

Annex A

Pakistan Systems Diagnosis

June 16, 2017

Part I: Symptomatic Overview

Over the past 15 years, the education system in the Punjab has undergone extensive changes. Education spending has increased dramatically, allowing for greater investments in key inputs like school infrastructure, teachers, and classroom materials. Education policies have also evolved at a dizzying rate, with major changes to administration, accountability, teacher policies, and rules regarding the private sector. Compared to other countries, the pace of these changes and the ability of reformers to overcome opposition have been remarkable.

While much has changed with education inputs, the outcomes of these efforts are disappointing. Enrollment continues to lag behind comparator countries, and available measures of test scores show almost no improvement. These trends present a puzzle for both scholars and policymakers: how is it possible that so much has changed, but there are so few results?

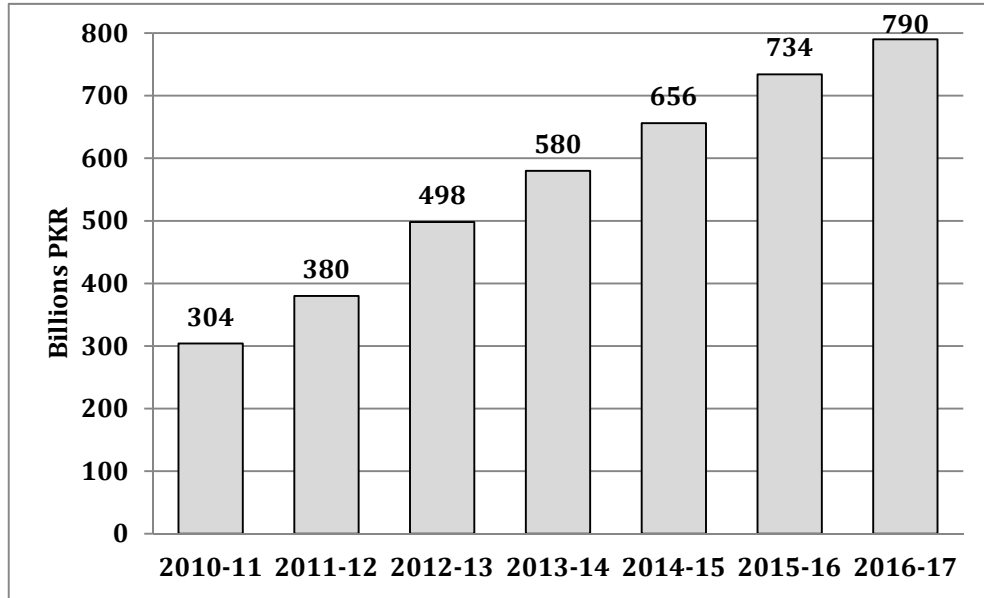
Evaluating this question first merits greater exploration of exactly what has and has not changed.

The most impressive development in the past decade is likely the tremendous growth in education budgets. Since 2010, government funding for education in Pakistan overall has increased an average of 17.5% per year (Table 1). In the Punjab, the budget allocated to primary education increased over 50% from 2010-2015, while the allocation to secondary education increased 124% (Table 2).¹ Given the relatively small changes to public school enrollment, per

¹ Note that actual expenditure over this period has been about 8% lower than budget, suggesting frictions in the disbursement of budget dollars.

