer a way to involve the private sector in reforming quality and governance constraints in the state service delivery mechanisms.

ePPPs can be regarded as innovative means of financing education that draw upon the best of the public and private with the potential to resolve deep systematic problems in education systems, such as access, quality, equity." Elizabeth King, 2009

EPPPs encompass a variety of policies where either the management of education or its funding is open to private sector participation. As such, private actors may be involved in a range of public sector education activity, including education management, service provision, capacity building services etc. (Osario et. al, 2005). Figure 5 illustrates the various types of partnerships that can exist between governments and private actors. Partnership mechanisms can involve public financing of private provision (such as through vouchers, charters, or as in assisted or subsidized schools), or private investment in government schools such as the adopt-a-school model in Pakistan.

The international policy community is divided in how it views PPPs in education. On the one hand there is concern that PPPs represent a silent privatization of sorts – where more and more public services are being privatized and monetized. There is a belief that increasing reliance on PPPs are resulting in states reneging on its responsibilities as a primary provider of education. On the other hand, partnerships have the potential to provide innovative means of financing and managing education, and to provide flexible solutions for access and governance problems,

Figure 5: Financing and provision of services in public-private partnerships



Source: Adapted from World Bank, 2006

making these mechanisms attractive policy tools/choices. Our position, based on our research thus far in the context of Pakistan, is that it is the nature of partnerships and the effectiveness with which the State plays its part that determines eventual outcomes at the individual and also system level. Given the scale of challenges faced by the State, it is necessary to think of ways that the private sector can help build the capacity of the state to good quality education for all.

Partnerships have the potential to improve education quality without sacrificing equity and are therefore powerful mechanisms that facilitate a compromise and balance between multiple and often competing goals. Recent policy literature, particularly from the World Bank, has argued that the way forward for education service delivery systems is a redefinition of state functions and roles, from that of a provider to a regulator, and ePPPsoffer mechanism for making this transition happen (Patrinos, Osario Barrera, Guaqueta, 2009; Patrinos, 2006). However, successful utilization of partnership mechanisms to deliver the goal of strengthening state's capacity for providing good quality education is dependent on the ability of the state to steer, monitor and eventually re-appropriate the schools contracted out to private partners. The ability of the state to regulate the partners and its capacity to put in place mechanisms for effective monitoring and sustainable exit for them is an aspect that is not part of the current discourse or debate of partnership policies in Pakistan. By focusing on partnerships for management, we want to highlight these issues.

What are Partnerships for Management?

Partnerships for Management are mechanisms whereby the State/education authorities contract private organizations to handle a wider range of responsibilities to operate public schools. The aim of such contracts is most often to free schools from bureaucratic constraints or to give schools more autonomy. This mechanism is intended to address problems of weak management in government schools, considered to be a crucial constraint in improving public school performance. Under this arrangement, private organizations can either be given a single school, or an entire public school district. The responsibilities of the contractors can fall within one of four categories: financial management, staff management to long-term planning, and leadership. Within these contracts, all non-managerial personnel continue to be public sector employees (Patrinos, Osario Barrera, Guaqueta, 2009).

Beyond this basic blueprint, partnerships between governments and private actors for management can be organized in a variety of arrangements and models. The variations manifest in modes of financing, the reason for involvement (the target objective), and the level of authority transferred to the private actor. In some cases, as in Latin America and South Asia, the state continues to fund schools as it would, and private actors (mostly not for profit) manage schools. In Pakistan, originally the partnerships were envisioned as a way to rebuild and make damaged schools operatioinal.In Colombia, Mexico and Nicaragua the State empowers community and parent organizations to take over management of schools. In each case, management, hiring firing of staff, operational matters and decision-making is all assumed by the management agents that the state contract empowers. Details of some international models are included in the Box on international reviews.

This partnership mechanism takes the form of charter schools in the US, and academies (or free-schools) in the UK. In these arrangements, the state gives private actors (sometimes parents, for-profit organizations, or any other private entity) the charter to set up new schools that are funded through tax-payer money. These schools are free for the public to use, in effect being privately managed state schools, but operate with a significant level of autonomy and outside the regular binds of state control. The charter school and academies model differs from the first two in the way that state money flows to private schools. In a different arrangement, of the sort in Pakistan and Colombia's contract schools, the state hands over management of schools to private organizations.

Private Management of Public Schools: An International Review

The primary form of PPPs in the education sector is the private management of public schools; whereby education authorities directly contract non-state actors to operate public schools or certain aspects of public school operations. While these schools are privately managed, they remain publicly owned and publicly funded.

A variety of non-state actors are involved in such partnerships across the world, including private firms, neighboring schools with a good reputation for serving students and their community, non-government organizations (NGOs), universities etc. Contract schools are often given authority for spending public funds and hiring and firing staff. Contracts contain basic requirements that apply to private schools but also outline expected student outcomes, methods of assessing those outcomes, the goals of the school and its program of instruction. The contracts also cover agreed or mandate curriculum. As part of the contract, the management company or organization is generally required to meet specific benchmarks in areas such as school attendance, student performance and community involvement. Examples of these programs are discussed below.

Contract Schools, United States

Contract schools are publically owned and funded, and privately managed schools. This model has been operating in the US since the early 1990s. The number of contract schools increased from 135 in 1995 to 521 in 2005. There are two forms of private management of state schools: either local boards contract directly with EMOs; or indirect contracting where EMOs contract with organizations that hold the charter issued by the local boards. Typically, organizations are brought in to manage low performing schools. Local governments may enter two types of contacts: a) management contract – under which the staff remain employees of the local school board and members of the unions; b) operating contract – the teaching staff can be employed by the private contractor and terms of employment vary.

Charter Schools, United States

Charter schools are public schools that operate with freedom from many of the regulations that apply to traditional public schools, such as geographic enrollment restrictions and teacher union contracts. The charter that establishes a school is a performance contract that details the school's mission, program, goals, students served, methods of

assessment and ways in which success will be measured. Charter schools may be managed by the community or by a for-profit or not-for-profit school manager.

Most charters are granted for 3 to 5 years, though the terms can vary. Charter contracts are subject to conditions including positive academic results, curriculum and management guidelines being followed. While closely monitored, charters enjoy greater autonomy compared with regular public schools. The number of charter schools in the US had increased from 253 in 1995 to 4147 in 2005, serving 1.2 million children.

The Charter Management Organization (CMO) model was an evolution of the charter model, where by non-profit networks served a specific geographic area. This model provided scope for scale up of the charter school model by centralizing certain functions and resources across schools. CMOs have the potential to provide a viable model for wholesale reform of large public school systems with reduced variability that individual charter school models bring.

Colegios en Concession, Colombia

The *Colegios en Concession* or the Concession Schools program was instituted in Bogota, Columbia in 2000. This program involved handing over management of some public schools to private managers with proven track record of delivering high quality education. The program is designed to overcome many of the traditional problems faced by public schools, including weak leadership, the inability of schools to select their own personnel, lack of labor flexibility, lack of equipment and supplies, bureaucratic red-tape and the politicization/ unionization of the education sector.

The process of contracting involves and open competitive bidding. Successful organizations may be given a single school or a group of schools, to service children from low-income households and communities. The term of the contract is 15 years, demonstrating a long term commitment to education reform effort. Contracts are subject to conditions and monitored closely on dimensions including hours of instruction, quality of nutritional provision, and mechanisms of service delivery suited for low income communities. The provider has full autonomy over school management and is evaluated on the basis of results. Contracts with providers are performance based, as well. Failure to meet educational outcome targets, such as standardized test scores and drop-out rates for two consecutive years can result in the cancellation of the contract.

Source: (LaRoque, 2008)

Pakistan's policy position on PPPs and PfMs

Mention of partnerships in education appears in policy documents in the early 1990s, at a time when policy making was centralized at the federal level. The education policy 1992 declared State's intent for emphasizing private sector's role in education through “viable partnership[s]” (Govt. of Pakistan, 1992). This position is reiterated strongly in 2001: “Acknowledging the shift in government's role from being a provider to a facilitator [...] it is vital to rethink the parameters of public private partnership in the provision of education” (Govt. of Pakistan, 2001).

Over the years there has been a shift in the government's perception of its own role, from one as a sole provider and financier to one as regulator.

This shift is reflective of the state recognizing the constraints it faces when ensuring the provision of quality education for all the children in Pakistan. There is an admission by the state that the model of public financing and provision has failed to achieve the intended goals, and a need has been expressed for engaging the private sector in partnerships to stem the entropy of the state system: 'The government has officially recognized that the public sector on its own lacks all the necessary resources and expertise to effectively address and rectify low education indicators' (Govt. of Pakistan, 2001, p.68).

The Education Sector Reform Plan for 2001 explicitly stated the desire to involve private sector in management of state educational institutions. While these are called Partnerships for Management, the document indicates that essentially the state was seeking infrastructure injections. With regards to these partnerships, the plan laid out a procedure: 'Facilitate adoption of dysfunctional public sector institutions by private sector at all levels through shared administrative management and terms of partnership through an agreed Memorandum of Understanding' (Govt. of Pakistan, 2001, p.72).

In Pakistan the partnership for management model became known as the Adopt-a-School Model. The foundations for this model were laid by Professor Anita Ghulam Ali, in Sindh, through the Sindh Education Foundation. As part of a formal agreement, the government allowed private organizations to: a) invest resources into state schools to provide infrastructure, or additional teaching resources; b) serve to monitor teachers; c) improve management and decision-making at the school level. However, while they can put in requests with the Education District Officer (EDO) to have non-performing teachers transferred, the private partners in Pakistan are not given the authority to fire or discipline teachers. Nor are private partners funded by the state. These two differences make the current model of PfMs in Pakistan significantly different from the charter school model in the United States. Currently, the model is operating on a comparatively limited scale: there are approximately 600 adopted schools in the Punjab[2] and about 500 in Sindh.

Punjab and Sindh have taken different positions on partnerships in general, and partnerships for management in particular. While both provinces established the basic organizational and policy infrastructure – in the form of provincial education foundations and the PPP Acts to facilitate partnerships with the private sector, the type of partnership mechanisms championed, funded and encouraged have been very different. Punjab, and the Punjab Education Foundation, has viewed partnerships as a means for expanding private sector provision (through vouchers and foundation assisted private schools). PfMs – or the adopt-a-school policy – operates in Punjab completely outside the purview of Punjab Education Foundation. There are no clear policy guidelines or operating procedures administering the PfM model in Punjab.

On the hand, in SIndh, the adopt-a-school policy is the flagship partnership mechanisms for the SIndh Education Foundation. Over the years Sindh has taken gradual but clear steps towards creating the policy and organizational space for supporting systematic function of PfMs, including: setting up a steering committee to formalize oversight of the mechanism by the State and for improving coordination between various stakeholders; amendments to the PPP Act to create the legal grounding for partnerships in service delivery (including education); introducing a budget line dedicated to state funding of private partnerships for management of State schools.

The evolution of partnerships mechanisms and policy developments over time have happened in the absence of any evidence-based discourse on the relative efficacy of various partnership models, or an assessment the contribution of these mechanisms. There have, recently, been some evaluations of state funding of private schools (See: Barrera-Osorio, Blakeslee, Hoover, Linden, Raju and Ryan, 2015). There has been no systematic assessment of the adopt-a-school policy to date. This report presents findings from the first empirical assessment of the partnership mechanism in Pakistan.

[2] Most recently, in the past couple of months, the Punjab government has announced the 'reactivation' of the adopt-a-school policy where more than 400 State schools have been handed over to private organizations. By our estimate this brings the total number of adopted schools in Punjab to 1000. It is important to note that this expansion is happening in the absence of a dedicated policy framework, and without amending earlier operational weaknesses.

IV.EMPIRICAL ASSESSMENT OF THE CONTRIBUTION OF PARTNERSHIPS FOR MANAGEMENT (PfM)

Existing literature on PPPs in Pakistan has focused on evaluating PPP mechanisms where state financing subsidizes private provision (Barrera-Osorio et. al, 2013). Global models of PfM mechanisms have been documented (Box 1 below; Malik et. al, 2014). Our study provides an empirical assessment of the PfM mechanism, a partnership mechanism that has not been studied to date.

Contribution of the PfM mechanism is judged by comparing indicators of access, quality and governance between adopted and un-adopted schools. Access is tracked through enrollments overtime. Changes in quality are assessed by comparing indicators for infrastructure and basic facility provision, available teachers, and learning outcomes. A bespoke dataset is used to analyze decision-making at the school level and the support received by the headteachers for various tasks. This analysis provides a snapshot comparison of school level governance.

Empirical data analysis reveals significant improvements in enrollments, provision of basic facilities and the state of infrastructure in adopted (or PfM) schools in Punjab and Sindh. Comparisons of student test scores in Punjab reveal significant differences in learning for children in adopted schools, higher than their counterparts in un-adopted schools. Survey data reveals that teachers and head-teachers in adopted schools receive more support and training in key areas of school governance and teaching.

Methodology: Data, Process and Sample

Impact evaluations of interventions involve the selection of control and treatment groups where all characteristics but one (the intervention) are the same, in order to isolate the impact of specific factors on outcomes of interest. Ex-post evaluations, particularly in contexts with limited data availability present a number of challenges. The adopt-a-school policy has been in operation for more than fifteen years, without dedicated monitoring and evaluation, making it difficult to track trends in outcome variables overtime to assess the contribution of the mechanism. We relied on secondary data sources and a primary field survey for data to use for comparisons.

The first challenge was in compiling the list of adopted and un-adopted schools for Punjab and Sindh. In Punjab, this was accomplished through collecting lists of adopted schools from the four large adopters. In Sindh, a school list was obtained from Sindh Education Foundation (SEF), but only for schools adopted in 2013 and 2014. The lists of adopted schools were used for two purposes: a) to locate adopted schools in the EMIS databases; b) to select sample schools for the field survey in Sindh.

Secondary data sources: Education Management Information Systems in Punjab (EMIS) and Sindh (SEMIS) provide data for all schools in the two provinces, and over time. One of the challenges was to identify the adopted schools in the EMIS and SEMIS data bases. School lists obtained from adopters – and school codes where possible- were used to identify adopted schools within the larger school databases. EMIS and SEMIS are temporal data sets but do not date back to the earliest dates of adoption. The datasets are used for the following years: 2008 to 2013.

Field

Field Survey in SIndh: A school-based survey was undertaken in Sindh to collect primary data on access, quality and infrastructure indicators. Additionally, the survey collected information on decision-making at the school level, to provide a comparison of governance indicators in adopted and un-adopted schools. Such an exercise has been undertaken for the first time in Pakistan's context, to help construct an understanding of the ways school based management mechanisms can be employed to improve State schools. The survey was conducted in three districts in

Sindh: Karachi, Thatta and Badin; and could not be conducted in Punjab because permission was not granted.

Propensity Score Matching: In order to establish the contribution of the PfM mechanism in a way that can be statistically valid, it is important to select schools that match the baseline characteristics of adopted schools in the year of adoption, but were not adopted. These schools make up the control group, and the adopted schools make up the treatment group. The technique used for this purpose is Propensity Score Matching. Appendix A contains details of the data sets and the PSM technique. PSM was used to select control and treatment schools for both secondary and primary data sources.

The Sample: Four main data sets are used: Sindh Survey data, Sindh EMIS data, Punjab EMIS data, and Punjab Examination Commission (PEC) data.

For the Sindh Survey Data, our sample size is 101. There are 44 adopted schools and 57 un-adopted schools in our sample. For Sindh EMIS Data, our sample size is 134. There are 67 adopted schools and 67 un-adopted schools in our sample. For Punjab EMIS Data merged with PEC data, our sample size is 606. There are 303 adopted schools and 303 un-adopted schools in our sample.

FINDINGS

KEY MESSAGES

- Enrollments increase more in adopted as compared to un-adopted schools
- The increase in enrollments is higher over longer periods of time (i.e. enrollments continue to increase over time)
- Infrastructure-index, a composite of basic facilities, is significantly higher for adopted schools
- In Punjab, where learning outcomes data is available over a longer period of time, and where it is possible to find adopted schools in the government data sets; it emerges that adopted schools are associated with better learning outcomes and the increase in learning outcomes is higher over time.
- Head-teachers in adopted schools receive more support in key aspects of school management, and they are more likely to exercise authority in key aspects of decision-making (based on school level data from Sindh)
- Teachers in adopted schools receive better training in areas of pedagogical practice, parent-teacher interaction, providing feedback on student performance, most often provided by adopters (based on school level data from Sindh).

THE RATE OF INCREASE OF ENROLLMENTS IN ADOPTED (PfM) SCHOOLS IS HIGHER THAN IN UN-ADOPTED SCHOOLS IN PUNJAB AND SINDH

Enrollment trends are compared over five years, between 2008 and 2013 for both provinces, using data from SEMIS for Sindh, and EMIS for Punjab. The base year for comparison is 2008. As mentioned earlier, data limitations prohibited the analysis from going back further in time.

In Sindh, in 2013 the average enrollment of students in adopted schools is 193.6 as compared to 104.8 in un-adopted schools[3]. At the base-line the two groups were at a (statistically) similar level of average enrollments as indicated by numbers in row 1. The percentage change in enrollment from 2008 to 2013 in adopted schools is 25% as compared to -16% in un-adopted schools[4]. While enrollments in adopted schools register an increase, enrollments in comparable un-adopted schools fell over the same time period.

[3] For Sindh Survey Data, the average enrolment of students in 2015 in adopted schools is 163.93 as compared to 152.46 in un-adopted schools. This difference is not statistically significant at 10% level.

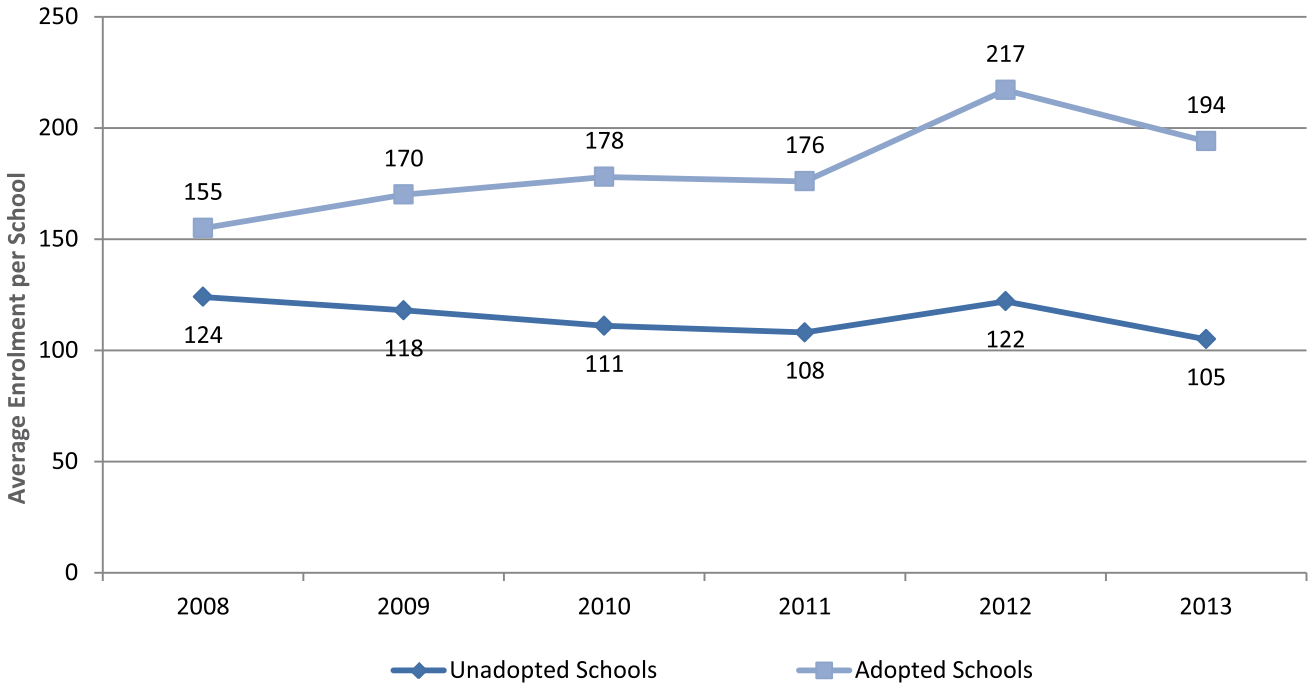
[4] Positive percentage change shows increase in enrolment from 2008 to 2013 while negative percentage change shows decrease in enrollment from 2008 to 2013.