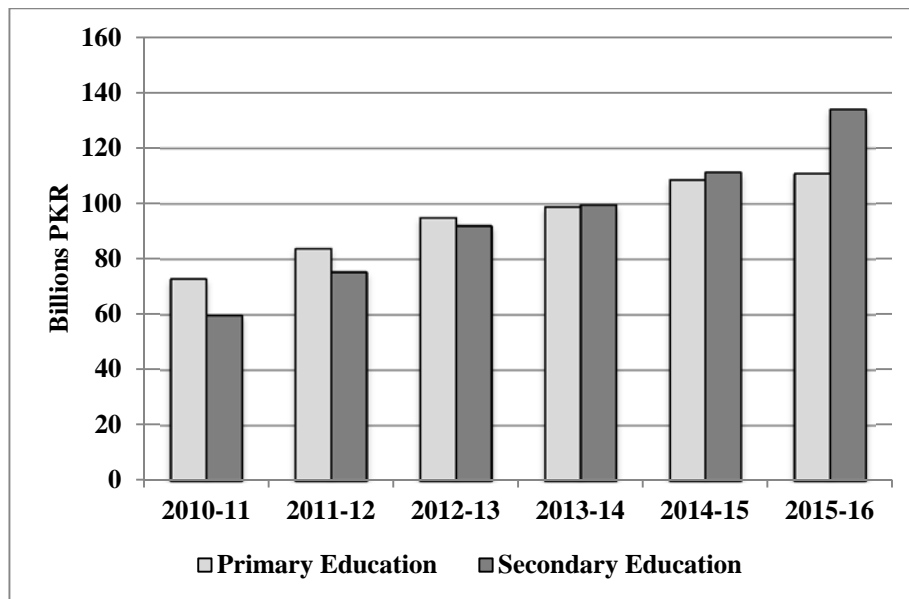
student government spending in Punjab primary schools also increased by similar proportions (Table 3).

Table 1: Pakistan Government Education Spending 2010-2016



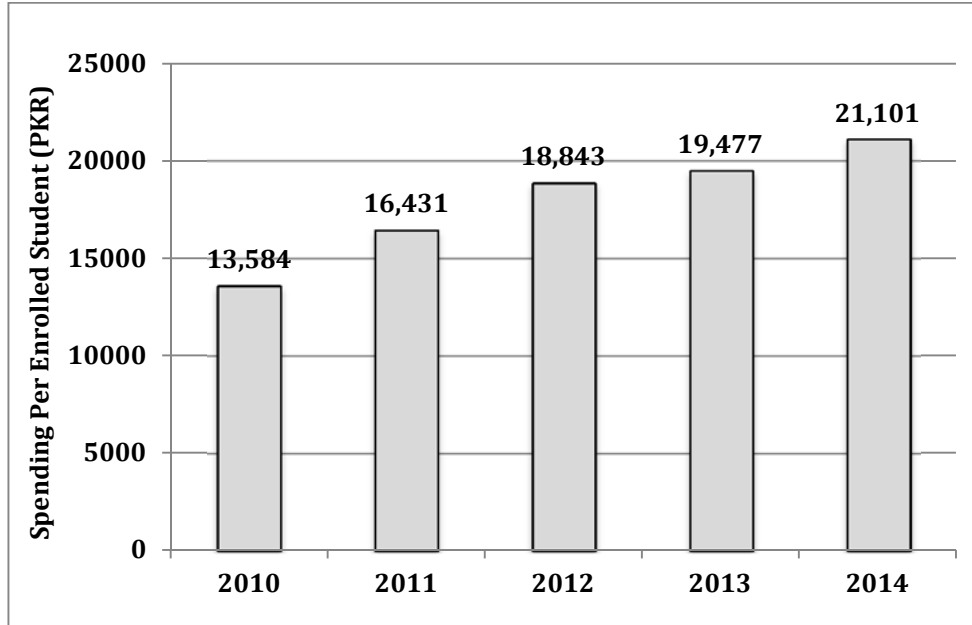
Source: Alif Ailaan and I-SAPS budget charts as cited in Dawn