Table 3A: Enrollment Trends in Adopted and Un-adopted Schools in Sindh (2008 -2013)

	Average Enrollment per School		Difference (Adopted – Un-adopted)	Significance of Difference
	Un-adopted School	All Adopted School		
2008	124.45	154.91	30.46	Insignificant at 10% Level
2009	118.40	170.36	51.96	Significant at 10% Level
2010	110.67	178.37	67.7	Significant at 5% Level
2011	107.87	175.51	67.64	Significant at 5% Level
2012	122.38	216.64	94.29	Significant at 5% Level
2013	104.81	193.58	88.77	Significant at 5% Level
Percentage Change in Average Enrolment per School from 2008 to 2013	-15.78%	24.96%	40.74%	Not Applicable

Source: Sindh EMIS, 2013

Figure 6A: Enrolment Trend in Adopted and Un-adopted Schools in Sindh (2008-2013)



Source: Sindh EMIS, 2013

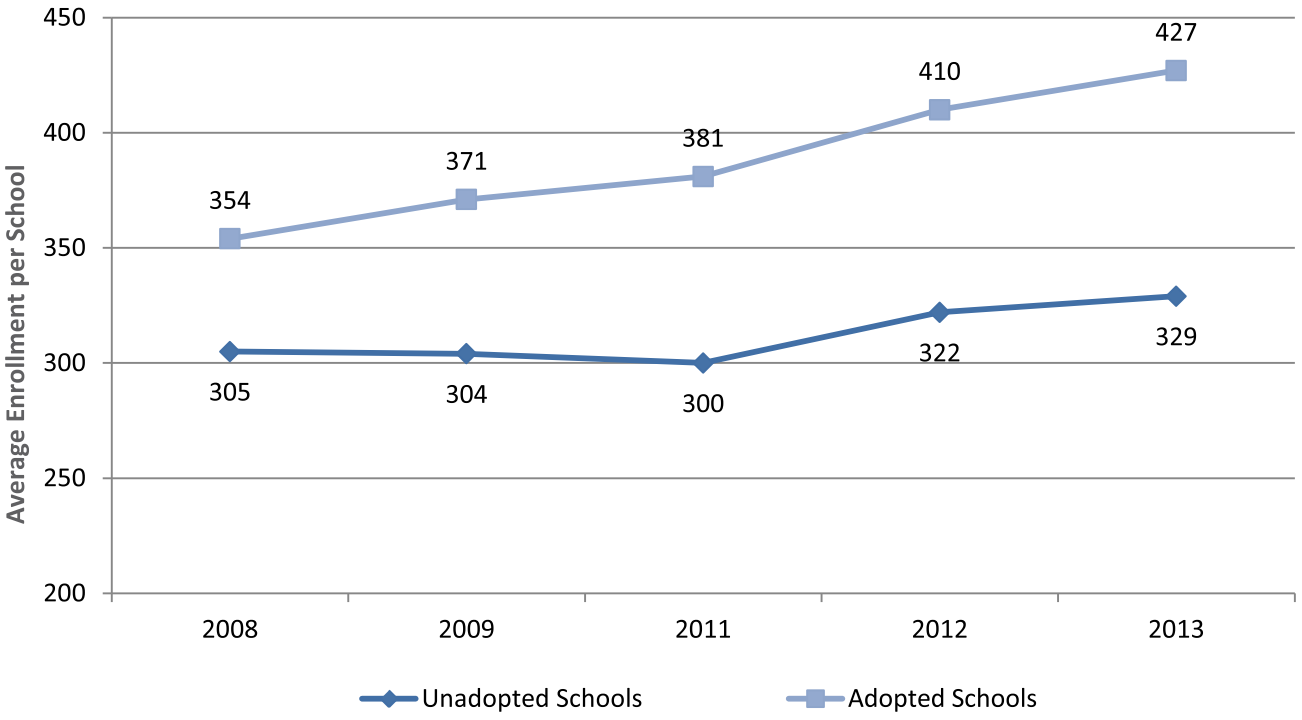
In Punjab, the average enrollment of students in 2013 in adopted schools is 427, as compared to 329 in un-adopted schools. More importantly, the percentage increase in student enrollment from 2009 to 2013 is 27.4% in adopted schools, as compared to 16% in un-adopted schools. Also, the last two columns of Table 1B show that longer periods of adoption are associated with slightly greater percentage increases in enrollment in un-adopted schools.

Table 1B: Enrollment Trends for Adopted Un-adopted Schools in Punjab (2008- 2013)

Year	Average Enrollment in			
	Un-adopted Schools (N=303)	All Adopted Schools (N=303)	Schools Adopted in 2010 (N=88)	Schools Adopted in 2012 (N=82)
2008	305	354	181***	140***
2009	304	371**	166***	136***
2011	300	381**	170***	119***
2012	322	410**	181***	146***
2013	329	427***	192***	142***
Percentage Change in Enrollment from 2009 to 2013	16.0%	27.4%**	31.8%**	30.5%*

Source: Punjab EMIS, 2013. * indicates that difference in enrollment of adopted and un-adopted schools is significant at 10% level; ** indicates that difference in enrollment of adopted and un-adopted schools is significant at 5% level; *** indicates that difference in enrollment of adopted and un-adopted schools is significant at 1% level

Figure 6B: Enrollment Trends in Adopted and Un-adopted Schools in Punjab (2008-2013)



Source: Punjab EMIS, 2013

THE STATE OF BASIC FACILITIES AND INFRASTRUCTURE PROVISION IS SIGNIFICANTLY BETTER IN ADOPTED SCHOOLS

Data for key basic facilities were used to construct an infrastructure index for adopted and un-adopted schools, using the Principal Component Analysis. In Sindh the index comprises five variables: Availability of Electricity, Drinking Water, Washrooms, Boundary Walls, and Number of Class Rooms. In Punjab, six variables are used: Drinking Water, Electricity, Washroom, Boundary Wall, Main Gate, and Number of Classrooms. Table 2A summarizes findings for Sindh and Table 2B for Punjab. Small negative value of index show comparatively worse infrastructure quality of a school, while large positive values show comparatively better infrastructure quality of a school.

In Sindh, the value of index in 2013 for adopted schools is 0.08 as compared to-0.082 for un-adopted schools. The infrastructure index for adopted schools is 0.161 more than the index for un-adopted schools[5]. Not only is the state of infrastructure better in adopted schools, it has improved overtime (index value increases by 0.027). The state of infrastructure has depreciated in comparable un-adopted schools over the same time period (2008-2013) (index value declines by 0.030). A deconstruction of the index reveals improvements in each component facility as well in adopted schools in 2013[6].

Table 4A: Trends in infrastructure provision and upkeep in Sindh (2008-2013)

	Index value for the infrastructure quality present in school		Difference (Adopted-Un-adopted)
	Un-adopted	Adopted	
2008	-0.05	0.05	0.10
2009	-0.07	0.08	0.15
2010	-0.10	0.10	0.20
2011	-0.07	0.07	0.14
2012	-0.12	0.12	0.24
2013	-0.08	0.08	0.16
Change over time	-0.03	0.03	0.06

Source: Sindh EMIS, 2013

In Punjab, the value of index in 2013 for adopted schools is 0.45, as compared to 0.19 for un-adopted schools. The state of infrastructure is better in adopted schools. Between 2009 and 2013, the value of the index for un-adopted schools falls from 0.4 to 0.2, whereas it remains the same at the higher level for adopted schools. Data trends between 2009 and 2013 reveal a widening gap in the index for adopted and un-adopted schools. A comparison of component facilities of the infrastructure index reveals that adopted schools started off at a worse position than un-adopted schools as regards basic facilities (baseline values in 2008). Over time, not only have adopted schools caught up, they have surpassed the levels of infrastructure provision in State schools[7].

Table 2B: Trends in infrastructure provision and upkeep in Punjab (2008-2013)

Year	Average Value of Infrastructure Index in			
	Un-adopted Schools (N=303)	All Adopted Schools (N=303)	Difference (Adopted – Un-adopted)	Significance of Difference
2008	0.40	0.46	0.06	Insignificant at 10% level
2009	0.40	0.48	0.08	Insignificant at 10% level
2011	0.31	0.42	0.11	Significant at 10% level
2012	0.28	0.41	0.13	Significant at 5% level
2013	0.19	0.45	0.26	Significant at 1% level
Average Value of Change in Infrastructure Index from 2009 to 2013 (index2013 - index2009)	-0.19	-0.06	0.13	Not Applicable

Source: Punjab EMIS, 2013

[5] For Sindh Survey Data, the infrastructure index is 0.13 for adopted schools as compared to -0.10 for un-adopted schools. This means that if a school is adopted, its infrastructure index increases by 0.23. In simple terms, better overall infrastructure quality is available in adopted schools as compared to un-adopted schools.

[6] To see how each of the five individual facilities (Electricity, Drinking Water, Washroom, Boundary Wall, and Number of Classrooms) compares in adopted and un-adopted schools, please see Tables B.1 to B.5 in the Appendix B.

[7] To see how each of the 6 facilities used in the construction of index compares in adopted and un-adopted schools, please see tables B.6 and B.7 in the Appendix B. For comparison we have selected only those schools which are adopted after 2008.

A HIGHER NUMBER OF TEACHERS ON AVERAGE IN ADOPTED SCHOOLS

In Sindh, the average number of teachers per adopted school is 7.46, as compared to 4.43 in un-adopted schools (SEMIS, 2013)[8]. Furthermore, the average number of teachers in adopted schools has increased overtime, while in un-adopted schools the average has fallen. Between 2008 and 2013, the average number of teachers in adopted schools increased by 25%, while for un-adopted schools the average decreased by 9%.

Table 3A: Trends in Teacher availability in Sindh (2008-2013)

	Average Number of Teachers per School		Difference (Adopted-Un-adopted)	Significance of Difference
	Un-adopted Schools	Adopted Schools		
2008	4.85	5.97	1.12	Insignificant at 10% Level
2009	4.15	6.18	2.03	Significant at 10% Level
2010	4.24	6.10	1.86	Significant at 10% Level
2011	4.79	6.95	2.16	Significant at 10% Level
2012	4.72	7.64	2.92	Significant at 5% Level
2013	4.43	7.46	3.03	Significant at 5% Level
Percentage Change in Average Number of Teachers per School from 2008 to 2013	-8.7	24.9	33.6	

Source: Sindh EMIS, 2013

The pattern holds in Punjab as well: In 2013, there are on average more teachers in adopted schools than un-adopted schools (Table 3B). Unlike Sindh, the number of teachers in both schools has gone up, however the percentage increase in the number of teachers available since 2008 is higher in adopted schools is higher than in un-adopted schools.

Table 3B: Trends in teacher availability in Punjab (2008-2013)

Year	Average Number of Teachers per School in			
	Un-adopted Schools (N=303)	All Adopted Schools (N=303)	Difference (Adopted-Un-adopted)	Significance of Difference
2008	7.0	7.4	0.4	Insignificant at 10% level
2009	7.2	7.4	0.2	Insignificant at 10% level
2011	7.6	8.6	1.0	Insignificant at 10% level
2012	8.5	9.1	0.6	Insignificant at 10% level
2013	8.3	8.9	0.6	Insignificant at 10% level
Percentage Change	22.8%	29.8%	7.0%	

Source: EMIS, 2013

[8] For Sindh Survey Data, the average number of teachers per adopted school in 2015 is 6.3 as compared to 5.9 in un-adopted schools.

Sindh survey data collected for this study reveals that contract teachers make 20% of the total number of teachers in adopted schools, as compared to only 3% in un-adopted schools – supporting the claim that the improvements in teaching force is linked with the process of adoption. We also test the possibility that a higher proportion of sanctioned posts are being filled in adopted schools.

LEARNING OUTCOMES IN PUNJAB SHOW SIGNIFICANT IMPROVEMENT; LEARNING OUTCOMES IN SINDH SHOW MODERATE IMPROVEMENT

For Sindh, the impact of adoption on learning outcomes is ambiguous

Sindh Survey Data contains information about the learning outcomes of students in the subjects of Mathematics, Urdu, and English. A test was conducted for grade 4 students in the subjects of Math, Urdu, and English. Table 4A below shows the aggregate marks of students in each of the three subjects[9]; and reveal that students in adopted schools perform slightly worse than students in un-adopted schools in each of the three subjects tested. A couple of points need to be kept in mind when interpreting these findings. One, because baseline data are not available, we do not have information on whether these students started off at worse learning levels. Second, due to data limitations for Sindh, we were able to only identify schools that had been adopted for less than 3 years. A majority of adopted schools in our sample (18 out of 44) are adopted in 2014 and almost all (38 out of 44) are adopted in or after 2010.

Improvements in learning outcomes take time to manifest, proceed- and are to some degree dependent on – improvements in inputs such as basic facilities and teachers. Given that available data for Sindh only allows tracking for a very short period of time and no baseline comparisons, the moderate or low learning improvements are not surprising. For substantive results, learning outcomes in these schools need to be tracked over time.

Table 4A: Aggregate Marks of Students in Math, English, and Urdu (Sindh Survey Data)

Subject	Maximum Aggregate Scores Achievable	Mean Aggregate Scores in			Difference in Scores (Adopted – Un-adopted)	Significance of Difference
		All Schools (Adopted + Un-adopted)	Un-adopted Schools	Adopted Schools		
Mathematics	17	10.67	10.88	10.37	-0.51	Significant at 5% Level
Urdu	30	14.41	15.69	12.62	-3.07	Significant at 1% Level
English	28	14.68	15.32	13.78	-1.54	Significant at 1% Level

For Punjab, adoption has positive impact on the learning outcomes of students

Comparisons of learning outcomes in Punjab were undertaken using Punjab Examination Commission data from 2009 and 2013, for adopted and un-adopted schools in the subjects of Mathematics, Urdu, and English. For comparison, schools adopted in 2010 were selected. In 2009 these schools are not adopted and any increase in learning outcomes in 2013 can be attributed to adoption. From table 4B below, we can see that even though adopted schools start at lower learning levels in 2009, they do however, not only catch up to un-adopted schools but also outperform them in 2013. In other words, the percentage increase in learning outcomes of students in adopted schools is greater than un-adopted schools. This difference in percentage increase in scores is also statistically significant for each of the three subjects.

[9] For the performance of students in each question of each subject test, please see Tables B.8 to B.10 in the Appendix B.

Table 4B: Aggregate Marks of Students in Math, English, and Urdu (PEC Data)

Subject	Year	Average Scores of Students in		Difference in scores (Adopted – Un-adopted)
		Un-adopted Schools (N=303)	Adopted Schools (N=88)	
Mathematics	2009	43.2	39.3	-3.9*
	2013	42.8	46.6	3.8**
Urdu	2009	54.8	46.0	-8.8***
	2013	54.7	54.8	0.1
English	2009	48.3	35.4	-12.9***
	2013	51.6	55.2	3.6**
Percentage Change in Scores of Students from 2009 to 2013	Mathematics	14.6%	26.7%	12.1%*
	Urdu	6.6%	16.7%	10.1%*
	English	18.7%	74.2%	55.5%***

HEAD-TEACHERS IN ADOPTED SCHOOLS RECEIVE MORE SUPPORT (IN SOME ASPECTS) FOR SCHOOL MANAGEMENT THAN THEIR COUNTER-PARTS IN UN-ADOPTED SCHOOLS

The findings presented in this section relate to Sindh. One of the objectives of the study is to investigate the potential of PfMs to trigger improvements in school management. A central question of the study was to investigate the differences in school level decision-making and the support available to school heads from private partners.. Good school governance is associated with effective decision-making at the school level, an empowered school leader, and a supportive school environment. The authority of the State school-head has increased over the years in Pakistan. Most notably, school-heads have been authorized with powers to surrender ineffective teachers to the Districts Education Officers and bring in replacements; and the authority to hire contract teachers to make up for shortfalls (using SMC funds). The school-head is also the Chairperson of the School Management Committee, with powers to convene the committee, make decisions regarding the allocation of school funds for infrastructural development and repair. While these powers grant State school-heads considerable authority, in effect they are not often practiced. In practice, State schools continue to function as part of a centralized, hierarchical bureaucracy with little flexibility or autonomy being exercised by the school head.

The field survey in Sindh collected information on management decisions, support received by head-teachers in matters of school management, training received by head-teachers, training received by teachers, and tasks teachers engaged in. The survey collected data on 24 variables for different types of school management decisions. The data show a positive impact of adoption on management and the teaching capacity of head-teachers and teachers of adopted schools. In a key finding on autonomy, the data show that head-teachers in adopted schools are 17.4 percentage points more likely to dismiss teachers, as compared to head-teachers in un-adopted schools.[10]

Head-teachers in adopted schools receive more support in formulating the school development plan, for decisions regarding allocation of funds, disciplining teachers, and in decisions regarding school construction (Table 5).

[10] See Table B.11 in Appendix B, to see the percentage of head-teachers in adopted and un-adopted schools with the autonomy to make different kinds of management decisions.

Table 5: Prevalence of School Management Support of Head-teachers in adopted and un-adopted schools in Sindh

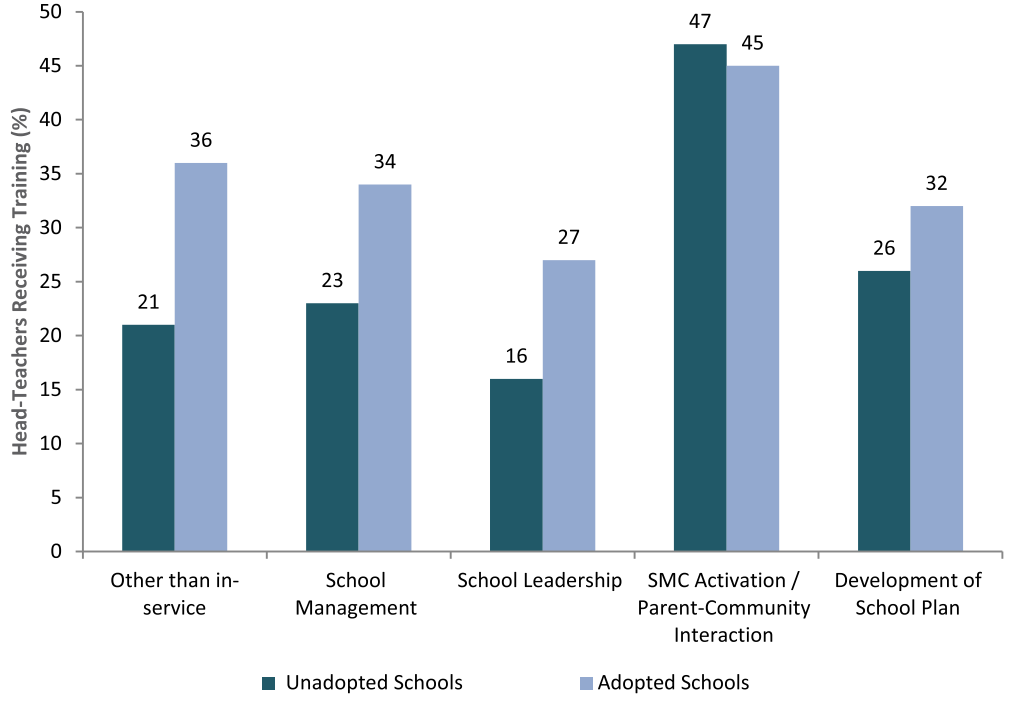
Kinds of Management Decision for which support is provided	% of HTs receiving support for management decisions		Difference in Support Received by HTs in adopted and un-adopted schools (Adopted-Un-adopted)
	Un-adopted	Adopted	
Development of School Plan	36.8	68.2	31.4***
Asking for SMC Funds	71.9	65.9	-6.0
Allocating SMC Funds	66.7	79.5	12.8
Hiring Teachers	64.9	72.7	7.8
Monitoring Teachers	38.6	47.7	9.1
Disciplining teachers	17.5	43.2	25.7***
Addressing Behavioral Changes	21.1	38.6	17.5*
Community Interaction	24.6	43.2	18.6*
Processing Requests with Education Department	50.9	40.9	-10.0***
School Construction	52.6	63.6	11.0***
Teaching and Learning Materials	28.1	36.4	8.3***
Buying Teaching and Learning Materials	38.6	38.6	0

Source: Sindh Survey Data. Note: *** significant at 1%; *significant at 10%

The data show that heads in PfM schools are more likely to receive support in areas of school management, which is key for them being effective in their jobs.

The survey also collected information on five different types of trainings received by school-heads in adopted and un-adopted schools. Data show that a higher proportion of heads of adopted schools report receiving funds for school management, development of school plans, and school leadership training; and that these trainings are provided by adopters.

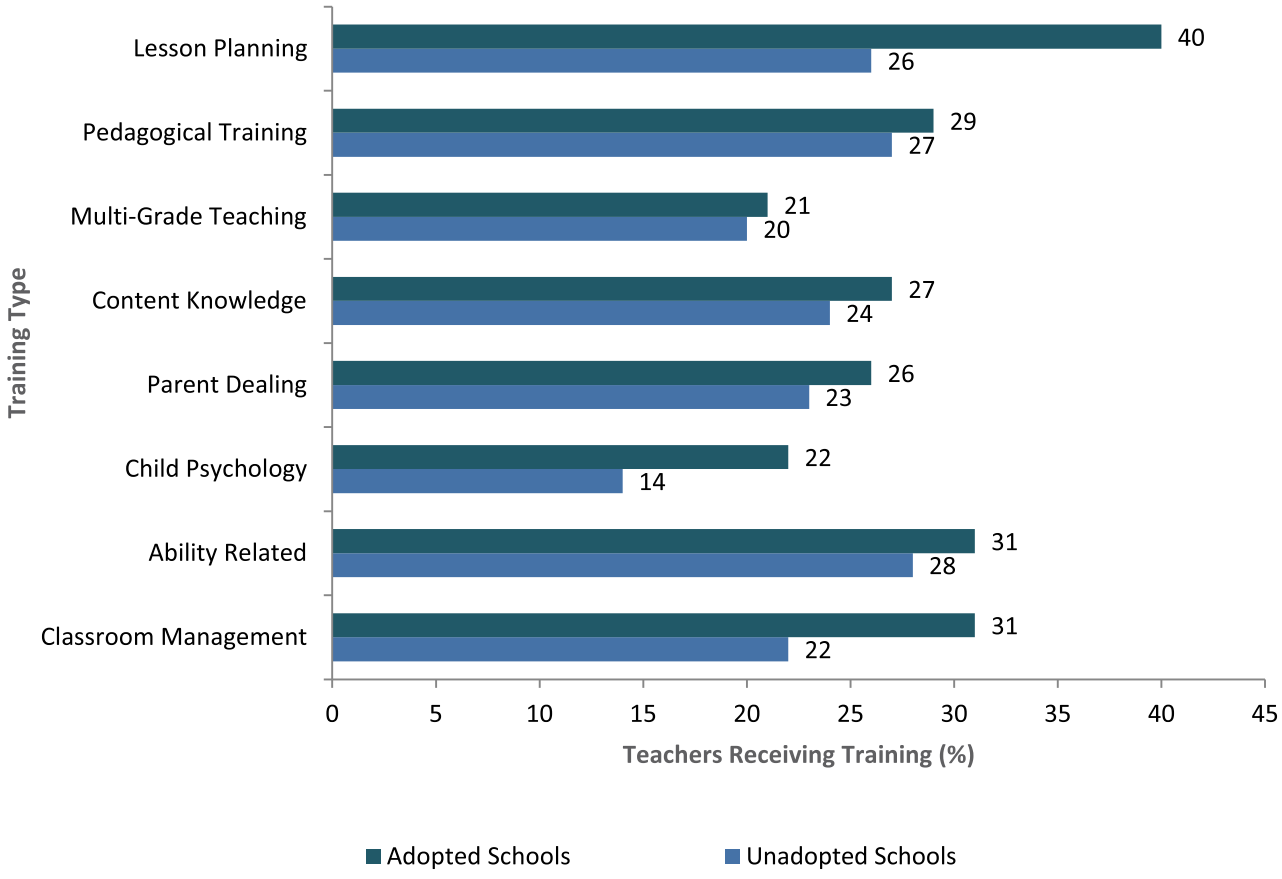
Figure 7: Prevalence and nature of Head-Teacher Training across school types in Sindh



A HIGHER PROPORTION OF TEACHERS IN ADOPTED SCHOOLS REPORT RECEIVING MORE TRAINING IN KEY AREAS

The Sindh survey collected information about eight different types of trainings received by head-teachers. Teachers in adopted schools receive more training for each of the eight training types (Fig 8)[11]. For instance, teachers in adopted schools receive more lesson planning training and classroom management training.

Figure 8: Prevalence and nature of Teacher training across school types in Sindh

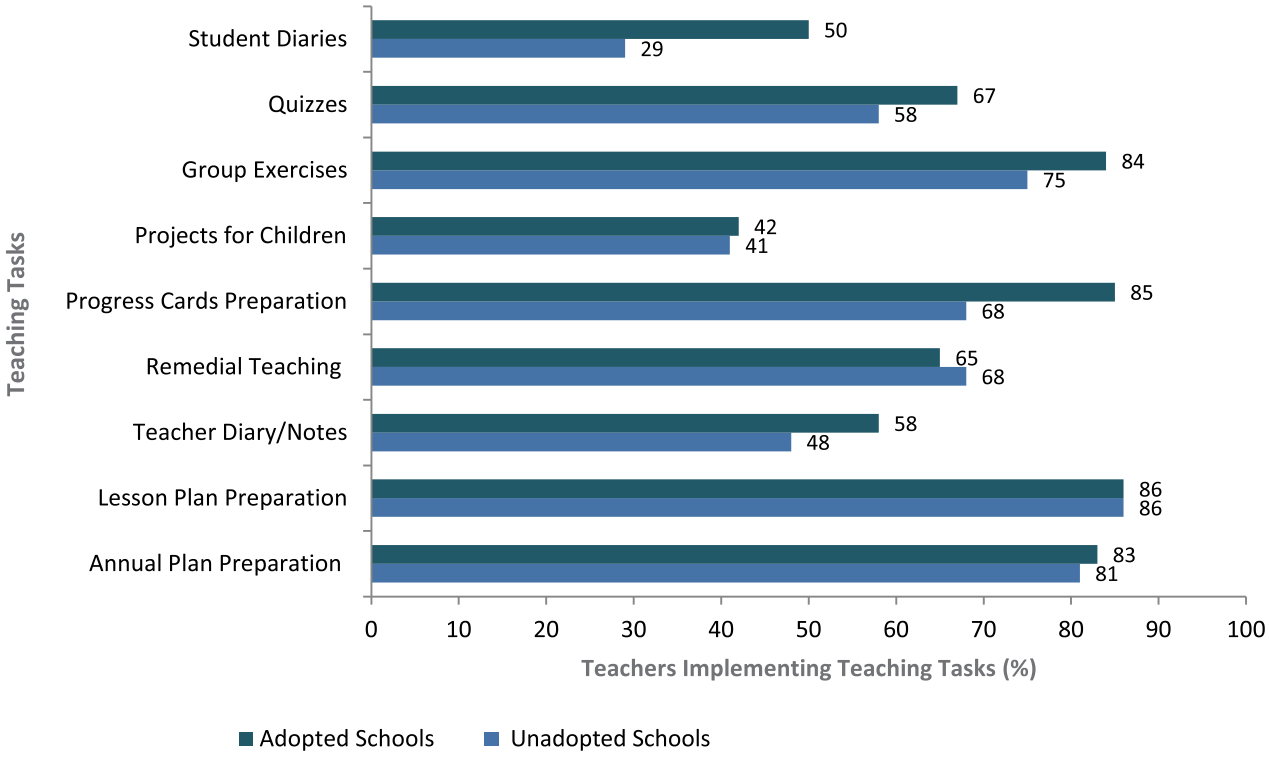


A HIGHER PROPORTION OF TEACHERS IN ADOPTED SCHOOLS REPORT IMPLEMENTING PEDAGOGICAL BEST-PRACTICES IN CLASS ROOMS

Sindh survey data also contain information about the teaching methods of teachers in adopted and un-adopted schools. From Figure 9 below, we can see that teachers in adopted schools prepare and implement more (desirable) teaching tasks than teachers in un-adopted schools. For instance, larger proportions of teachers in adopted schools prepare teacher diaries/notes and progress cards for students.

[11] Although teachers in adopted schools receive more training, it is important to mention that only about a quarter of teachers in adopted and un-adopted schools receive these trainings. More information and research is required to know why only a quarter of teachers receive these trainings and how we can increase the number of teachers (both in adopted and un-adopted schools) who receive these trainings.

Figure 9: Incidence of Teachers implementing pedagogical best-practices in class rooms



V.THE INTERVENTIONS AND COMPARATIVE COSTS OF MODELS

Schools that are part of the partnership mechanism show significant improvements in key aspects of quality, access and governance. Data limitations and the nature of analysis preclude positions on strict causality. However, improvements seen in the adopted sector can very reasonably be associated with the interventions made as part of PfM mechanisms.

There is a need to develop a better understanding – for researchers, policy makers, and donors – of the elements of the intervention in comparison to global models. The interventions undertaken are linked with getting a handle on the costs of the mechanism as a policy choice.

This section describes the spectrum of interventions part of current PfM models, and provides estimates of the cost of these interventions. The nature of PfM interventions are linked directly with the cost of interventions, in that the deeper and broader (more elements) the intervention, the greater the cost of implementation. Cost estimates are important for helping a discussion around policy choices. Estimates of cost per student/child facilitate informed decisions regarding allocations of public finances. This information is important also for the design of a systematic framework where the State funds PfMs.

A BUNDLED INTERVENTION

As with PfM mechanisms elsewhere in the world, the adopt-a-school program is a bundled intervention, which includes elements of infrastructural provision, resource injections and management interventions. Unlike the rest of the world, the PfM model in Pakistan is not state-financed[12]. The current terms of arrangement involve non-State actors investing their own resources (financial and managerial) into State schools. The main objective of arrangement, as detailed in the contractual agreements (or Memorandums of Understanding) is to rehabilitate dysfunctional and damaged schools by rebuilding classrooms and providing additional facilities. Additionally, the non-State actors are tasked with brining teachers on board to ensure the schools are staffed and running for the duration of the contract. Across Sindh and Punjab, provision of infrastructure and teachers are two inputs all adopters have provided; and these two categories represent the minimum standard inputs that a majority of adopters provide.

There are some differences in the PfM models operating across the two provinces. In Sindh, the mechanism was conceived as a way for community and non-state actors taking greater ownership of State schools and working to improve service delivery in these schools. Ownership translated into investment of resources for infrastructure enhancement, but also for improving management and operations at the school level. In Punjab, this partnership was originally conceived by the provincial administration as a mechanism for leveraging additional resources and managerial capacity of willing non-state actors towards supporting district authorities in rebuilding damaged schools and making them operational again. In Sindh, PfMs operate through a wide number of adopters (more than 20), each adopting a small number of schools. In Punjab, it's the opposite: less than 5 major adopting organizations, each taking on a large number of schools.

Each of these aspects of the way in which the model is organized has implications for the nature of interventions as well as the cost of interventions. Table 6 summarizes the nature and variety of interventions for four key adopters in Punjab to give a sense of this range. We offer details on interventions in Punjab for illustrative purposes and to provide cost estimates, given that with fewer adopters the models are easier to define and costs are easier to calculate.

[12] Sindh is piloting an evolution of the PfM model which will be state financed. This model is known as the Education Management Organizations model, and will become live in 2015. Punjab thus far has no plans for financing PfM interventions.

The Inputs

The interventions are divided into three broad categories: infrastructure, human resource, and academic and extracurricular. These provisions are made in line with the gap assessments conducted during the school selection process. Provision of physical facilities includes such things as boundary walls, additional classrooms, toilets and water supply. Similarly, adopters estimate the number of contract teachers required based on the student-teacher ratio requirements. These teachers are contracted from the community or nearby localities if possible, and trained before they start teaching in schools.

Table 6: Partner Interventions in PfM Schools in Pakistan

	Progressive Education Network (PEN)	Tareen Education Foundation (TEF)		CARE
		Core Schools	Non-Core Schools	
Infrastructure	Construction of new classrooms where needed	Construction of classrooms (98 classroom constructed in three core schools)	Construction of new classrooms where needed	Construction of new classrooms where needed (520 classrooms built in 182 schools)
	Provision of toilets with running water	Construction of new toilets	Restoration of non-functional toilet blocks	Provision of toilets facility
	Provision of clean drinking water	Construction of new water tanks	Construction /Repair of water tanks	Provision of clean drinking water
	Furniture for every class for students/teachers	Furniture/Equipment (e.g. UPS, lights, fans) for classrooms and school		Furniture for students as needed
	Repair and maintenance of adopted school building	Repair and maintenance of adopted school building	Repair and maintenance of adopted school building	Repair and maintenance of adopted school building
	Provision of computer labs (Mostly in middle and high schools)	Provision of computer lab, science lab, library, art room and audio visual room		Provision of computer lab, science lab and library in selected schools
		Construction of Boundary Wall	Construction of Boundary Wall	Construction of Boundary Wall
Human Resource	Provision of teachers (2-3 per school)	Provision of teachers (85 in 3 core schools)	Provision of teachers (1-2 per school) (111 teachers in 82 schools)	Provision of teachers as needed by schools (up to 12 teachers in some schools and total of 2700 teachers in 182 schools)
		Provision of headmistress		Provision of internal coordinator in school
		Provision of Librarian, sports teacher, lab assistants and doctor		Provision of Library
	Provision of one janitor per school	Provision of janitorial staff	Provision of one janitor per school	Provision of janitorial and custodian staff
Academics and Extra Curricular	Training of contract and government teachers/head-teachers	Training of contract teachers/head-teachers (special training visits to Karachi for selected teachers also)	Training of selected teachers	Training of teachers (summer training is must for all CARE teachers)
	Teaching Kits	Teaching and visual aid Kits		
		Subsidized Uniform and stationery		
	Student and Teacher Incentives on performance			
	Monitoring and Evaluation of student and teachers	Monitoring and Evaluation of students and teachers		Monitoring and Evaluation of students and teachers
	Student Assessment	Student Assessment		Centralized student examination system (Assessment conducted twice a year)

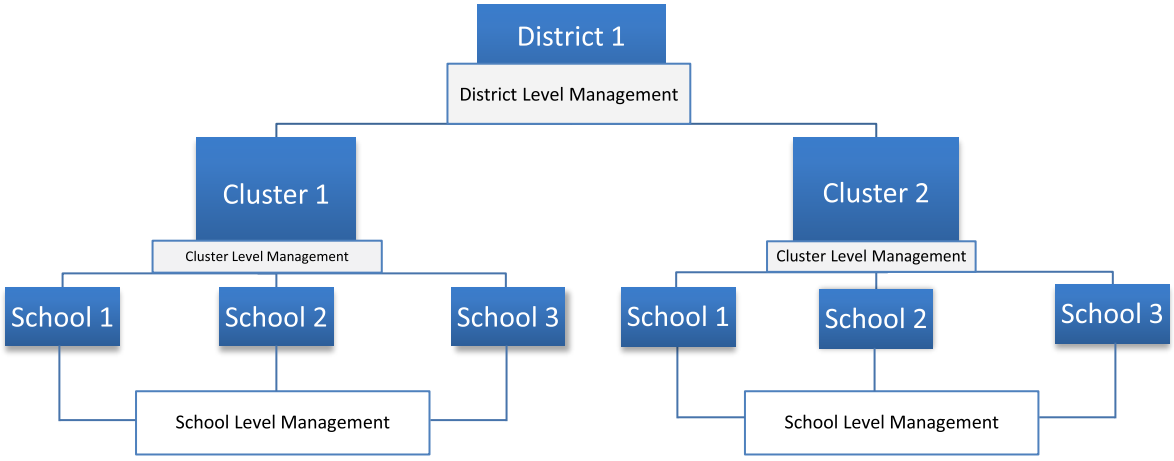
	Free student Notebooks	Provision of supplementary English, Math and Book group books		Use of "Radiant way" as supplementary book for primary schools (4 sets of book per class)
		Monthly provision of Arts and crafts and sports material	Limited provision of Arts and crafts and sports material	
	Annual sports, debates and quiz competitions	Regular student exhibitions, competitions and exposure trips	Exposure trips for selected students	Annual Debates, writing and sports competitions
	Early childhood education kits	Kindergarten classrooms and Day care centers		Access to English program
		Outdoor and Indoor sports facilities e.g. volley ball court, cricket ground, skateboards, chess boards etc.		

The Management Structures

In addition to the inputs provided to the schools, a significant but less visible outcome of PfM arrangements is the organizational / management structure that develops backstage for implementation and continuation of the interventions undertaken by the adopters in schools. Much like the models themselves, the size and structure of this management force differs by adopter. Larger adopting organizations, like CARE, have developed a sophisticated, layered structure of management which enables them to oversee a large number of schools. Smaller adopters have a smaller management team. In either case, an additional layer of management oversight is introduced in the school.

Figure 10 is a generic organogram of the management structures that the larger adopters have instituted[13]. At the top of the structure are district coordinators (or district managers), followed by cluster managers (or tehsil managers for others), and area managers. At the school level, adopters have representatives that coordinate with the head-teacher. Some call them internal coordinators, and others education promoters. Each of the levels of hierarchy represents a larger group of schools and geographical areas to look after. For example, the cluster managers are responsible for overseeing academic standards in 5 to 6 schools. The District coordinators or managers are counterparts to the DCO and EDO and serve to represent the interests and voice of the adopters and their schools in the government departments. The hierarchy to some degree mirrors that of the education department's structure of governance. The adopter representatives at each level work closely with the government counterparts.

Figure 10: Organizational structure of management for larger adopters in Sindh and Punjab



Source: by Authors; Interviews with representatives of adopters

[13] Details of each of the mode of operations of each of the adopter are found in the IDEAS Working Paper: Partnerships for Management and School Improvement in Pakistan: Mapping the policy and implementation space for the school adoption programme (see IDEAS website).

Each school has an Internal Coordinator (IC), working alongside the head teacher, who is a senior teacher responsible for daily management issues such as attendance, pedagogical methods, timetables etc. Cluster managers (CM) are responsible for overseeing academic standards and performance in 5 to 6 schools whilst working in collaboration with the District Coordination Officer (DCO) on all pertinent issues. Area Managers (AM) have executive authority over management and performance of their schools; all complaints and managerial issues are also handled by them.

The internal coordinators or the education promoters are adopters' representatives within schools, and work closely with the head teachers. Their ambit of responsibility includes working closely with the head to oversee and facilitate all school related matters, but also monitoring teachers, ensuring attendance and effort, and working with the new contract teachers that are brought in. While in Sindh the rest of the management structures are missing, the role of the internal coordinator is usually being played by a key representative of the adopting individual or organization.