Table 2: Punjab Primary and Secondary Education Budget 2010-2015



Source: I-SAPS budget charts

Table 3: Punjab Per Student Funding Government Primary Schools 2010-2015



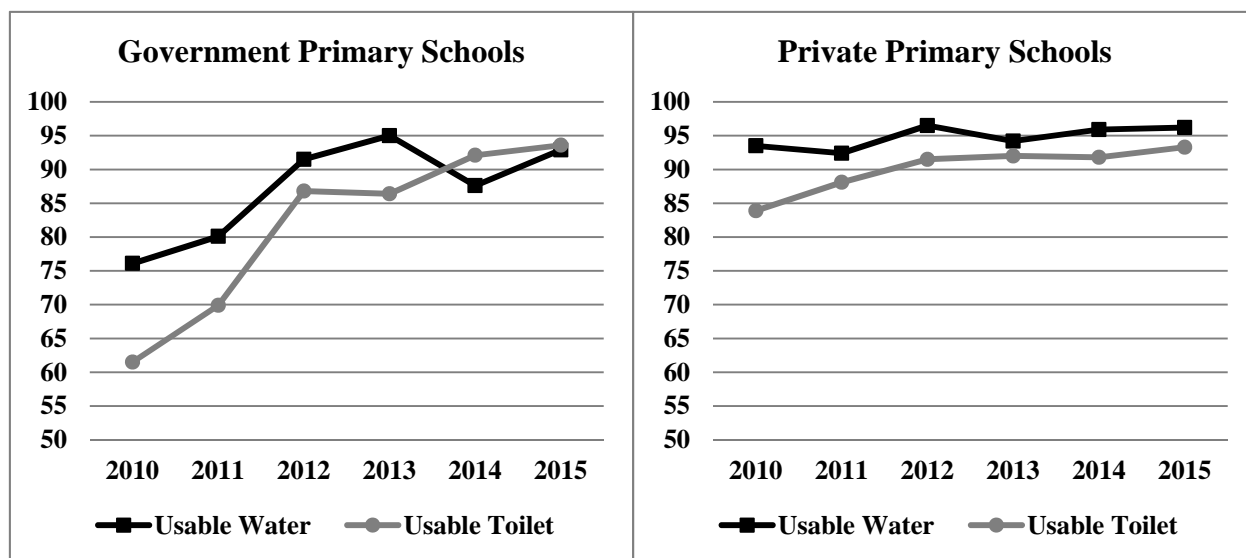
Source: I-SAPS budget charts and PSID

The government has supplemented this increase in the public school budget with a new program to provide funding to private primary schools through a voucher system. The voucher system now represents 10% of total government spending on primary schooling, and funding for the program has grown steadily since its inception in 2011. Aggregating both public school funding and the voucher budget, funding per enrolled student in public primary schools has increased 70% from 2010 to 2014.

Increases in funding have helped schools make significant infrastructure improvements, particularly in rural areas. Previous studies suggest that infrastructure components like usable toilets and potable water can influence student learning (Miguel & Kremer 2004, Glewwe et al. 1995; Glewwe et al. 2011). Data available since 2010 shows that the proportion of rural public schools with these amenities has increased almost to the level of private schools, where as

previously the superior infrastructure in most private schools was a major reason why parents preferred to send their kids to these institutions.

Table 4: Punjab Proportion of Schools with Usable Water and Toilets, 2010-2015



Source: ASER

Aside from spending,

education inputs have changed substantially due to the onslaught of policy changes over the past 15 years. Table 3 tracks government reforms or projects that addressed a list of key policy levers, which were adapted from the World Bank’s Systems Approach for Better Education Results (SABER) framework. In each five year period, the national or provincial governments passed through a substantive reform in the majority of the designated areas, with the most activity occurring in regard to teacher qualifications, transfers, and training, school monitoring, school based management, assessments, and private schools. In many countries, any one of these reforms would have been a major political achievement due to the crippling opposition and debate that often surrounds education reforms. In the Punjab, the political will and capacity to implement these reforms at such a rapid rate is exceptional relative to the international experience.

Table 5: Punjab and National Education Reforms 2000-2015

Areas of Policy Reform	Reforms Passed Nationally or in Punjab		
	2000-2005	2006-2010	2011-2015
Teachers			
Hiring and recruitment	X	X	X
Pre-service credentials and assessment	X	X	X
In-service training and support	X	X	X
Transfer and promotion policies		X	X
Teacher monitoring and assessment	X	X	X
Salaries			X
Performance incentives	X	X	X
Contract teachers	X	X	X
Basic Inputs			
Expand enrollment access	X	X	X
Rationalize school distribution		X	
Ensuring school infrastructure	X	X	
Curriculum improvement	X		X
Providing textbooks	X	X	
School Finance			
Scholarships and support for low income students	X	X	X
Efficient budgeting process		X	X
Financial transparency			X
Auditing process	X		
School Autonomy & Accountability			
Autonomy in school budget	X	X	X
Autonomy in personnel management	X		
School councils	X	X	
School monitoring	X	X	X
Transparency on school performance	X		X
Data collection and management	X		X
Student Assessment			
Classroom assessment	X		
National/Provincial large scale assessment	X	X	X
International large scale assessment			
Engaging the Private Sector			
Encouraging innovation by providers	X		
Holding private schools accountable		X	X
Support diversity of supply	X	X	X
Early Childhood Development			
Establishing an enabling environment	X	X	X
Implementing widely			X
School Health & School Feeding			
Health-related school policies	X		X
Safe school environments			X
School feeding	X		X