Adopters with fewer schools have a point person looking after multiple schools. As more schools are taken on by each adopter, more sophisticated structures of management will be required for management and coordination. The structure of management cited above, developed by the larger adopters, has the advantage of being replicable to accommodate larger number of schools.

Through this system of management, the adopters are able to put in place a structure that allows faster identification and redressal of issues. The management structures of the adopters operate in parallel to the official governance structures set up by the state (EDOs, AEOs), but outside of them. The district coordinators work closely with the EDOs but are not answerable to them. The presence of coordinators in schools allow them to monitor teacher presence and effort, work with the head teachers to support them in their tasks, provide a voice and clout to the demands.

Comparative Cost of Models

The scope and nature of intervention are the two major factors which determine the cost of different PfM models operating in Pakistan. As mentioned infrastructure provision and contract teachers are the standard minimum intervention undertaken by most adopters. However, the number of rooms required, and the number of teachers etc. varies by school. Costs of provision also vary by location. Furthermore, a comprehensive PfM model includes interventions beyond infrastructure and teacher provision to include areas related to teacher training, deployment of managers to support school heads, and other elements. Generally, the greater the number of school improvement areas the adopters involve themselves in, the higher the cost they will incur. Differences in the size and structure of management teams are another key factor that impacts costs of operation. A discussion on costs, therefore, can only be undertaken keeping in mind a number of constraints including the difficulty in ascertaining the exact cost of each of the models, given the variation. This is particularly true for Sindh.

Along with the breadth of the intervention, the extent to which an aspect of school improvement is dealt with reflects in the balance sheets of the adopters. For instance, two adopters might be providing teacher trainings to the adopted school staff. The first adopter may arrange teacher trainings on a biannual basis for a selected number of teachers, whereas the second adopter may conduct trainings on a quarterly basis with the help of a specialized trainer for all the adopted school teachers. Although both the models are providing teacher training to the adopted schools, the variation in the scope and the quality of intervention has implications for the cost of the models.

Taking all these assumptions, variations and limitations into account, we have attempted to provide per unit cost estimates of a sub-sample of PfM models in operation in Pakistan.

Table 7: Comparative costs of PfM models in Punjab (Monthly in Pak Rupees)

	PEN	TEF	CARE
Cost per child (Intervention + Management)	158	750	700
Average cost per child (Only Intervention)	125	N/A	550
Average operating Cost per school	38,727	375,000	150,000
Average cost of capital per school	5646	200,000	40,000
Cost of capital per child	23	7142	N/A

The key here is a very simple one. Leaving aside infrastructure provision/capital expenditure, which is fixed, the basic intervention in schooling through the provision of teachers, teacher training, pedagogical support and management support, is quite low cost and is quite comparable across adopters. Cost varies from PKR 250 per child to PKR 500 per child. This is the cost of a basic intervention in terms of a) provision of some contract and/or private teachers and support staff that are brought in by the adopter, b) teacher training, c) pedagogical support for teachers, and d) management training and management support, for improved organization and monitoring.

These costs are comparable to the costs of provision by an average LCPS in the low to medium fee range, and to the Punjab Education Foundation (PEF), which is utilizes low fee private schools to extend access of schooling to children in places where there are no public schools available.

Cost effectiveness of resources, particularly public resources, is an important aspect of policy decisions. The recent discourse on education financing has noted that the very high cost per student of traditional government schools – considering the low learning outcomes in the state sector- indicates significant inefficiencies of state-run schools. Low fee private schools in comparison are recognized as more efficient options – producing higher learning outcomes at lower costs of operation. Schools funded by the Punjab Education Foundation – (Foundation Assisted Schools) FAS – are the hybrid models of state financing, private provision.

VI.THE ROLE OF ADOPTERS IN AMPLIFYING VOICE OF STATE SCHOOLS (within the education system)

One aspect of the PfM intervention (in addition to resource injections) is the effort undertaken by the non-state actors to improve the school environment, which requires consistent and extensive engagement with local functionaries. As detailed above, adopted schools tend to be run down, located in poor communities. One key aspect of the intervention is the additional layer of management that is introduced by adopting organizations at the school level, and the close interactions between the school, local administration and the adopting organizations that result as an outcome of the arrangement. In addition to infrastructural enhancement, adopters' presence in these schools is serving two purposes: amplifying the voice of the school within the overall structure of the bureaucracy, and monitoring the school and building operations capacity at the school level. The qualitative work undertaken as part of the study is focused on understanding how these two mechanisms are working.

THE PROBLEM OF WEAK VOICE

Frameworks for improving service delivery for the poor speak about a system of voice and accountability that envisions a role for the community to hold local representatives accountable (World Development Report, 2004), and through them, influence state machinery to respond better to local needs. Pakistan has devolved responsibility of school management as part of a larger program of decentralizing of services (Local Bodies Ordinance, 2001). As part of this program, authorized local bodies – School Management Committees – were established with representation from the community to serve as platforms to bring state functionaries and actors with a stake in the schools together for overseeing aspects of management. On paper, SMCs are to serve as mechanisms for increasing community participation and parental oversight of school matters on the one hand. On the other, they are meant as dedicated, formalized forums for coordinating collective voice of the communities and parents, and to channel collective demands relating to schools to local political representatives and state representatives.

Collective and individual voice in Pakistan is weak; and it is weaker for poorer households and communities. Research in the area of parental participation and effectiveness of the SMC mechanism has revealed that while dedicated spaces have been provided in state schools in the form of SMCs, they are not functioning in the way intended on paper (Khan, 2007; Malik, 2014). The consequence is that a powerful channel for school improvement is not functioning to potential; and the benefits associated with decentralized decision-making are not being realized.

This problem is not specific to Pakistan, and has been noted in international literature on decentralization. Bardhan and Mookerjee (2003) note that the simple act of decentralization and creation of local bodies does not in itself guarantee improved decision making or improved governance. In fact, in many cases it could make governance worse for poor people in communities; voice weaker through local capture or lack of capacity. Weak capacity to express voice, costsof collective organization and coordination, and low levels of political capital are factors that contribute to the problem of weak voice.

THE POTENTIAL OF THE PfM MECHANISM TO ADDRESS THE CHALLENGE

Existence of voice improves public schools (Hirschman, 1970). Voice in this case has the connotation of *speaking up* for school improvement through the available political channels. Only those who have a *stake in school improvement* will speak up for school improvement. The current sets of stakeholders (parents, SMCs, other forms of community organizations) are unable to provide a strong voice for the improvement of schools without necessary capacity development. Strong stakeholders in schools are needed for the exercise of effective voice

option. PfMs have the potential to improve the functioning of voice mechanisms. PfMs introduce stakeholders in schools that compensate for the missing voice, and – if designed with foresight – can build capacity of communities to help improve functioning of SMCs and other voice mechanisms.

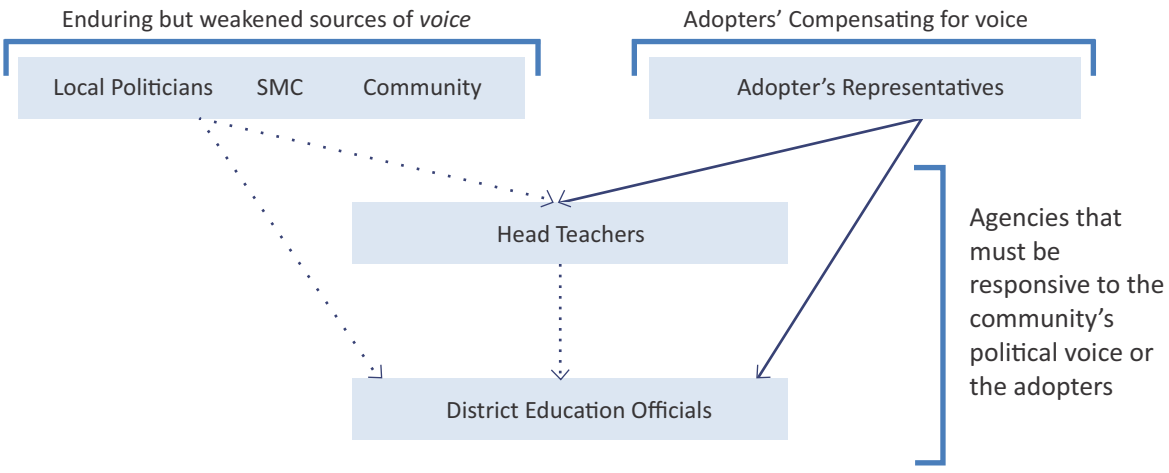
Qualitative work undertaken as part of the study is interested in generating knowledge about this aspect of PfMs in Pakistan's context – where adopters are through their presence in adopted schools serving as the strong stakeholder with political capital to raise demands of schools within the local education departments. In many ways the presence of the adopters pushes the school sideways out of the hierarchy of bureaucratized control, to create spaces where experimentation and innovation can take place.

Interviews with a wide variety of stakeholders show that adopters' presence in these schools is serving two purposes: amplifying the voice of the school within the overall structure of the bureaucracy; monitoring the school and building operations capacity at the school level. However, it is unclear whether the capacity of the local communities to continue this engagement is being built.

ADOPTERS ARE ARTICULATING DEMANDS OF THE SCHOOLS TO LOCAL AUTHORITIES

Data collected through interactions with the adopters and visits to schools show that *adopters are compensating for the political voice a lot more than stimulating it*. Put differently, where there is need to demand action for school improvement from authorities outside of the school and school-based leadership, such demands are articulated and pursued by the adopters themselves. In other words, they appear to be compensating for the voice of the community. This is shown schematically in the figure below:

Figure 11: The schematic description of sources of voice and response to it in the context of particular schools



The broken lines from such potential sources of *voice,* as local politicians, SMCs, and the community at large depict the current weakness in the use of voice option by these sources. When adopters' increasingly interact with district agencies and with school-based leadership they are, in effect, compensating for the absence of voice from more enduring, but weaker, sources within the local communities. This is the weakness in governance mechanisms that the PfM mechanism is addressing.

A channel of communication between the private organization and the local education department opens up prior to contract signings, as they coordinate at the time of school selection. After contract signings, adopters continue to interact closely with local education departments. Most adopters' representatives, with one exception, spoke of the time they spent in chasing government officials. As one representative put it, "We interact with the

government officials very frequently. There is a need to take permission for any sort of intervention the adopter aims to make in the school." On probing the various reasons for interaction with the officials, the representative had this to add:

[An adopter] interacts with the government officials at the district level —which include EDOs (Executive District Officers),DEOs (District Education Officers),DDEOs (Deputy District Education Officers), AEOs (Assistant Education Officers) and DTEs (District Teacher Educators)—on frequent basis […] DDEOs are approached *if a permission letter is to be requested for events like training of the government teacher […] and inter school extra-curricular competitions*. DSD (Directorate of Staff Development)/DTEs are also informed in case PEN arranges the government schoolteachers' training. Meetings are arranged with the DEOs *to put up a request related to infrastructure.* (Emphasis added to the interview transcript)

Representatives of other adopting organizations also noted frequent interactions with the education department to sort out mainly the teacher issues and complaints. Likewise, another adopting organization frequently reached out to government officials with requests for the release of resources and works. Representative of a third organization said that they would like to approach government officials to resolve the problems related to teachers, classrooms, washrooms, and cleanliness. However, they were currently unable to do it due to political reasons. There were some exceptions. One small organization in Sindh said they 'hardly interacted' with the government. They had been unable to make inroads into the education departments, and also lacked the political capital of some of the larger adopting organizations operating in Punjab.

ADOPTERS ARE SUPPORTING HEAD-TEACHERS IN THE PERFORMANCE OF THEIR ROLES

Head-teachers have the primary responsibility to ensure the smooth functioning of the school. It is their job to ensure that teachers are both present and providing teaching services of an acceptable quality to all students. They must also maintain the schools' infrastructure and seek to augment it as and when needed. In a nutshell, they are responsible for providing a learning friendly environment to the students.

Ideally, the stakeholders in schools, including parents and community at large, should be able to demand performance from the head-teachers and teachers. But head-teachers in most public schools, barring a few exceptions, do not experience any such pressures from the school community. The effectiveness of SMCs in creating pressure for performance by school actors has also been called into question by observers (Rashid and Awan, 2015). In a nutshell, the SMCs do not come across as an effective conduit for the exercise of voice option. The adopters' school-based representatives compensate for this absence of voice option by engaging actively with and supporting the head-teachers in the performance of their professional tasks.

Adopters expect and push head-teachers to carry out their duties. Some of the head-teachers' expected duties are (in the words of Adopter B's representative): a) introducing organized teaching, making timetables, using teaching tools; ensuring punctuality; regular interactions with parents and involving the community in school affairs. Other adopters' representatives that we interviewed also echoed these expectations. Some more are given below:

Adopter D: The foundation expects the head-teacher to be present at the school and manage it in its entirety, on his/her own. The head-teacher of the school we visited does not interact with the adopter and is absent most of the days.

Adopter A: The head-teacher is the most important point person in the school. The head-teacher is expected to prepare school development plans, improvement plans, allocate class levels to rooms, supervise teachers and teaching methods, etc. Adopter A wants the head-teacher to be "policy-minded, futuristic and hard-working".

Adopter C: The head-teacher should take the lead. When the EDO sees that the school is doing well (because of

adoption) he thinks highly of the head-teacher rather than the adopter. So this is about the empowerment of the head-teacher.

Nearly all adopters think that head-teachers are important and that they won't be able to manage the schools without good head-teachers. For example, Adopter A's representative regarded the head-teacher as the most important point person in the school. Adopter C's representative also thought that the head-teachers should be in the lead, in fact, thought that their entire intervention was indirectly empowering the head-teachers. As he put it: "When the EDO sees that the school is doing well (because of adoption) he would think highly of the head-teacher…"

The adopters are providing some degree of support to head-teachers, as well. Adopter A has provided an *Internal Coordinator* in each school, whose job is to assist the head-teacher in all areas of school management. Adopter A's representative, much like Adopter C's, also thought that when a school becomes successful, it is the head-teacher that gains recognition in the eyes of the community and government officials. The adopters are supporting head-teachers to approach the District Staff Directorate(DSD)to organizing teacher training, to approach the Education District Offices (EDOs) for administrative and strategic planning for school improvement, and to obtain approvals for in-school activities and infrastructural improvements of their schools. However, it remains unclear if such support is meant to enable the head-teachers to become autonomous in managing the schools.

While the adopters recognize the importance of head-teachers and are supporting them in the discharge of their responsibilities, their relationship with the head-teacher is not always smooth. Conflicts have also sometimes occurred. According to the adopters, the head-teachers are not always open to being critiqued by a 'third party'. According to a representative of Adopter B, some of their schools have uncooperative head-teachers, who have misgivings about the role of adopters. They are suspicious of the adopters' presence in their school and look upon them as trespassing on their jurisdiction. In other words, some head-teachers possibly perceive the adopters as working against their autonomy. In such schools the adopters' perceive their effectiveness to be quite low.

Adopter A's representative also notes instances of conflicts with head-teachers. As he puts it, "occasional conflicts do develop over monitoring the attendance of teachers and requiring them to attend trainings." Representatives of other adopters held similar opinions. There are no well-defined strategies for resolution of these conflicts and the adopters usually tend to avoid any controversial issues, and instead rely on what they term as long-term 'repo-building.' They work on the assumption that when the school would eventually perform better and the head-teachers would be recognized for their respective school's improvement, it is then that their attitude towards the adopters would also change. The experience of most adopters testifies to this gradual trust building between them and the head-teachers.

Adopters are helping mechanisms that should be working by default to function. They are able to push the school sideways, out of the overly centralized structure of decision-making. Evidence of this is available in the way that they are able to improve the effectiveness and efficiency of spending the SMC funds; hiring teachers that are most needed; training them, and introducing new pedagogical practices and syllabi. However, their authority and autonomy do not go far enough.

However, currently PfMs are functioning on the basis of political access. In the absence of clear rules of engagement and defined responsibilities, private partners have to walk a fine line of leveraging their political capital for pushing for demands for the school and backing down when necessary. The effectiveness of PfM mechanisms is compromised by lack of political capital.

There are a multiple ways that adopters can raise their voice; including as legitimate representatives of community demands. Clear policy positions taken by government with defined operating procedures, and roles and responsibilities that can be enforced will improve the efficiency of mechanisms. Drafting clear protocols will also guard against weak institutional memory that affects the operation of this mechanism.

FOR SUSTAINABILITY OF INTERVENTION AND POSITIVE GAINS, FOCUS ON THE CAPACITY BUILDING OF SMCS AND HEAD-TEACHERS IS REQUIRED

The SMCs in one set of adopted schools consists of 6 members, 2 from the adopter, 2 from the City District Government and 2 from the community residents in the vicinity of the school. The Chairman of the SMC is the head-teacher and adopter representatives are also co-signatories. This gives the adopter a control over SMC funds. In some cases, SMCs have managed to install water tanks, fans and other basic facilities in schools. Another organization is not a co-signatory on the SMC, but an honorary member. Through its presence, it is able to assess member-performance, and execute dismissals or transfers. In Sindh, the adopter is made the Patron of the school management council and it has the responsibility of ensuring the active participation of SMC through teachers and parental involvement. And where SMC is not working in school, adopter has to establish the SMC through elections.

Some adopters are engaging with communities on some level. Due to the emphasis on the school and community ownership of the program, workshops are conducted to re-activate dormant SMCs. One organization holds 'hopes and fears' sessions with all stakeholders to explain its purpose and methodologies as a form of introduction to the community. For another, community mobilization to gain access to new communities is the first step in the series that includes adoption of schools. This is done by some, but not all adopters.

Overall however, most organizations are not focused on building capacity of the communities to articulate voice, and for existing dedicated structures of community involvement to function better. At the moment there is considerable variation amongst partners with regards to the significance placed on this issue. While some clearly engage more with communities and work with them to build capacity for voice and accountability, others choose to function in a more discreet manner.

In the absence of a clear framework for engagement directed by the state, this aspect of the PfMs which can yield considerable dividends, is not being focused on. This has clear implications for sustainability. Once the infusion of funds, contract teachers, and some interventions for pedagogy takes place, the three actors left behind will be the school, the community and the parents. Is the only legacy of the PfM going to be brick and mortars? If the PfM mechanism is going to affect something more than infrastructure, a systematic engagement with capacity building of communities and empowerment of dedicated voice and accountability structures – namely SMCs – is needed.

VII.EXIT STRATEGIES: WHAT IS THE END-GAME FOR PfM ARRANGEMENTS?

The empirical analysis above evidences significant improvements in enrollment rates and qualitative accounts of the ways in which adopters are intervening to improve the functioning of state systems of schooling. PfM mechanisms are at least partially addressing the weakness of the political economy of education systems, specifically by addressing two failures in governance and service delivery in the state sector: the low capacity for governance at the school level; and a failure of coordination between the school and local education departments. It is important to note that the intervention is happening not just at the school level, but at the meso level, as well (i.e. in the processes and links between the local state administrators and schools).

However, PfMs – particularly in the way they are functioning in Pakistan, are not a permanent fix. Yet, they have the potential to contribute to reform in a sustainable and meaningful way. For understanding the potential for gains from partnerships to be sustained over time, it is important to understand the thinking around exit strategies.

State schools are being handed over for management by private organizations with the intent of improving governance and operations to the level where the State can start running them successfully again. Management contracts in both Punjab and Sindh are time bound: the term of adoption is specified to be 5 years. Yet, after 15 years of operations very few, if any, of the schools have been handed back to education departments. This is true for Sindh as well as Punjab. The private partners (adopters) have the same opinion in this regard: they lack confidence that the provincial education departments will be able to run the schools in the way that the adopters will leave them.

Eventually the state has to be able to run these schools and provide the kind of oversight that the adopters are providing, and maintain the improvements that are instituted during the adoption process. As part of the qualitative work for this study, we were interested in understanding the state's and adopters' perspectives on the end-game for this mechanism; whether the necessary thinking exists to prepare for a handover, and whether steps are being taken to facilitate exit. The case will aim to also recommend the steps that are needed for sustainability of this mechanism, but also of the standards in the school.

Stakeholder perceptions of viable PfM durations

Representatives of partner organizations interviewed in Punjab and Sindh spoke clearly about their preferences for handing the reformed schools back to the district governments to move on to new ones. For one adopter active in Punjab and Sindh, this is part of a strategic plan to reach as many schools as possible. This is also indicative of the role the adopters see for themselves. They do not see themselves replacing the state or remaining in the schools for an unspecified period of time; rather as providers of services needed, partners supporting district governments in shouldering the responsibility of service delivery.

As mentioned, the current management contracts are also drawn up with a view to have the non-state organizations exiting after 5 years. Yet, many partner organizations in both Punjab and Sindh have not handed schools back. A majority of partners expressed a lack of confidence in the ability or readiness of the district/provincial governments to maintain the interventions (pedagogical and managerial) instituted by partners in PfM schools.

On the other hand, representatives of government departments associated with the PfM are of the view that the primary objective of the adopt-a-school policy, in both provinces was the provision of basic infrastructure; as it is reflected in the management contracts. If the terms of the partnership are to be limited to this, the adopter will come in, construct schools and leave.

There is currently a disconnect between the positions the two key stakeholders are taking: the provincial governments are unable to recognize the extent of the interventions being made by the adopters. The absence of this recognition is apparent in the lack of clear political and policy positions being taken on the PfM mechanisms by either province.

There are three key interventions that most adopters make in schools: resources for provision or repair of infrastructure; contract teachers; and providing a voice for the school within the local education departments. Overtime, partners have invested resources: in addition to construction of rooms and provision of basic facilities they have employed and paid for contract teachers; trained the teachers; and introduced new books and pedagogical practices (see section on interventions for details). Partners have also invested effort and time in improving coordination between the schools and local government departments. At least one of the partner organizations has developed a management organization that functions to ensure the interventions run smoothly. This parallel management structure monitors schools, provides support to the head-teacher, is responsible for overseeing the hiring and training of teachers; and coordinates with local education departments.

An effective exit strategy would mean a systematic plan is in place for the state to judge whether the school has been brought to a mutually determined level of operating quality; and whether the school management has been capacitated to carry on without the support of an external actor. At the moment, the management contracts do not include key process indicators (KPIs) that would allow either government or independent monitors to assess the readiness of the school to be handed to the state (or for the partner to exit).

Aspects of the partnership model that can be assessed objectively to judge the state of readiness of the provincial governments to take back the schools and run them effectively. This will involve looking at what aspects of school operations the state functionaries will have to take over in order for the partnership intervention to be sustained.

Can the state sustain the financial and human resource injections being made by the private partner?

At the moment significant infrastructural improvements are being undertaken through resources raised and invested by non-state partners. The contract teachers that are brought in for sanctioned but un-filled posts are paid by the partners as well. A key question for exit readiness is regarding the steps the provincial governments will take in order to sustain these interventions.

A sustainable exit strategy with regards to teachers requires the provincial department for school education in Punjab, the Department for Staff Directorate and the district government (teachers are employees of district governments) to work with the partners to plan the ways in which human resource additions to PfM schools can be sustained beyond the partners' exit: i.e., can the teachers that are hired become part of the permanent teaching force? Can the school where the teachers are hired be provided resources to keep them on as contract employees? Similarly, the Education and Literacy department in Sindh, the Sindh Education Foundation and the partner organizations need to undertake the same negotiation.

What are the types of mechanisms that will be required for organizations to successfully exit?

Regular operations of a state school require interaction between various departments, including the M&E department, the education department, the finance department, the directorate for staff development, provincial examination boards etc. It is important to figure out what the role of these departments becomes when the school is taken over by a non-state manager. At the moment, all regular monitoring mechanisms continue. Yet, the thinking about actively gearing these moving parts to support the exit of partners is missing. The following

questions need to be asked: a) how does an M&E framework tie in with exit strategies? ; b) should it be that the private organizations have a permanent place in the SMCs? Or should there be an alternative mechanism; and c) can the head-teachers, on their own, perform the same role that the private organizations are performing – brining on board contract teachers to address staffing shortages, facilitate the SMCs to generate extra resources and make decisions about resource allocations?

Sindh has gone further than other provinces by supporting an evolution of the adopt-a-school policy to a Partnership for Management arrangement where these concerns are addressed more clearly. (Details can be found in the box on EMOs in the section on recommendations).

VIII.FACTORS INHIBITING THE OPERATION OF PfM MECHANISMS AT SCALE

After 15 years of operation, adopted schools in Punjab are close to 600 in number (which is less than 1% of total schools in Punjab. In Sindh, the number of adopted school is close to 500 (which is also less than 1% of total schools in Sindh). Close to 700,000 children are enrolled in PfM schools across the two provinces. In the past month, the provincial administration in Punjab has transferred 400 more schools to adopters as part of a strategy for school improvement. This development will is likely to raise the enrollments in adopted schools to 1 million. Comparison with other partnership mechanisms reveals the scale of the mechanism to be comparable to other models: PEF's foundation assisted schools enroll close to 1.3 million children; and 200,000 vouchers have been distributed in Punjab[14]. The limited scale of the mechanism is often cited as proof of failure of the mechanism, and becomes the basis for serious doubts regarding the ability of the partnership to function at scale.

Yet, findings from the empirical evaluation reveal that the partnership mechanism has contributed significantly to improvements in enrollments, infrastructure and basic facilities, and over time to improvements in learning outcomes. Furthermore, the investigation has also revealed the ways in which the presence of external actors in schools is improving school-based decision making and coordination between the state and school functionaries. The empirical investigation undertaken as part of this study is the first evaluation of the mechanism in Pakistan. We can say fairly confidently that the opposition to PfMs is not grounded in empirical evidence, rather on a cursory assessment of the limited number of schools. Findings from our study as well as from empirical studies of similar partnership mechanisms in other countries [reference needed here], indicate strongly that PfMs have the potential to generate huge dividends for state sector schools. However, a supportive and enabling policy and governance infrastructure, and clear, transparent operating procedures are necessary pre-requisites for the realization of this dividend.

Policy research undertaken as part of this study is interested in understanding reasons for the limited scale, in other words identifying factors that have been inhibiting its function at scale; and recommending actions/policy steps that can be taken to enable this partnership mechanism to contribute to education sector reform at a significant scale.

We identify two sets of factors that inhibit the partnership mechanism from functioning at scale in Pakistan, which we categorize as demand and supply side factors. **Demand side factors** include: lack of a clear policy position on Partnerships for Management by provincial governments; (which leads to) an absence of an enabling policy environment that can structure and support an effective implementation and scale-up of PfMs in a systematic way (including an identification strategy for schools most in-need); and weak, non-specific and limited contractual agreements. **Supply side factors** include: a limited supply of not-for-profit actors with the capacity to manage schools (particularly in geographically distant and economically challenged regions); varying capacity of adopters to generate funds; and the limitations of the philanthropy model of financing to support the expansion of operations.

Generally, demand is generated by stakeholders benefiting from a service. Here those stakeholders are the provincial and district governments: they are the primary party contracting services from private actors. Parents and students in these schools are beneficiaries of improvements that result from partnerships, and may well form the constituency that demands reform, but they are not the primary actors generating demand. Supply side factors relate to the availability and capacity of non-state partners/organizations to effectively operate this mechanism at scale, specifically, the capacity of non-state partners to raise resources to a) take responsibility for more than tens of schools, and b) to sustain their engagement for an infinite time period. In addition to functioning at a much larger quantum scale, the study notes/suggests that the partnership mechanism has a potential to function more effectively by broadening and deepening the goal of contractual arrangements to include improvements in governance mechanism.

[14] website: pef.edu.pk

Findings discussed in this section are based on a mapping of the policy and implementation space, and interviews with a number of stakeholders, including multiple representatives of adopting organizations and current and former education department officials.

THE ABSENCE OF AN ENABLING POLICY FRAMEWORK

The lack of clear policy positions and implementation frameworks is a key factor, among others, contributing to the limited scale of operations. While the Public Private Partnership Acts exist for both Punjab and Sindh, and semi-autonomous education foundations with the specific mandate of furthering partnerships with the private sector have been in operation in the two provinces since the early 1990s, the necessary policy infrastructure has not been put in place to enable engagement of private actors for state sector reform on a large scale. While there is evidence of the right sort of thinking about partnerships in various policy documents over time, it hasn't for a number of reasons been followed through to PfMs functioning at scale.

Mention of partnerships in education appears in policy documents in the early 1990s, at a time when policy making was centralized at the federal level. The education policy 1992 declared the government's intent for emphasizing private sector's role in education through “viable partnership[s]” (GoP, 1992). Furthermore, the education sector reform plan of 2001 clearly stated the desire for engaging private actors for management of state schools: 'Facilitate adoption of dysfunctional public sector institutions by private sector at all levels through shared administrative management and terms of partnership through an agreed Memorandum of Understanding' (GoP, 2001: p. 72).

However, the 18th Amendment in 2010 devolved responsibility/authority of policy planning and implementation to the provincial level – and since then each of the provinces has taken a different position on partnerships, with implications for PfMs.

Establishment of the Punjab Education Foundation and Sindh Education Foundation, following the declaration of support for partnerships in the 1992 education policy was a significant step towards putting in place an implementation structure that could effectively facilitate PPPs. These foundations were established with the express mandate of promoting partnerships with the private sector. It is important to note however, that each of the foundations took a very different position on partnerships / revealed preferences for different types of partnerships in the way that they operated, which has had implications for the trajectory of the PfMs policies and operations in the two provinces. The idea of engaging non-state actors, particularly the community, for improvement of state schools has had more support in Sindh, which has resulted in a supportive policy structure emerging in the province. Effective expansion and sustainability of the mechanism has been compromised due to leadership deficits, weak steering of implementation and absence of effective monitoring structures. Punjab on the other hand has witnessed an evolution of more effective models of PfMs, but with the state playing little or no role at all.

The policy infrastructure in Sindh has been more supportive of PfMs

Sindh Education Foundation – established by Prof. Anita Ghulam Ali – saw partnerships as a way of involving the community in supporting the failing state schools. Prof. Ghulam Ali was the first to institute partnerships for management mechanism in its earliest form in Pakistan – the adopt-a-school policy was the flagship partnership mechanism for the Sindh Education Foundation. This earliest version of the PfM mechanism involved an arrangement between the education department and the private partner to take responsibility for rebuilding/improving infrastructure of the schools, investing resources to provide missing facilities and bringing in contract teachers.

Sindh Education Foundation has over the years established operating procedures for PfMs which have helped

facilitate access between civil society actors and the state. Open calls for organizations and individuals with prior experience in school management are invited to partner with the state education department to adopt government schools. A steering committee with representation from the education department, private partners/early adopters and SEF, vets applicants and makes decisions regarding the number of schools to be handed over.

The Sindh Education Sector Plan 2013-2016 emphasized broadening the base of the PPP framework. In 2014, the Sindh government moved to amend the Public Private Partnership Act to add a clause that will allow the government to contract private actors for services in social sectors (Sindh, 2014). Prior to this amendment, the PPP Act made provision for contracting services of private firms for large scale infrastructural contracts, such as building of dams, highways etc. This amendment is a significant step forward towards establishing a well-functioning governance structure for partnerships. As we discuss further below, this step is a hugely enabling factor for PfMs, also because it establishes legal grounds for provincial governments to direct public funds to private actors for contracting management services. One of the key constraints identified on the supply side is the ability of private actors to raise funds, and the amendment is a step towards instituting provisions that can alleviate the constraint.

SEF's ownership of the PfM and the existence of a steering committee, in theory, contributed to more systematic operations. However, interviews with a number of stakeholders in Sindh have revealed that the operations of this mechanism have deteriorated over the years.

PfMs in Punjab have been operating on a more ad hoc basis

The situation, as regards PfMs in Punjab, is particularly complex. Unlike Sindh, officially Punjab has viewed partnerships only as a means of expanding private provision through state finance. The Punjab Sector Plan 2013 speaks about scale up of the PEF models – that are focused primarily on private sector expansion- but does not mention partnerships for building the state's own capacity for service delivery. PfMs have historically not been part of the menu of partnerships supported by the Punjab Education Foundation[15]. Unlike Sindh, Punjab has not amended its PPP Act to clear the way for the state to contract services of private actors to manage state schools. Officially, Punjab does not have a policy on PfMs.

Yet, private actors have been adopting schools in Punjab 1998. Lack of a clear policy position by the provincial government has meant that no operational guidelines for this partnership have been established. In the absence of clear and transparent operating procedures, PfMs function on the basis of patronage and political access. Memorandums of Understanding (MoUs) signed between individual district coordination officers and the adopting organizations serve as documents granting permission to private actors to work in schools, often without the knowledge and consent of district education departments. There is no dedicated post at the provincial level to coordinate between the partner organizations, finance and education departments; to ensure the development of operational guidelines necessary for effective functioning; and monitoring of the partner organizations. Partners deal with EDOs and DCOs in an individual capacity. The MoUs, identification of new schools, renewal of contracts etc. all happen at a very ad hoc basis.

Lack of an identification strategy for schools most in-need

Beyond the differences in policy positions, however, both provinces have failed to develop an effective operational infrastructure at the provincial level to leverage resources (financial and managerial) for state sector reform efforts in a systematic way. Cases in point, neither of the two provinces have a systematic transparent identification mechanism for selecting schools to be given for adoption.

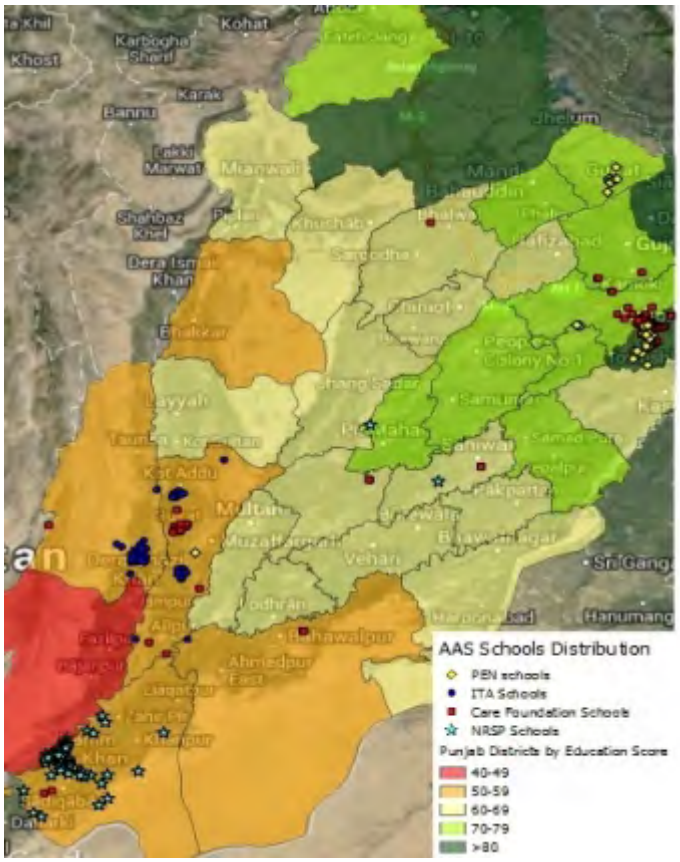
[15] As discussed earlier in the report, Foundation Assisted Schools (FAS) is PEF's flagship partnership model whereby private school owners are supported through state funding to provide free education. The foundation also funds establishment of new private schools, and subsidizes access to low-fee private schools through the provision of need-based voucher programs

Education Sector Plan 2001 noted the following: "[e]xercises have been conducted to identify 'ghost schools', 'ghost teachers', under-used, incomplete schools and closed schools. There is a sense that almost 20%of infrastructure is lying under-utilized. A substantial number of institutions which are functioning, management is so weak that the delivery of quality education is virtually impossible to achieve. In the past decade, various efforts have been made to support public sector institutions by concerned private citizens and NGOs such as the "Adopt a School" program, as well as groups setting up quality elementary schools through private philanthropy for disadvantaged children"(GoP (2001), p.71). This indicates an inclination to formalize PfMs. However, there is little evidence – based on interviews with representatives (current and retired), that this exercise informed a design of a systematic operational framework, which would include a process of identification of schools for adoption.

In principle, schools that are most run down, in districts where there is most need, should be offered for adoption. In practice, this is not always the case. While private partners undertake their own process of surveying localities identified in consultation with the education department to select schools that are the most challenged in terms of infrastructural decline, teacher shortages, low learning outcomes and other operational challenges.

For the purposes of this study, we plotted PfM (or adopted) schools in a district map for Punjab[16]. This was overlapped with information on district rankings based on indicators of infrastructure deficiencies and teacher shortages. It is immediately apparent that districts with the lowest rankings are also ones where PfMs are not common, for example Rajanpur and Bahawalpur in South Punjab stand out. The mapping also shows that more often than not, PfM schools tend to be clustered in specific regions.

Figure 12: Graphic presentation of location and growth in schools across Districts and Provinces[17]



From existing data on school characteristics, we know that there is considerable variation within districts in the quality and needs of schools. An effective identification mechanism can be developed to estimate the number of schools in need within and across districts, and link them to civil society adopters in different regions (See Recommendations).

[16] A similar exercise has not yet been conducted for Sindh due to data limitations, but it is possible if data on locations of PfM schools is available.
[17] Source: TPI-IDEAS GPS mapping exercise using EMIS data; District Rankings from Alif Ailaan

A number of factors have to coincide for a partnership agreement and takeover of a school to proceed, including the willingness and availability of partners (discussed in section on inhibiting factors) and the recognition and demand for the partnership by the district and school administration. A systematic identification mechanism and a flexible but effective matching mechanism (private partners to schools) can help expand the scale of PfMs to areas most in need.

Both Sindh and Punjab governments compile yearly status updates on all state managed schools, through Education Management Information Systems. These systems make up-to-date data available at district and school level for infrastructure, number of teachers, and –combined with PEC data – on learning outcomes for children in primary and middle schools. This data can be used as the basis for the design of a standardized and transparent identification mechanism, through which provincial and district administration can identify schools that are most in need of resource injections and managerial support.

WEAK CONTRACTUAL AGREEMENTS AND THE ABSENCE OF OUTCOME-BASED TRACKING

"The compact between policymakers and organizational providers should create an environment in which all schools have the means and motivation to provide high-quality learning. Whether there is public production or government funding of a range of providers, the compact should focus on outputs and outcomes. This requires a means of assessing a school's contribution to the collective objectives of education, and creating an environment for organizations to innovate and bring those innovations to scale— school autonomy with accountability." (World Development Report 2004- Making Services Work for Poor People: 118)

Contractual documents between the state and partner organizations contain the terms of arrangement between the two parties, including the responsibilities and returns for each, expected outputs, timeline for achievement of outputs, and contingency measures in case of breach of contract. The agreements are a reflection of the clarity of policy objectives, and are one element of a clear implementation strategy for reform.

In Sindh and Punjab, Memorandums of Understanding (MoUs) signed between the district government and partner organization serve as management contracts that delineate the responsibilities and expectations from each of the partners. In Punjab, these MoUs do not constitute a legally binding agreement that relates to any existing policy plan for partnerships. In Sindh, until the recent amendments to the PPP Act, the MoUs did not constitute a legal agreement. What are the implications of this? According to these documents, the partner organizations are volunteers with little or no obligation to deliver on the agreements being entered into.