Although the growth in education inputs in the Punjab is encouraging, the resulting outcomes are both disappointing and perplexing. While enrollment of children ages 5-12 in the Punjab has grown from 71% in 2005 to 79% in 2014, it is still far behind most countries in Asia and Africa, the majority of which have made much greater strides towards universal enrollment. The other provinces are even further behind, with 5-12 enrollment rates ranging from 71% (Khyber Pakhtunkhwa) to 59% (Sindh) to 50% (Balochistan) in 2014. These disappointing results are due in part to high drop out rates after primary school, but also because poor parents often wait to enroll their children until age 6 or 7, as shown in Table 6. Pakistan's performance is especially poor for female enrollment, which has remained approximately 10 percentage points lower than male enrollment, and is even lower in rural areas.

Since 2010 when the budget began growing substantially, enrollment figures have been roughly constant. The proportion of students enrolled in private schools has also remained roughly constant, which is impressive given that private schools did not have a major increase in per student spending over this period, suggesting that even with relatively lower spending, private education is still more desirable to many students and parents

Table 6: Net Enrollment for 5-12 Year Olds by Province, 2005-2014

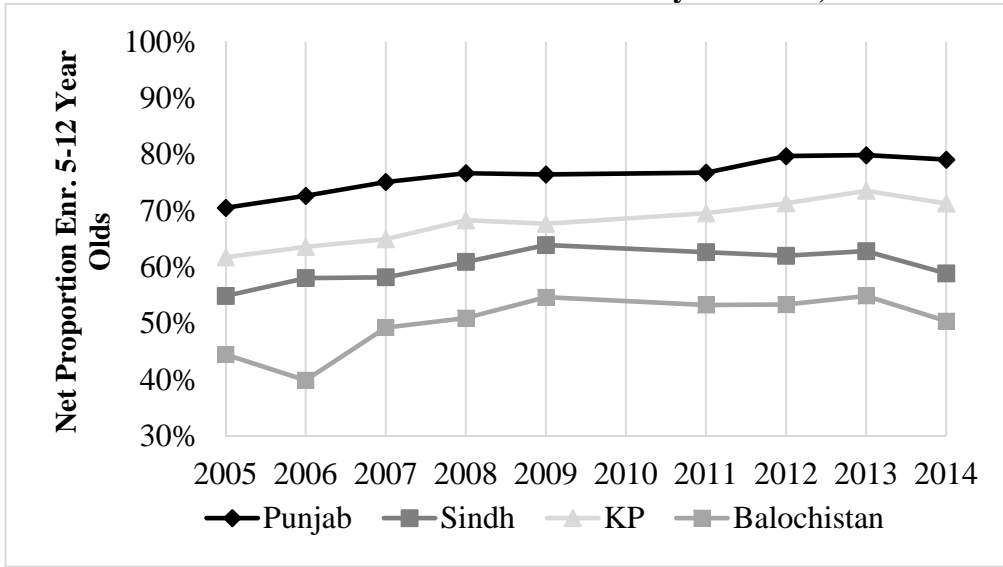
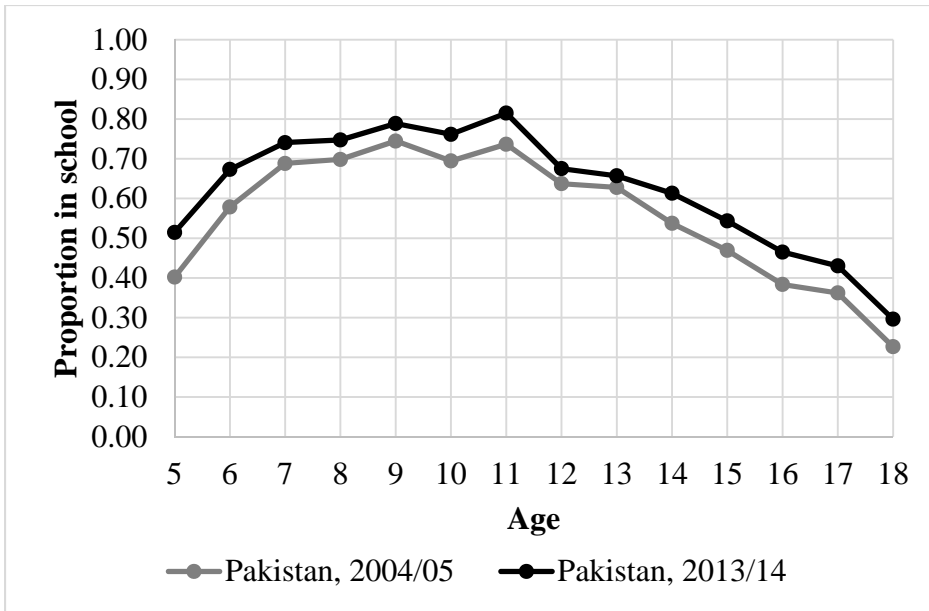