The documents include vague references to the responsibilities of the partner organization and expectations. The responsibilities include investment in and rebuilding of damaged school buildings, provision of missing facilities and recruitment of contract teachers.

Beyond the expression of these broad expectations, the contracts do not include any performance indicators; or a plan for outcome-linked evaluation of progress on performance indicators. The contracts are general and not school specific; even though the needs of each of the schools vary considerably. Investments undertaken by the private actor are determined entirely on their own and are subject to the amount of funds available to them.

Currently, according to these documents the responsibilities of the partner organizations list resource investments for infrastructural improvement as the only objective of the partnership agreements. Key stakeholder interviews with representatives of the Sindh Education Foundation and provincial education departments corroborate that both provincial governments think of the role of the adopters to be limited to provision of basic facilities and rebuilding of depleted infrastructure. There is no provision made in the contract to leverage the capacity of non-state actors to improve quality of learning outcomes through pedagogical interventions and capacity building of teachers and school leaders.

There are no dedicated monitoring and evaluation mechanisms in place to assess the contribution of private partners. While these schools continue to be monitored as per the standard mechanism of provincial governments, at the moment the management information systems in Punjab and Sindh are not geared to identify adopted schools. Effectively, there has been little or no monitoring of the adopted schools.

The contracts are reflective of an outdated policy position that views private engagement solely as a way to improve school infrastructure. The responsibilities and expectations detailed in the contract do not go beyond brick and mortar requirements. This limits the potential of the PfM mechanism. While in practice adopters have gone beyond to deepen interventions by introducing teacher training with a focus on pedagogy and improved content, the absence of these elements from the contracts mean the improvements are happen on an ad hoc basis and not in a systematic way that can benefit a maximum number of schools.

LIMITS OF THE PHILANTHROPY MODEL OF FINANCING

As discussed in the section on interventions, PfMs in Pakistan have thus far been functioning as arrangements where non-state actors invest their own resources into state schools. The chapter on interventions and cost provided estimates obtained from a survey of select partner organizations; non-state organizations are spending between Rs. 100,000 and 300,000 on average for one school in Punjab. In Sindh, this number can vary greatly given the much wider variety of organizations engaged in PfMs in the province.

A majority of the organizations rely heavily on a philanthropy model of financing. Many of these organizations are set up as not-for-profit foundations with endowments that have been built overtime, through contributions from their founders who are representatives of big business in Pakistan and through fundraising nationally and in the international diaspora.

One of the key supply side factors inhibiting the current model of PfMs in Pakistan - adopt-a-school – from functioning at scale is the built-in financial constraints faced by non-state organizations. The larger organizations with networks in the business community and the capacity to raise funds nationally and internationally (this requires a large fundraising machine), are able to generate resources required for investment in state schools, expansion of operations and interventions. The smaller adopters are unable to do the same. Some rely on funds made available through corporate social responsibility initiatives, while others rely on funding through international donors. Interviews with representatives of private foundations engaged in PfMs in Punjab and Sindh reveal that the ability to raise finances to maintain or expand their activities is limited, which is the most important constraint for expanding operations.

Currently, provincial governments do not share in the resource investments in the school, in addition to the regular operational funds given to state schools (which include the salaries of government teachers in these schools, funds for payment of utility bills, and the school management committee fund). Historically, there has been no provision of funding to partner organizations for covering their cost of operations. Representatives of partnership organizations stated very clearly during interviews that currently PfMs were not operating as a balanced partnership. Partnerships / contracts require a distribution of risk and responsibilities between the two parties. The current arrangement is interpreted by the partners are one where they are having to bear a disproportionate burden of the partnership and are getting very little in return.

SUPPLY OF NON-STATE ACTORS WITH MANAGEMENT CAPACITY

PfMs entail an arrangement where non-state actors assume responsibility of management of the state school, either entirely (charter school model in the US) or significant aspects of schools operations (adopt-a-school policy in Pakistan). Pre-existing capacity and expertise for managing schools is a necessary condition for the arrangement

to develop effectively and for it to bring about the intended improvements in school management. Supply of non-state organizations that can credibly claim to possess such capacities is limited in Pakistan.

Finding partners with appropriate experience in managing schools, particularly outside the large metropolises of Lahore and Karachi is difficult.

As discussed in the chapter on models and adopters, the larger partner organizations in Punjab have evolved structures of management that mirror the state's structure of governance, effectively providing a hierarchical but flexible model of supporting management in a large number of schools. CARE Foundation in particular has been the most successful in evolving a management structure, with the following strength: individual school coordinators are overseen by a cluster manager (groups of schools), who in turn reports to an area manager (looking after a city or district). Partners in Punjab have also developed independent capacity building arms that, working in coordination with their human resource departments, are able to provide professional development support to the contract teachers they are hiring.

The lack of capacity of this nature is a big constraint in terms of replicating successful models of PfMs in Pakistan to areas where they are needed most.

IX.Recommendations

Partnerships for Management mechanisms have the potential to contribute to education sector reform in Pakistan. Research undertaken as part of this study provides evidence of significant improvements in 'adopted' /PfM schools in Punjab and Sindh. These have higher enrollments, better infrastructure facilities, and higher levels of learning outcomes (particularly in Punjab). Increases in enrollments are higher for longer periods of adoption. Teachers and head-teachers in PfM schools are receiving better capacity building support. However, lack of a clear policy position by the political governments and provincial administrations on PfMs and an enabling policy environment are not only inhibiting operation of the mechanism at scale, but also slowing – if not reversing – gains for the State from such partnerships.

We recommend steps that provincial governments can take in order to ensure gains from partnerships in education are realized for state sector reform. The recommendations are based on findings from policy and operational space mapping exercises, and individual and collective dialogues with key stakeholders including representatives of governments and partner organizations. The recommendations relate to three key areas of policy design for PfM mechanisms: a) political and structural reform (which require clarity in policy positions taken on PfMs); b) redefinition of terms and conditions (which would involve redesigning the terms of contract, authority transfers, and designing financing mechanisms); c) engaging in substantive reform of operating procedures (including designing a framework for identification of schools, and exit strategies).

ENGAGING IN POLITICAL AND STRUCTURAL REFORM

There must be a significant evolution in the way that the State views the role of and interfaces with civil society actors. State representatives must formally articulate a policy framework that establishes the State's primary responsibility for education provision while also recognizing the capacity-building potential of private partners. Further, the State must provide the right incentives to and share optimal resources with the latter for meaningful collaboration.

Policy and Legal Framework that positively endorses and fully supports PfMs

To begin with, there must be a broad and unqualified political buy-in for PfMs as well as for restructuring them through a well-defined, balanced and consensus-based policy and legal framework. Such a framework would enable the State and private actors to pool abilities, capacities and resources into the public provision of education as equal partners who have a mutual recognition of their respective roles and strengths and are committed to strengthening educational development through realistic goals. Sindh has most recently spearheaded a new policy and legislative framework that seeks to legalize transfer of state resources for private actors (See box for details). This step indicates a growing political consensus for ownership of state education as well as of public private partnerships.

Political and Structural Reform in support of PfMs in Sindh

Sindh has gone further than the other provinces in moving towards structural and policy reforms needed for helping the PfM mechanisms function more systematically and at scale. The province has generated the political will necessary for instituting the legal amendments required to make the policy infrastructure amenable to partnerships for Management.

An amendment to the PPP Infrastructure Act 2010, approved by the provincial parliament in 2014, has provided the legal grounding for the provincial government to enter into partnerships with service contractors. The amendment is significant in that it will allow the provincial government to transfer resources to private partners; with positive implications for PfMs. The amendment has been made with the specific purpose of providing a legal basis for management contracts to be undertaken in the social services sectors. Sindh is the first of the four provinces to have this amendment to the PPP Infrastructure Act approved. Following these changes, the management contracts will be governed by PPRA rules, making the process more systematic and transparent than before. The education department has included a dedicated line item in the budget effectively setting aside resources for funding management contracts.

Changes to the management and administrative structures have accompanied the Amendment. A dedicated PPP unit is housed in the finance ministry, with a PPP node established within the Education and Literacy Department to coordinate between departments, develop the contracts, facilitate the bidding process, oversee the procurement process, and follow through.

The Amendment and the budgetary allocations are the first steps in the implementation of a policy where non-state actors will be contracted to manage 120 schools in the province. Sindh was the first of the four provinces to engage the resources and expertise of private/community/non-state actors for building the capacity of the state. The Adopt-a-School Model, the pioneering PfM model in Pakistan, was an innovation instituted by Dr. Aneeta Ghulam Ali in Sindh – first through a dedicated desk at the Sindh Governor's office and then through the Sindh Education Foundation.

Sources: Sindh PPP Infrastructure Act, 2010; Notification of the Amendment; Sindh PPP Policy document; EMO policy document.

Institutionalized Access to the State for Expanding the Role of PfMs

Access to the State for entering into PfMs must be institutionalized for a more expedient, but also a wider and more diverse engagement with civil society actors. This entails the establishment of a publicly-open, transparent and merit-based process in line with the broader policy framework for both the State and interested private actors to match their know-how and resources. This also entails bureaucratic reform for ensuring continuity in PfMs as well as enabling all concerned State actors to provide assistance to and facilitate the work of the private partners. Specifically, a PPP unit is needed to provide the administrative support required for ensuring effective management of the PfM process. The scope of responsibilities of this unit would include tasks including but not limited to the design and revision of contracts, coordinating the procurement process, coordinating the monitoring and evaluation process during the term of the procurement process, and coordinate effective exit. This unit should also serve as the main policy coordination unit to ensure a short and effective feedback loop for implementation and policy improvement processes.

REDEFINITION OF THE TERMS AND CONDITIONS

Legal Recognition & Protection of Private Partners

Private partners in PfMs do not appear to have any legal standing or rights as public education providers. Neither do they have any legal protection in relation to the investments and contributions they make to public schools – whether capital, infrastructural or human resource-based. Their role is structured as purely voluntary and philanthropic, and they may be denied access to or evicted from the school premises without notice or

compensation for their enhancement of the premises or their services. If PfMs are to survive, let alone expand and move toward a sustainable and replicable model for public education provision, private partners must have a formally recognized role with well-defined legal rights, liabilities and targets

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Shift from Voluntarism to Shared Responsibility

A purely voluntary or altruistic engagement on the part of private partners is not only a disincentive for many civil society actors in collaborating with the State, it is also an impediment to setting and maintaining quality standards in public education provision. While voluntarism may have its advantages – for the State because it essentially outsources education provision to a private actor, and for the private partner because of the autonomy in managing the public school and introducing programmatic innovations without any formal evaluation – what ultimately suffers is education quality and access. PfMs, therefore, must shift from a structure based on voluntarism and informal public-private relations to a formally defined framework of shared responsibility between the State and private partners. Amongst other things, this necessitates that the State invest financial resources in public schools being managed by private partners to supplement the limited resources of private partners and make PfMs sustainable. To be effective, the financial resources contributed by the State in PfMs must be of a realistic amount to match the monetary as well as non-monetary contributions of the private partners.

Greater Decision-Making Authority

A meaningful structure for PfMs must additionally grant decision-making authority to the private partners to correspond to the improvements and contributions expected of them. Particularly in the realm of teaching staff, PfMs must enable private partners to exert some control over frequent transfers of government teachers and their role allocations.

ENGAGING IN SUBSTANTIVE REFORM OF OPERATING PROCEDURES

The reform of PfMs must be geared ultimately toward providing quality education. This requires an articulation of realistic and concrete targets and outcomes, as well as institutionalization of evaluation and monitoring mechanisms and appropriate exit strategies.

A systematic identification strategy for most challenged schools

One of the outcomes of ad hoc operations is that the most challenged schools are falling outside the PfM net. The heat map of PfM schools (SEC VIII) illustrates this point very clearly. For example, the partnership mechanism is not active in some of the most deprived districts, eg. Rajanpur. The state needs to play its role as a steering agent for the policy mechanism. There is a need for an identification strategy that uses available data resources to rank and select districts based on deprivation criteria. The strategy/mechanism can vary based on the needs of schools – infrastructure deficit; teacher deficit; learning outcome deficit etc. [18]

The report outlines above processes that can be followed for the design of an identification strategy for schools that are most challenged in provinces. Education Management Information Systems make available detailed disaggregated data all the way to the school level, including on key indicators of interest such as basic facilities, sanctioned posts, filled and unfilled posts. The data is rich enough to be able to identify targeted schools based on the nature of deficits within them.

An additional database of adopting organizations can be developed and maintained by the provincial PPP unit,

[18] Need-based planning of this nature will beneficial for the education department beyond the partnership mechanisms. The provincial finance commission award - which is meant to be underpinned by principles of need-based planning and outcome-linked financing - is widely acknowledged to be dysfunctional in all provinces at the moment. The need-based planning proposed for the PfM mechanism can be broadly adapted for planning for development expenditures in general.

which details key strengths and capacities of each adopter. Adopters can then be matched to schools based, first on location (since certain adopters may have a presence and management systems in place which puts them at an advantage for operating in key areas); second, on expertise (the section on interventions outlines typologies of adopters based on their expertise, and variations therein).

PfMs Must Operate on the Basis of Concrete Targets & Outcomes

In the absence of express and concrete targets, neither the State nor the private partner has a proper understanding of or plan for what to accomplish, how best to accomplish it, and the timeframe within which to accomplish it. The lack of any consideration or articulation of targets and outcomes reflects a paucity of shared understandings and consensus on the policy rationale for public education provision. It also creates negative incentives for private partners to perform better and for the State to abdicate its constitutional obligation.

Government of Sindh has made significant headway in designing contracts that include key performance indicators which will allow for the mutually agreed desired / envisioned objectives to become an explicit part of contract agreements from the outset, and for the progress on these objectives to be tracked systematically.

Need for Formal Mechanisms of Evaluation & Monitoring

Along with concrete targets, PfMs must be restructured to include formal mechanisms of evaluation and monitoring of their performance and outcomes. These need not be State-led or State-heavy mechanisms, but could, once again, involve different kinds of public-private partnerships for education provision monitoring.

An outcome-based monitoring framework grounded in contract signed between the state and adopter. Rationalized set of outcomes over a period of 5 years can be identified that will be evaluated: infrastructure targets at the end of year 1; enrollment targets for year 3; and learning outcome targets for year 5. This framework will be part of a larger operational change to build functioning accountability mechanisms between the adopters and the state.

Existing monitoring mechanisms of the provincial and district education departments need to be adapted to the requirements of partnership mechanisms. This will require coordination between various departments including department for staff development, project management units, district monitoring, district education, and district coordination offices, the finance and procurement departments as well. A dedicated PPP node can serve as a coordinating office for this activity.

Education Management Organization (EMO) Model: Evolution of the AAS policy in Pakistan

The Education and Literacy Department in Sindh has over the past couple of years put in place the legal and structural prerequisites for enabling the state to contract private services for management of state schools, supported through public funds. The Education Management Organizations (EMO) Model is an evolution of the Adopt-a-School Policy mechanism, with a number of improvements in the operational rules. The key difference between the EMO and AAS policies is the funding arrangement: the state will fund the management costs of non-state partners as part of the PPP arrangement. Additionally, a legally grounded management contract with clearly delineated key performance indicators, and performance-based disbursement linked to the KPIs is a significant precedent as regards partnership for management arrangements in Pakistan. The EMO model categorically states management oversight and improvements as one of the key purposes of the partnership between state and non-state actors, and not limiting the partnership to a bricks and mortar model.

The background note / Policy notification issued by the Secretary of Education, Sindh states **the objectives of the EMO Model** to be: "credible Education Management Organizations (EMOs) from the private sector to manage and improve the functioning of public schools by introducing innovations, modernizing the education system, addressing management gaps, maintaining and upgrading the school building and facilities, and cooperatively working along with teachers, schools' staff, school management committees (SMC), surrounding communities and local tiers of ELD."

Responsibilities of the government: "In return for the management of public schools by the EMOs, the ELD will make performance based payments to the EMOs under the concession agreement. These performance based payments would be linked to the Key Performance Indicators (KPIs) defined under the concession agreement.

Monitoring and Evaluation: In order to ensure that the EMOs and the ELD carry out their respective obligations under the concession agreement, an independent third party oversight mechanism has been proposed, whereby reputed firm/consortia would be hired as an Independent Auditor (IA) to oversee compliance by the parties of the terms of the concession agreement. Furthermore, under the proposed mechanism, the IA would be responsible for developing periodic reports on the performance of the EMOs against the predefined KPIs set out in the concession agreement and, based on the performance of the concerned EMO, the IA would then approve the release of the periodic payments to such EMO. Therefore, under the concession agreement, the IA would be empowered to approve the release of the periodic payments to the respective EMOs on behalf of the ELD."

Key performance Indicators in three categories will be used to track progress, and trigger performance-based funding tranches: a) Process- including enrollment rates, retention rates, completion rates, induction of out-of-school children, and gender balance); b) Quality - student performance, teacher performance, infrastructural quality, health & hygiene, co-curricular activities, learning resources; c) Governance – involvement of community or SMCs in the schooling process.

The EMO model will be piloted in 120 recently reconstructed schools in three most deprived districts in Sindh.

Source: Sindh Education Management Organizations, Policy Document by Government of Sindh; USAID (2014). Sindh Community Mobilization Program: Report on the First Policy Dialogue on Education Management Organizations

The EMO policy is addressing three of the major weaknesses of its predecessor PfM model: a) by increasing the resources the states puts in to PfM schools, it is increasing its stake in the partnership, sharing the financial risks equally (making it a real partnership); b) addressing one of the key constraints for the model to function at scale – one of the main reasons; c) linking financial disbursements to key process indicators, which is one of the key constraints of this mechanism keeping it from functioning at scale.

However, thinking about one key aspect remains unresolved: the political economy of teachers in the public sector; their incentive and accountability structures will require engagement to ensure sustainability of improvements introduced.

Agreement on Exit Strategy

PfMs are not intended as indefinite arrangements. They need to be re-visualized as short-term partnerships that build the capacity of the State during a stipulated period of time to develop and manage specific public schools and to bring them to a defined level of operating quality. An exit strategy that is part of the PfMs agreement is an incentive-enhancing policy that assures private partners that their contributions will be taken seriously and efforts will be made by the State to sustain those contributions over time.

A key constraint identified for the scale up of this mechanism is the lack of supply of non-state actors with the capacity and expertise for managing state schools. A state coordinated mechanism can be envisioned which brings together older, larger, more experienced partner organizations with newer, younger organizations and individuals to build capacity of the latter in school management.

One design area which still requires considerable thinking and engagement is the question of public teachers, and how to improve their involvement and engagement with the partnership mechanisms.

FUTURE DIRECTIONS

Systematic evaluation of policy mechanisms to inform and support reform efforts in Pakistan is a relatively new phenomenon. As provincial governments grow in their role as the primary tiers of policy formulation and implementation, there is a need to develop the practice of evidence-based policy design. This study is the first evaluation of its kind of the Partnership for Management mechanism that has been in operation in different forms for the past couple of decades. Such evaluations and the evidence generated can be very helpful for policy makers in their selection of reform mechanisms to support, and provide a sense of the kinds of improvements they can expect, and steps they need to take in order to make the achievement of policy goals a reality.

Methodologically, mapping the policy and operational space of policy mechanisms can be a powerful method for identifying weaknesses within the system that need to be addressed. The study has highlighted the gaps in policy design of partnerships for management, and the ways in which these gaps can become hurdles for successful scale up. This methodology can be replicated as a key component of assessing education reform efforts across a number of key areas such as other partnership mechanisms, school and class room based interventions. Using a two (or more) provincial comparison also offers a way to learn from the variations in policy design as well as implementation successes. In identifying and detailing the EMO policy as an evolution of the weaker predecessor model, the study provides a resource for other provincial governments hoping to engage the private sector in similar partnerships.

Partnerships mechanisms can be very powerful policy tools available to the provincial administrations in their efforts to reform schools, provided they are implemented effectively. Effective implementation requires learning lessons from small scale interventions, using those lessons to inform improvement in policy design, and putting in place the enabling factors necessary to scale up the successful elements of interventions. Research undertaken here points to the benefits of having a flexible and clear policy framework that links interventions with targets and outcomes, a transparent and open mechanism for identifying partners, and effective monitoring mechanisms. Specifically, the Punjab government can, in the design of the new framework for PfM mechanisms, engage with the findings of this report. The Sindh government can make sure systematic monitoring and evaluation mechanisms are in place for the EMO model, so relevant lessons can be generated.

Bibliography

AlifAilaan. (2014). *25 Million Broken Promises: The crisis of Pakistan's out of school children.* Islamabad: Alif Ailaan.

ASER. (2013). *ASER, Pakistan.* Idara-e-Taleem-o-Aagahi.

Aslam, M., Jamil, B., &Rawal, S. (2011). *Teachers and School Quality: Some Policy Pointers from Rural Punjab.* South Asian Forum for Educational Development.

Bank, W. (2004). *World Development Report 2004 : Making Services Work for Poor People.*

Bardhan, P., & Mookherjee, D. (2003). Pro-Poor Targeting and Accountability of Local Governments in West Bengal. *Boston University - Department of Economics - The Institute for Economic Development Working Papers Series*.

Bari, F., Khan, B., & Maqsood, N. (2013). Analyzing Inter-Provincial Differences in Schooling Quality. In *ASER Pakistan* (pp. 12-14). Idara-e-Taleem o Agahi.

Barrera-Osorio, F., Blakeslee, D., Hoover, M., Linden, L., Raju, D. , & Ryan, S. (2013). *Leveraging the Private Sector to Improve Primary School Enrolment: Evidence from a Randomized Controlled Trial in Pakistan.* RISE Conference 2015.

Hirschman, A. O. (1970). *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States.* Cambridge: Harvard University Press.

I-SAPS. (2013). *Public Financing of Education in Pakistan: Analysis of Federal, Provincial and District Budgets 2010-11 2013-14 .*

Jamil, B. R. (2013). *ASER and Right to Education - Tracking Provisions for Fundamental Rights and Social Justice.* ASER 2013.

Jamil, B. R. (2014). *Public Private Crossings: Who is Minding the Gap for Post Primary Transitions - Evidence from ASER 2014.*ASER 2014.

Khan, F. (2007). School management councils: a lever for mobilizing social capital in rural Punjab, Pakistan? *Prospects: quarterly review of comparative education*, 57-79.

LaRoque, N. (2008). *Public-Private Partnerships in Basic Education: An International Review.* CfBT.

Lusk-Stover, O., & Patrinos, H. A. (2014, December). Private Sector & Development. *Unlocking the potential of the private sector to improve education*, p. 22.

Malik, R. (2014). Social Inequality a mixed methods study of school choice and parental participation in Punjab . *Doctoral Thesis Unpublished* . Cambridge.

Malik, R., Maqsood, N.,Mashhood, T. &Maqsood, E. (2014).Partnerships for Management and School Improvement in Pakistan: mapping the policy and implementation space for the school adoption programme. *Working Paper 1*.Institute of Development and Economic Alternatives.

Monazza Aslam, B. R. (2011). Teachers and School Quality: Some Policy Pointers from Rural Punjab . S.A.F.A.E.D.

Pakistan, G. o. (1992). *National Education Policy 1992.* Islamabad: Ministry of Education.

Pakistan, G. o. (2001). *Education Sector Reforms Action Plan 2000-2003.* Islamabad: Ministry of Education.

Pakistan, G. o. (n.d.). *Constitution: Article 25 A.* Retrieved from Pakistan Constitution Law: http://pakistanconstitutionlaw.com/article-25a-right-to-education/

Patrinos, H. A. (2006). *Public-Private Partnerships: Contracting Education in Latin America.* World Bank.

Patrinos, H. A., Barrera-Osorio, F., & Guáqueta, J. (2009). *The Role and Impact of Public-Private Partnerships in Education* Washington: World Bank.

Punjab, G. o. (2009).Punjab Examination Commission 2009.

Punjab, G. o. (2013).Punjab Examination Commission 2013.

Punjab, G. o. (2013). Punjab School Education Sector Plan 2013-2017.

Punjab, G. o. Education Management Information System 2013.

Rashid, A., &Awan, A. (2015). In A. Rashid, & I. Muzaffar, *Education Crisis and Reform: Perspectives from South Asia.*OUP.

SAHE, S. o. (2014). *Education Monitor - Reviewing quality of key Education Inputs in Pakistan.*

Sindh, G. o. (2013).Sindh Education Management Information System 2013.

Sindh, G. o. (2013). Sindh Education Sector Plan 2013-2016.

Sindh, G. o. (2014). The Sindh Public Private Partnership (Amendment) Ordinance, 2014. *Sindh Government Gazette*. Karachi, Sindh, Pakistan.

Sindh, G. o. (2014, December 4). The Sindh Public Private Partnership (Amendment) Ordinance, 2014. *Sindh Government Gazette*. Karachi, Sindh, Pakistan.

UNESCO. (2014). *EFA Global Monitoring Report 2013.*

World Bank, W. (2013). *Pakistan: Punjab Social Sector Public Expenditure Review.* World Bank .

Appendix A
Details of Data Methods and Data Sets

Four datasets are used for our analysis: Sindh Survey Data, Sindh EMIS Data, Punjab EMIS Data, and Punjab Examination Commission (PEC) Data. Sindh Survey Data is a primary data collected by IDEAS and is collected for only one round (2015). It contains information about a sample of adopted and un-adopted schools in three districts of Sindh. EMIS Data for Punjab and Sindh is survey data about public schools and is collected by governments in Punjab and Sindh annually. For Punjab and Sindh EMIS Data, we have used survey rounds from 2008 to 2013. Punjab Examination Commission (PEC) Data has information about the marks of students in schools of Punjab in the subjects of Math, Urdu, and English. We have used 2009 and 2013 rounds of PEC data.

Sindh Survey Data: For Sindh Survey Data, our sample size is 101 schools in districts Thatta, Badin and Karachi. There are 44 adopted schools and 57 un-adopted schools in our sample[19]. The survey collected data on: enrollment trends, infrastructure quality, teacher availability, governance, and student learning outcomes.

Sindh EMIS Data: Sindh EMIS provide data on enrollment trend, teacher availability, and infrastructure quality in schools. For Sindh EMIS Data, the total number of adopted schools for which data is available is 233. We only select the districts of Karachi, Thatta, and Badin for our analysis because most of the adopted schools (over 80%) are in these three districts. If we include all districts in our sample then it will increase our sample size and as a result the statistical power of our design but it will create problem when we are doing Propensity Score Matching. As a result our control group will not be very comparable to our treatment group. So, we only use the three districts mentioned above and go for accuracy (treatment and control are statistically similar to each other) instead of precision (larger sample size). Working with only three districts also makes our work comparable to Sindh Survey Data. For the same reasons mentioned above, we also drop higher secondary schools from our data because they are outliers (make about 2% of our data) and were biasing our results.

After using only three districts and dropping higher secondary schools, the number of adopted schools in our sample drops from 233 to 170. Out of these 170 schools, 102 schools are adopted in 2013 (5 schools) or 2014 (97 schools) and 68 schools are adopted before 2013[20]. Since we have Sindh EMIS Data available till the 2013 round of survey so including schools adopted in or after 2013 would make no sense at all because to measure the impact of adoption for these schools we must have Sindh EMIS data for 2014 and onwards. The 102 schools adopted in or after 2013 are also much better schools in terms of enrollment, teacher availability, and infrastructure quality than the 68 schools adopted before 2013. If we include these 102 better adopted schools in our sample, then our control group will also be much better on average and will bias our results. For both of these reasons, we drop the 102 schools adopted in or after 2013. This further reduces the number of adopted schools from 170 to 68. These 68 adopted schools are adopted before 2013 and after PSM the number of adopted schools (treatment group) in our sample becomes 67. Therefore, our sample selected from SEMIS data has 134 schools, out of which 67 are adopted schools (treatment group) and 67 are un-adopted schools (control group).[21]

Punjab EMIS and Punjab Examination Commission (PEC) Data: Like the EMIS data in Sindh, Punjab EMIS Data contains information about enrollment trend, teacher availability, and infrastructure quality in schools. There are 406 adopted schools in Punjab EMIS Data. We only select five districts in Punjab for our analysis because most (over 88%) of the adopted schools are in these districts. The districts are Lahore, Lodhran, Muzaffargarh, Layyah, and Rajanpur. We also drop higher secondary schools because they make less than 1% of our data. After dropping the other districts and higher secondary schools, the number of adopted schools drops to 337. After PSM the number of adopted schools is reduced to 303. So, the final sample selected for Punjab EMIS Data has 606 schools out of which 303 schools are adopted (treatment group) and 303 schools are un-adopted (control group).[22]

PEC data contains information about the marks of students in the subjects of Math, Urdu, and English. For

[19] The balance of the adopted and un-adopted schools in the survey has been compromised due to difficulties faced by the enumerators in the field.

[20] From the information we received from SEF, we have data for year of adoption of adopted schools only for those adopted schools which were adopted in 2013 and 2014. For other adopted schools, year of adoption is missing and we assume (a strong assumption) that these schools are adopted before 2013 because all schools adopted in 2013 and 2014 have year of adoption information available.

[21] The profile of adopted schools (67) and un-adopted schools (67) in our Sindh EMIS Sample (134 Schools) is provided in Table A1 of Appendix A.

[22] The profile of adopted schools (303) and un-adopted schools (303) in our Punjab EMIS Sample (406 Schools) is provided in Table A2 of Appendix A.

comparing the marks of students in adopted and un-adopted schools, we use the 2009 and 2013 rounds of PEC data and calculate the percentage change in the learning outcomes of students from 2009 to 2013. It should be noted that there is a great variation in the types of adopted schools in our treatment group. Schools adopted in 2010 and 2012 are very different from schools adopted in 2003 and 2004. So if we are comparing schools adopted in 2010 with all control group schools then our comparison might be biased. We did such comparison for learning outcomes in Punjab, so we should be slightly skeptical with the estimates for learning outcomes. However, we were getting almost the same results in learning outcomes (in terms of percentage changes) when we corrected this bias.

PROPENSITY SCORE MATCHING

What would have happened in the absence of the intervention or program? It is the key question when measuring the impact of an intervention or a program. Technically, it is known as the counterfactual and it is necessary to know the counterfactual to measure the impact of a program. But the problem with counterfactual is that it cannot be observed directly and must artificially be constructed. This is usually achieved by selecting a group of individuals[23] that were not part of the program. This group is known as the control group. *How this group is selected is the key decision in the design of any impact evaluation*. The idea is to select a group that is exactly like the participant group except that they have not been the part of the program which needs to be evaluated. After we select this group, we can attribute the differences between the outcomes of the participant group (also known as treatment group) and control group (also known as comparison group) only to the program itself and not to any other factors.

For measuring the impact of a program, randomized experiments are the gold standard for selecting the control group for comparison. However, there are many programs which are not randomized experiments but we can still evaluate their impact using quasi-experimental techniques. Propensity Score Matching (PSM) is one of these methods. PSM first estimates propensity scores of program participants and non-participants based on a list of observables. Propensity score provides information on *the propensity of being selected for treatment* (in our case, school adoption). Then PSM selects a control group which is most similar to the treatment group in terms of these propensity scores. To measure the impact of adoption on different school outcomes, we will use PSM to construct a group of un-adopted schools which are most similar to adopted schools in baseline year. This would be our comparison (or control) group. PSM was done separately for Punjab and Sindh. For each case, after the estimation of propensity scores, ten quantiles of propensity scores was created. In each quantile, the number of adopted schools was counted and then from the same quantile equal number of un-adopted schools was selected randomly. In this way we selected a random sample of un-adopted schools as our comparison group which was as similar to treatment schools as possible.

For Sindh, the Propensity Score Matching was done using thirteen (13) observables of adopted and un-adopted schools in 2008[24]. This ensures that in our baseline of 2008, we have selected those un-adopted schools (control group) which are most similar to adopted schools (treatment group) in terms of these thirteen observables. The 13 observables are:

1. District: This shows in which district (Karachi, Thatta, and Badin) the school is located.
2. Gender: This shows the gender of the school. There are Boys School, Girls School and Mixed Schools/Co-Education
3. Level: This show the level of the school. There are three levels: Primary, Middle, and High.
4. Location: This shows whether the school is in urban or rural area.
5. Status: This shows whether the school is currently operational or closed.
6. Medium: This shows the medium of instruction in schools. Most schools are Urdu or Sindhi medium and only a tiny fraction are English or Mixed Medium.
7. Number of Classrooms: This shows the number of classrooms in a school.
8. Electricity: This shows whether or not electricity is present in a school.

[23] It is not necessary to be an individual. It can be a school, village, community, etc. It depends on the unit that the program is targeting.
[24] For the Sindh Survey done by IDEAS, un-adopted schools were also selected by PSM

9. Drinking Water: This shows whether or not drinking water is present in a school.
10. Boundary Wall: This shows whether or not a school has a boundary wall.
11. Washroom: This shows whether or not washroom is present in school.
12. Total Enrollment: This shows the total number of students enrolled in a school.
13. Total Teachers: This shows the total number of teachers employed in a school.

Table A1 below shows that although un-adopted schools of our control group are not exactly like treatment schools (adopted schools) at baseline, they are however a much better sample of un-adopted schools to work with as compared to working with 'all' un-adopted schools.

Table A1: Profile of Schools at Baseline (2008) In Sindh EMIS Sample

		Data Before Sampling (Original Data)		Difference (Adopted –Un-adopted)	Data After Sampling (Sample Constructed After PSM)		Difference (Adopted –Un-adopted)
		Un-adopted Schools (N=8953)	Adopted Schools (N=68)		Un-adopted Schools (N=67)	Adopted Schools (N=67)	
District in which the school is located	Badin	2953	15	N/A[25]	18	15	N/A
	Thatta	3037	20	N/A	19	20	N/A
	Karachi	2963	33	N/A	30	32	N/A
Location of School	Urban	2658	32	N/A	27	31	N/A
	Rural	6295	36	N/A	40	36	N/A
Status of School	Functional	8605	66	N/A	67	65	N/A
	Temporarily Closed	348	2	N/A	0	2	N/A
Gender of School	Boys School	2625	32	N/A	37	31	N/A
	Girls School	1500	19	N/A	13	19	N/A
	Mixed School / Co-Education	4828	17	N/A	17	17	N/A
Medium of School	Urdu	2397	31	N/A	26	30	N/A
	Sindhi	6264	35	N/A	40	35	N/A
	English	38	0	N/A	0	0	N/A
	Mixed	254	2	N/A	1	2	N/A
Level of School	Primary	7970	55	N/A	60	54	N/A
	Middle	381	1	N/A	1	1	N/A
	Secondary	602	12	N/A	6	12	N/A
Average Number of Classrooms		2.6	4.7	2.1***	3.7	4.4	0.7
Percentage of Schools with Drinking Water		38	44	6	34	43	9
Percentage of Schools with Electricity		22	38	16***	33	39	6
Percentage of Schools with Boundary Wall		51	59	8	57	58	1
Percentage of Schools with Washroom		53	68	15***	71	67	4
Average Number of Teachers in Schools		3.7	5.9	2.2***	4.9	5.9	1
Average Student Enrollment in Schools		86	168	82***	124	155	31

[25] N/A stands for Not Applicable

*** means difference between adopted and un-adopted schools is statistically significant at 1% level

For Punjab, the Propensity Score Matching was done using eleven (11) observables of adopted and un-adopted schools in 2008. This ensures that in our baseline of 2008, we have selected those un-adopted schools (control group) which are most similar to adopted schools (treatment group) in terms of these eleven observables. The 11 observables are:

1. District: This shows in which district (Lahore, Lodhran, Layyah, Muzaffargarh, Rajanpur) the school is located.
2. Gender: This shows the gender of the school. There are Boys Schools and Girls Schools.
3. Level: This show the level of the school. There are four types: Primary, Middle, High, and Mosque.
4. Location: This shows whether the school is in urban or rural area.
5. Number of Classrooms: This shows the number of classrooms in a school.
6. Electricity: This shows whether or not electricity is present in a school.
7. Drinking Water: This shows whether or not drinking water is present in a school.
8. Boundary Wall: This shows whether or not a school has a boundary wall.
9. Washroom: This shows whether or not washroom is present in school.
10. Total Enrollment: This shows the total number of students enrolled in a school.
11. Total Teachers: This shows the total number of teachers employed in a school.

Table A2 below shows that although un-adopted schools of our control group are not exactly like treatment schools (adopted schools) at baseline, they are however a much better sample of un-adopted schools to work with as compared to working with 'all' un-adopted schools.

Table A2: Profile of Schools at Baseline (2008) in Punjab EMIS Sample

		Data Before Sampling (Original Data)		Difference (Adopted-Un-adopted)	Data After Sampling (Sample Constructed After PSM)		Difference
		Un-adopted Schools (N=6398)	Adopted Schools (N=337)		Un-adopted Schools (N=303)	Adopted Schools (N=303)	
District in which the School in Located	Lahore	1059	152	N/A	121	140	N/A
	Layyah	1531	27	N/A	34	25	N/A
	Lodhran	750	83	N/A	62	69	N/A
	Muzaffargarh	1968	50	N/A	52	46	N/A
	Rajanpur	1090	25	N/A	34	23	N/A
Gender of School	Boys	3455	173	N/A	162	166	N/A
	Girls	2943	164	N/A	141	137	N/A
Level of School	Primary	4672	215	N/A	198	195	N/A
	Middle	765	51	N/A	46	49	N/A
	High	511	59	N/A	41	50	N/A
	Mosque	450	12	N/A	18	9	N/A
Location of School	Rural	5554	186	N/A	173	165	N/A
	Urban	844	151	N/A	130	138	N/A
Average Number of Classrooms		4.0	6.2	2.2***	5.4	5.9	0.5
Percentage of Schools with Drinking Water		85	94	9***	95	95	0.0
Percentage of Schools with Electricity		38	59	21***	51	59	8*
Percentage of Schools with Bathroom		75	93	17***	92	92	0.0
Percentage of Schools with Boundary Wall		77	92	15***	90	91	0.01
Average Number of Teachers in Schools		5.1	7.3	2.2***	7.0	7.4	0.4
Average Student Enrollment in Schools		191	378	187***	305	354	49

* indicates that difference between adopted and un-adopted schools in significant at 10% level.

*** indicates that difference between adopted and un-adopted schools is significant at 1% level.

Appendix B
Quantitative Analysis – Supporting Data

Table B.1: Percentage of Schools Having Electricity (Sindh EMIS Sample)[26]

	Percentage of Schools Having Electricity		Difference (Adopted-Un-adopted)	Significance of Difference
	Un-adopted Schools	Adopted Schools		
2008	32.84%	38.81%	5.97%	Insignificant at 10% Level
2009	32.84%	35.82%	2.98%	Insignificant at 10% Level
2010	38.71%	53.97%	15.26%	Significant at 10% Level
2011	41.79%	56.72%	14.93%	Significant at 10% Level
2012	41.79%	49.25%	7.46%	Insignificant at 10% Level
2013	73.13%	73.13%	0.00%	Insignificant at 10% Level
Percentage Change in Electricity Availability from 2008 to 2013	122.69%	88.43%	-34.26%	Not Applicable

Table B.2: Percentage of Schools Having Washrooms (Sindh EMIS Sample)[27]

	Percentage of Schools Having Washrooms		Difference (Adopted-Un-adopted)	Significance of Difference
	Un-adopted Schools	Adopted Schools		
2008	71.64%	67.16%	-4.48%	Insignificant at 10% Level
2009	68.66%	64.18%	-4.48%	Insignificant at 10% Level
2010	67.74%	66.67%	-1.07%	Insignificant at 10% Level
2011	65.67%	61.19%	-4.48%	Insignificant at 10% Level
2012	56.71%	64.18%	7.47%	Insignificant at 10% Level
2013	64.18%	71.64%	7.46%	Insignificant at 10% Level
Percentage Change in Washroom Availability from 2008 to 2013	-10.41%	6.67%	17.08%	Not Applicable

[26] In Sindh Survey Data, 57% of un-adopted Schools have Electricity as compared to 61% in adopted schools.
[27] In Sindh Survey Data, 75% of un-adopted schools have Washroom as compared to 82% in adopted schools.