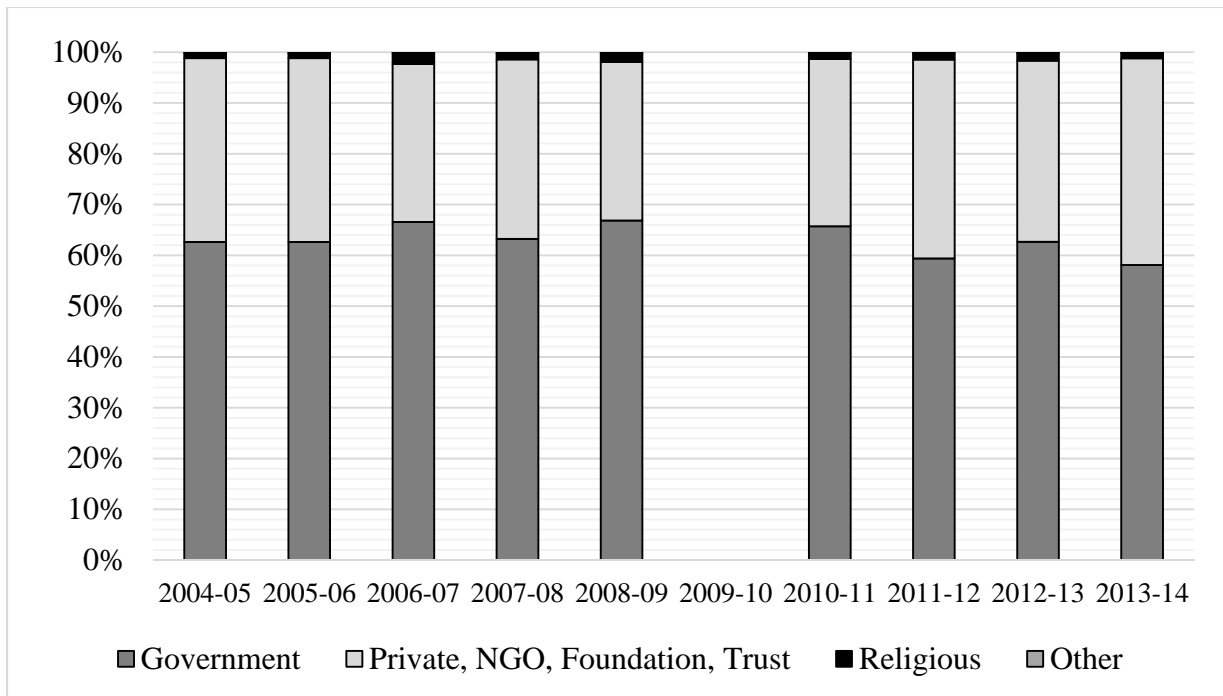
Table 7: Pakistan Net Enrollment by Age

Source: PSID



Source: PSID

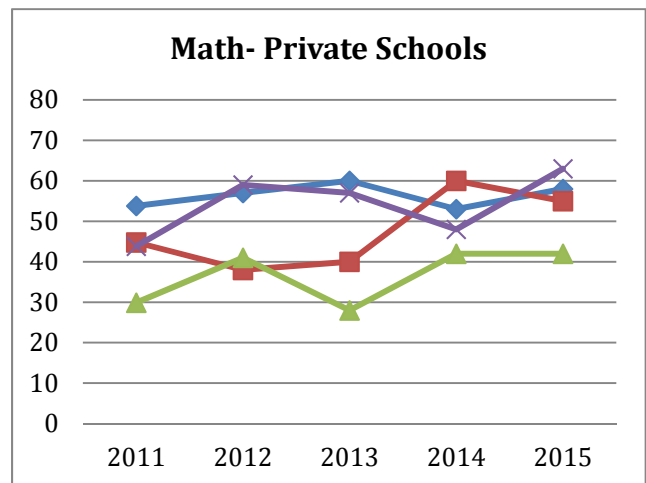
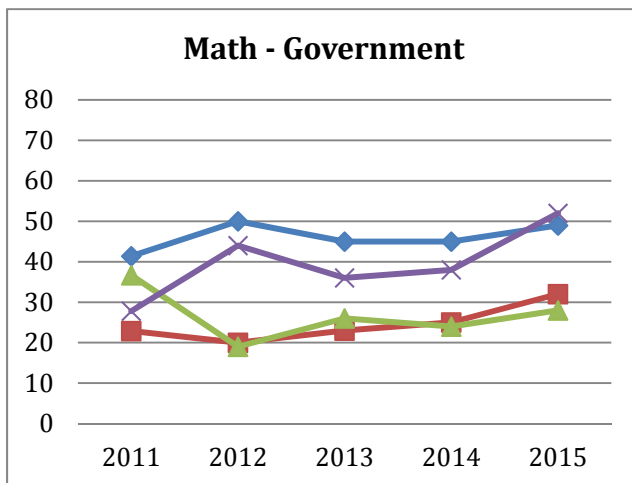
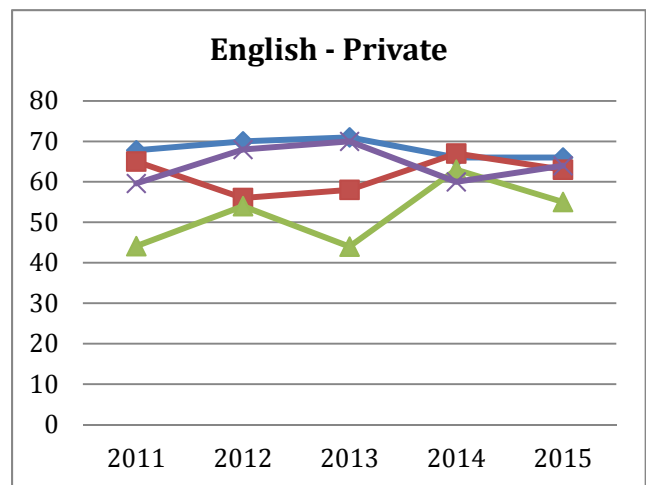
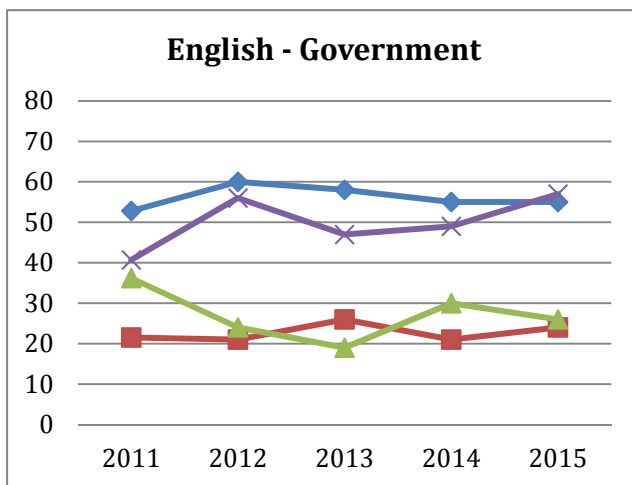
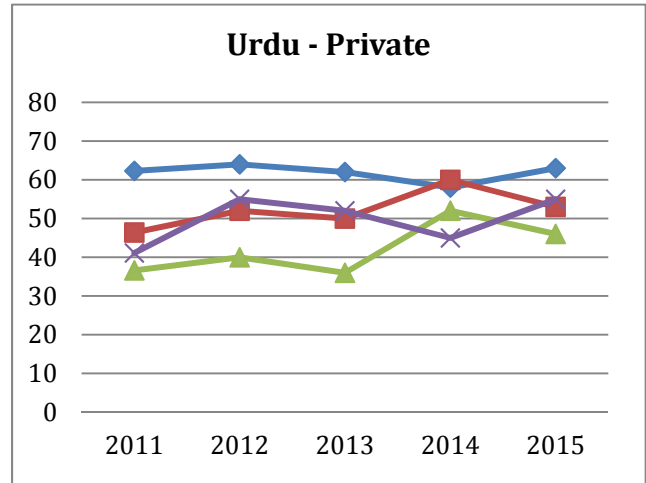
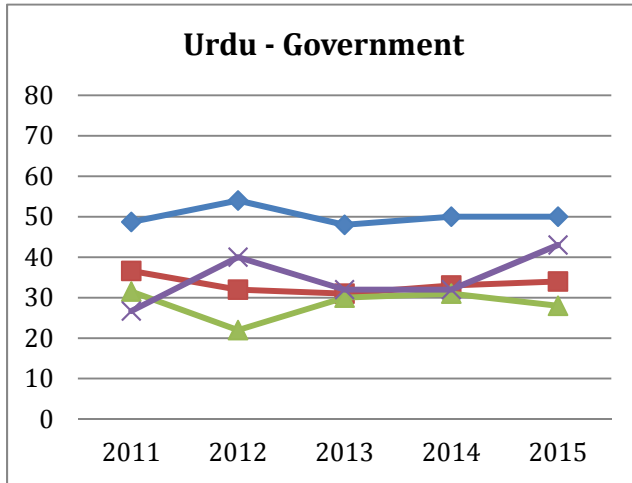
Table 8: Enrollment by School Type