TableB.3: Percentage of Schools Having Drinking Water (Sindh EMIS Sample)[28]

	Percentage of Schools where Drinking Water is Available		Difference (Adopted-Un-adopted)	Significance of Difference
	Un-adopted Schools	Adopted Schools		
2008	34.33%	43.28%	8.95%	Insignificant at 10% Level
2009	49.25%	47.76%	-1.49%	Insignificant at 10% Level
2010	53.23%	53.97%	0.74%	Insignificant at 10% Level
2011	46.27%	50.75%	4.48%	Insignificant at 10% Level
2012	38.81%	50.75%	11.94%	Insignificant at 10% Level
2013	52.24%	55.22%	2.98%	Insignificant at 10% Level
Percentage Change in Drinking Water Availability from 2008 to 2013	52.17%	27.59%	-24.58%	Not Applicable

TableB.4: Percentage of Schools with Boundary Wall (Sindh EMIS Sample)[29]

	Percentage of Schools where Boundary Wall is Available		Difference (Adopted-Un-adopted)	Significance of Difference
	Un-adopted Schools	Adopted Schools		
2008	56.72%	58.21%	1.49%	Insignificant at 10% Level
2009	56.72%	59.70%	2.98%	Insignificant at 10% Level
2010	69.35%	66.67%	-2.68%	Insignificant at 10% Level
2011	64.18%	61.19%	-2.99%	Insignificant at 10% Level
2012	62.69%	62.69%	0.00%	Insignificant at 10% Level
2013	67.16%	67.16%	0.00%	Insignificant at 10% Level
Percentage Change in Boundary Wall Availability from 2008 to 2013	18.41%	15.38%	-3.03%	Not Applicable

[28] In Sindh Survey Data, 75% of un-adopted schools have Drinking Water as compared to 77% in adopted schools.
[29] In Sindh Survey Data, 77% of un-adopted schools have Boundary Wall as compared to 80% in adopted schools.

Table B.5: Average Number of Classrooms in Adopted and Un-adopted Schools (Sindh EMIS Sample)

	Average Number of Classrooms per School		Difference (Adopted-Un-adopted)	Significance of Difference
	Un-adopted Schools	Adopted Schools		
2008	3.73	4.39	0.66	Insignificant at 10% Level
2009	3.74	5.02	1.28	Significant at 10% Level
2010	4.60	6.20	1.60	Significant at 10% Level
2011	4.72	6.64	1.92	Significant at 10% Level
2012	3.38	5.91	2.53	Significant at 1% Level
2013	3.13	6.14	3.01	Significant at 1% Level
Percentage Change in Average Number of Classrooms per school from 2008 to 2013	-16.09%	39.86%	55.95%	Not Applicable

Table B.6: Percentage of Schools with Facility Before and After Adoption in Punjab EMIS sample

Facility	Percentage of Schools (that will remain un-adopted) with Facility (2008)	Percentage of Schools (that will be adopted after 2008) with Facility (2008)	Percentage of Schools with Facility that have not been Adopted (2013)	Percentage of Schools with Facility after Adoption (2013)	Percentage Increase in Percentage of Un-adopted Schools with Facility (2008-13)	Percentage Increase in Percentage of adopted Schools with Facility (2008-13)
Drinking Water	95.0	92.5	96.7	99.4	1.8%	7.5%
Electricity	51.2	36.0	82.5	84.4	61.1%	134.4%
Bathroom	92.1	88.2	99.7	99.4	8.3%	12.7%
Boundary Wall	90.4	86.6	93.0	98.3	2.9%	13.5%
Main Gate	87.5	81.7	92.7	95.6	5.9%	17.0%

Table B.7: Average Number of Classroom in Adopted and Un-adopted Schools of Punjab EMIS sample

	Average Number of Classrooms in 2008 in schools that will remain un-adopted	Average Number of Classrooms in 2008 in schools that will be adopted after 2008	Average Number of Classrooms in 2013 in Schools that are still un-adopted	Average Number of Classrooms in 2013 in Schools that are adopted after 2008	Percentage Increase in Number of Classrooms in Un--adopted Schools	Percentage Increase in Number of Classrooms in Schools that are adopted after 2008
Number of Classrooms	5.4	5.9	6.8	7.9	35.9%	48.5%

Table B.8: Performance of Students in Each Question of Mathematics Test (Sindh Survey Data)

Qts No.	Question Description / Concept Tested by the Question	Max Marks	Average Marks of Students (in Adopted + Un-adopted Schools)	Average Marks of Students		Difference in Average Marks (Adopted – Un-adopted)	Significance of Difference
				Un-adopted Schools	Adopted Schools		
1	Circle the smallest number	1	0.84	0.84	0.85	0.01	Insignificant at 10% level
2a	Fill numbers in the sequence	1	0.89	0.89	0.88	-0.01	Insignificant at 10% level
2b	Fill numbers in the sequence	1	0.88	0.88	0.88	0.0	Insignificant at 10% level
3	Adding 3 Digit Numbers	1	0.80	0.82	0.78	-0.04	Significant at 10% level
4	Subtracting 2 Digit Numbers	1	0.80	0.80	0.80	0.0	Insignificant at 10% level
5	Multiplying a 2 Digit Number with a 1 Digit Number	1	0.59	0.60	0.57	-0.03	Insignificant at 10% level
6	Dividing a 2 Digit Number with a 1 Digit Number	1	0.40	0.40	0.40	0.0	Insignificant at 10% level
7	Word Problem – Unitary Method	1	0.77	0.77	0.76	-0.01	Insignificant at 10% level
8	Factor of a 2 Digit Number	1	0.63	0.64	0.63	-0.01	Insignificant at 10% level
9	Converting Decimal to Fraction	1	0.42	0.44	0.40	-0.04	Insignificant at 10% level
10	Converting Fraction to Decimal	1	0.45	0.44	0.46	0.02	Insignificant at 10% level
11	Geometry – Perimeter of a Triangle	1	0.31	0.31	0.32	0.01	Insignificant at 10% level
12_1	Information Handling – Bar Graphs	1	0.69	0.74	0.63	-0.11	Significant at 1% level

12_2	Information Handling – Bar Graphs	1	0.63	0.67	0.56	-0.11	Significant at 1% level
12_3	Information Handling – Bar Graphs	1	0.62	0.63	0.59	-0.04	Insignificant at 10% level
12_4	Information Handling – Bar Graphs	1	0.58	0.60	0.55	-0.05	Significant at 10% level
12_5	Information Handling – Bar Graphs	1	0.36	0.40	0.31	-0.09	Significant at 1% level

TableB.9: Performance of Students in Each Question of Urdu Test (Sindh Survey Data)

Qts No.	Question Description / Concept Tested by the Question	Max Marks	Average Marks of Students (in Adopted + Un-adopted Schools)	Average Marks of Students		Difference in Average Marks (Adopted – Un-adopted)	Significance of Difference
				Un-adopted Schools	Adopted Schools		
1	Reading Comprehension – Single Paragraph	1	0.76	0.77	0.74	-0.03	Insignificant at 10% Level
2	Reading Comprehension – Single Paragraph	1	0.20	0.18	0.24	0.06	Significant at 5% Level
3	Reading Comprehension – Single Paragraph	1	0.66	0.68	0.62	-0.06	Significant at 5% Level
4	Reading Comprehension – Single Paragraph	1	0.52	0.57	0.46	-0.11	Significant at 1% Level
5	Reading Comprehension – Single Paragraph	1	0.63	0.68	0.57	-0.11	Significant at 1% Level
6	Sentence Completion	1	0.56	0.62	0.48	-0.14	Significant at 1% Level
7	Sentence Completion	1	0.53	0.57	0.49	-0.08	Significant at 1% Level
8	Sentence Completion	1	0.44	0.49	0.37	-0.12	Significant at 1% Level
9	Sentence Completion	1	0.47	0.45	0.50	0.05	Significant at 10% Level
10	Sentence Completion	1	0.35	0.40	0.29	-0.11	Significant at 1% Level
11a_1	Write Three Sentences About My House – Sentence 1	2.5	1.49	1.66	1.24	-0.42	Significant at 1% Level
11a_2	Write Three Sentences About My House – Sentence 2	2.5	1.37	1.52	1.15	-0.37	Significant at 1% Level

11a_3	Write Three Sentences About My House – Sentence 3	2.5	1.22	1.41	0.96	-0.45	Significant at 1% Level
11b_1	Write a Sentence For The Given Word – Conversation	2.5	1.10	1.21	0.95	-0.26	Significant at 1% Level
11b_2	Write a Sentence For The Given Word – People	2.5	1.13	1.28	0.93	-0.35	Significant at 1% Level
11b_3	Write a Sentence For The Given Word – Teacher	2.5	1.37	1.52	1.16	-0.36	Significant at 1% Level
12a	Write The Plural of The Given Word – Teacher	1	0.17	0.18	0.15	-0.03	Significant at 10% Level
12b	Write The Plural of The Given Word – Child	1	0.31	0.33	0.27	-0.06	Significant at 5% Level
12c	Write The Plural of The Given Word – Fan	1	0.32	0.33	0.31	-0.02	Insignificant at 10% Level
12d	Write The Plural of The Given Word – Chair	1	0.40	0.41	0.39	-0.02	Insignificant at 10% Level
12e	Write The Plural of The Given Word – Watch	1	0.41	0.44	0.36	-0.08	Significant at 1% Level

Table B.10: Performance of Students in Each Question of English Test (Sindh Survey Data)

Qts No.	Question Description / Concept Tested by the Question	Max Marks	Average Marks of Students (in Adopted + Un-adopted Schools)	Average Marks of Students		Difference in Average Marks (Adopted – Un-adopted)	Significance of Difference
				Un-adopted Schools	Adopted Schools		
1	Reading Comprehension	1	0.73	0.74	0.72	-0.02	Insignificant at 10% Level
2	Reading Comprehension	1	0.52	0.53	0.52	-0.01	Insignificant at 10% Level
3	Reading Comprehension	1	0.40	0.46	0.32	-0.14	Significant at 1% Level
4	Reading Comprehension	1	0.47	0.51	0.43	-0.08	Significant at 1% Level
5	Reading Comprehension	1	0.31	0.36	0.26	-0.10	Significant at 1% Level
6	Fill In The Blanks Using ‘a’ or ‘an’	1	0.38	0.36	0.40	0.04	Insignificant at 10% Level
7	Fill In The Blanks Using ‘a’ or ‘an’	1	0.64	0.65	0.62	-0.03	Insignificant at 10% Level
8	Fill In The Blank Using Singular or Plural	1	0.75	0.76	0.73	-0.03	Insignificant at 10% Level
9	Fill In The Blank Using Singular or Plural	1	0.69	0.70	0.66	-0.04	Significant at 10% Level
10	Fill In The Blank Using Singular or Plural	1	0.71	0.74	0.66	-0.08	Significant at 1% Level
11a	Make a Sentence Using the Given Word – School	2.5	1.14	1.17	1.10	-0.07	Insignificant at 10% Level
11b	Make a Sentence Using the Given Word – read	2.5	0.88	0.95	0.77	-0.18	Significant at 1% Level
12a	Write the Masculine of the given Feminine Word - Girl	1	0.74	0.76	0.72	-0.04	Significant at 10% Level
12b	Write the Masculine of the given Feminine Word – Woman	1	0.57	0.61	0.53	-0.08	Significant at 1% Level
12c	Write the Masculine of the given Feminine Word – Mother	1	0.61	0.67	0.53	-0.14	Significant at 1% Level
12d	Write the Masculine of the given Feminine Word - Daughter	1	0.43	0.50	0.34	-0.16	Significant at 1% Level
13a	Match The Given Word With The Correct Picture – Knot	1	0.44	0.47	0.40	-0.07	Significant at 1% Level
13b	Match The Given Word With The Correct Picture – Comb	1	0.59	0.62	0.56	-0.06	Significant at 5% Level

13c	Match The Given Word With The Correct Picture – Lamb	1	0.43	0.46	0.39	-0.07	Significant at 5% Level
13d	Match The Given Word With The Correct Picture – Light	1	0.64	0.64	0.63	-0.01	Insignificant at 10% Level
13e	Match The Given Word With The Correct Picture – Wrong Sign	1	0.42	0.42	0.42	0.0	Insignificant at 10% Level
13f	Match The Given Word With The Correct Picture – Knee	1	0.36	0.38	0.33	-0.05	Significant at 5% Level
13g	Match The Given Word With The Correct Picture – Right Sign	1	0.45	0.46	0.43	-0.03	Insignificant at 10% Level
13h	Match The Given Word With The Correct Picture – Knife	1	0.48	0.51	0.44	-0.07	Significant at 5% Level
13i	Match The Given Word With The Correct Picture – Boy	1	0.89	0.88	0.90	0.02	Insignificant at 10% Level

Table B.11: Percentage of Head Teachers with the Autonomy to make School Management Decisions

Variable	Management Decision Represented by the Variable	Percentage of Head Teachers with the autonomy to make management decisions		Difference in Autonomy of Head Teachers in Adopted and Un-adopted Schools (Adopted-Un-adopted)*	Significance of Difference
		Un-adopted Schools	Adopted Schools		
SEC4_q24_1	Allocation of SMC Fund/New Rooms/Furniture	38.6%	34.1%	-4.5%	Insignificant at 10%
SEC4_q24_2	Hiring from SMC Fund/School Grant	22.8%	13.7%	-9.1%	Insignificant at 10%
SEC4_q24_3	Allocation of Collected Money for Different Purposes	45.6%	38.6%	-7.0%	Insignificant at 10%
SEC4_q24_4	Number of Teachers to be Hired	29.8%	22.7%	-7.1%	Insignificant at 10%
SEC4_q24_5	Selection of Teachers for Hiring	12.3%	18.2%	5.9%	Insignificant at 10%
SEC4_q24_6	Selection of Teachers for Teacher Training	29.8%	31.8%	2.0%	Insignificant at 10%
SEC4_q24_7	Teacher Dismissal / Surrendering to EDO	28.1%	45.5%	17.4%	Significant at 10%
SEC4_q24_8	Making Academic Calendar	49.1%	36.4%	-12.7%	Insignificant at 10%
SEC4_q24_9	Making Examination Schedule	35.1%	25.0%	-10.1%	Insignificant at 10%
SEC4_q24_10	Number of Students who would repeat a grade	77.2%	72.7%	-4.5%	Insignificant at 10%
SEC4_q24_11	Formulating School Development Plan	61.4%	45.5%	-15.9%	Insignificant at 10%
SEC4_q24_12	Type of Training Provided to Teachers	33.3%	29.5%	-3.8%	Insignificant at 10%
SEC4_q24_13	Working Hours of School Day	43.9%	40.1%	-3.8%	Insignificant at 10%
SEC4_q24_14	School Closes for Local Holidays	31.6%	31.8%	0.2%	Insignificant at 10%
SEC4_q24_15	Providing New Text Books (In addition to Syllabus Textbooks)	43.9%	45.5%	1.6%	Insignificant at 10%
SEC4_q24_16	Determining Method of Teaching Students	89.5%	84.1%	-5.4%	Insignificant at 10%
SEC4_q24_17	Determination of Class Size	91.2%	77.3%	-13.9%	Significant at 10%
SEC4_q24_18	Selection and Distribution of Textbooks and other educational resources	77.2%	56.8%	-20.4%	Significant at 5%
SEC4_q24_19	Determining Incentives for Teachers	10.5%	18.2%	7.7%	Insignificant at 10%

SEC4_q24_20	Informing locals about school affairs	82.5%	72.7%	-9.8%	Insignificant at 10%
SEC4_q24_21	Convening SMC Meetings	77.2%	59.1%	-18.1%	Significant at 5%
SEC4_q24_22	Spending SMC Funds	56.1%	40.9%	-15.2%	Insignificant at 10%
SEC4_q24_23	Monitoring Students	87.7%	84.1%	-3.6%	Insignificant at 10%
SEC4_q24_24	Monitoring Teachers	80.7%	72.7%	-8.0%	Insignificant at 10%

Appendix C
List of People Interviewed

Abdul Jabbar Shaheen, Secretary Education, Education Department Punjab
Adeel Durvesh, Program Manager Karachi, Progressive Education Network
Adnan Asdar, CEO Multinet/Board of Director, Progressive Education Network
Ahmed Ali Kamboh, Additional Secretary (Reform), Education Department Punjab
Aisha Sohail, Manager ACCESS program, CARE Foundation
Aizaz Ahmed Khan Joya, Education District Officer (D.G.Khan), Education Department Punjab
Akbar Khan, Program Manager, Tareen Education Foundation (TEF)
Akhtar Mirza, Project Coordinator, National Rural Support Program
Amir Quereshi, Administrative Manager, Progressive Education Network (PEN)
Arafat Majeed, Program Manager, National Rural Support Program
Aziz Kabbani, Director, Sindh Education Foundation (SEF)
Baela Raza Jamil, Director Program, Idara-e-taleem-o-agahi (ITA)
Dr. Abdul Haque, CEO of Zindagi Trust, Adopter
Ghulam Nabi, Program Director, Reform Support Unit (RSU)
Hadi Khan, Deputy Director, Sindh Education Foundation (SEF)
Hafiz Shaukat Ali, District Coordination Officer (Muzaffargarh), Education Department Punjab
Imran Shoukat, Area Manager, CARE Foundation
Jamil Najam, Retired Director Public Instruction (DPI), Punjab
Javed Siddiqui, CEO, Rizq Foundation
Lt. Gen Moin-ud-din Haider, Adopter
M. Ashfaq Gujjar, Education District Officer (Muzaffargarh), Education Department Punjab
M. Naziq Shehzad, Education District Officer (Lodhran), Education Department Punjab
M. Pervaiz Akhtar, Education District Officer (Lahore), Education Department Punjab
Maria Mir, Assistant Director (Adopt a school program), Sindh Education Foundation (SEF)
Mirza Mehmood-ul-Hassan, Additional Secretary, Education Department Punjab
Mujtaba Shahneel, Director General, PPP Unit Sindh
Naheed Shah Durrani, Managing Director, Sindh Education Foundation (SEF)
Naveed Ahmed Shaikh, Deputy Secretary, Education and Literacy Department Sindh
Omar Khayyam Sheikh, CEO, Progressive Education Network (PEN)
Qaiser Rasheed, Deputy Secretary (Budget and Planning), Education Department Punjab
Rehan Baloch, Additional Secretary, Education and Literacy Department Sindh
Sajjad Haider, Area Manager, CARE Foundation
Sami Mustafa, CEO, Book Group/CAS school
Sarwat, Program Manager, Progressive Education Network (PEN)
Seema Aziz, Managing Trustee, CARE Foundation
Shahzad Anjum, Area Manager, CARE Foundation
Warris Gillani, Program officer, Rizq Foundation
Yaqoob Khan, Area Manager, Tareen Education Foundation (TEF)
Zia Islam, Director, Ravians Educational Services Trust

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