Source: PSLM

Table 9: ASER Pakistan Class 3 Test Scores by School Type 2011 -2015

—●— Punjab —■— Sindh —▲— Balochistan —×— KP



Source: ASER Test scores for Pakistan Class 3

Available measures of test scores also show little growth. The Annual Status of Education Report (ASER), which has tested a random sampling of students in all four regions since 2010,² finds some annual fluctuations in test scores but no secular upward trends. In all three subjects (Urdu, English, and Mathematics), public schools in the Punjab perform better than public schools other regions, followed closely by Khyber Pakhtunkhwa. The regional variation among private schools is lower, especially in recent years where private schools in Sindh and KP seem to have caught up and even overtaken private schools in the Punjab. Across all subjects and regions, private schools tend to perform about 10 percentage points better than comparable public schools.

Test scores collected as part of the Learning and Educational Achievements in Punjab Schools (LEAPS) longitudinal study and related private school studies by the same researchers show similar inertia in test results over a longer period of time. From 2004-2011, public school test scores remained virtually unchanged, other than slight annual fluctuations. Private school test scores, which are available through 2014 due to additional studies, have also shown little growth, other than English test scores which seem to show lasting improvement since 2004. As in the ASER results, private schools perform better than public schools across all years and subjects.

² Chart displays test scores starting in 2011 due to methodological differences in the first year of testing (2010) that produced aberrant results.

Table 10: LEAPS Government School Test Scores 2004 - 2011

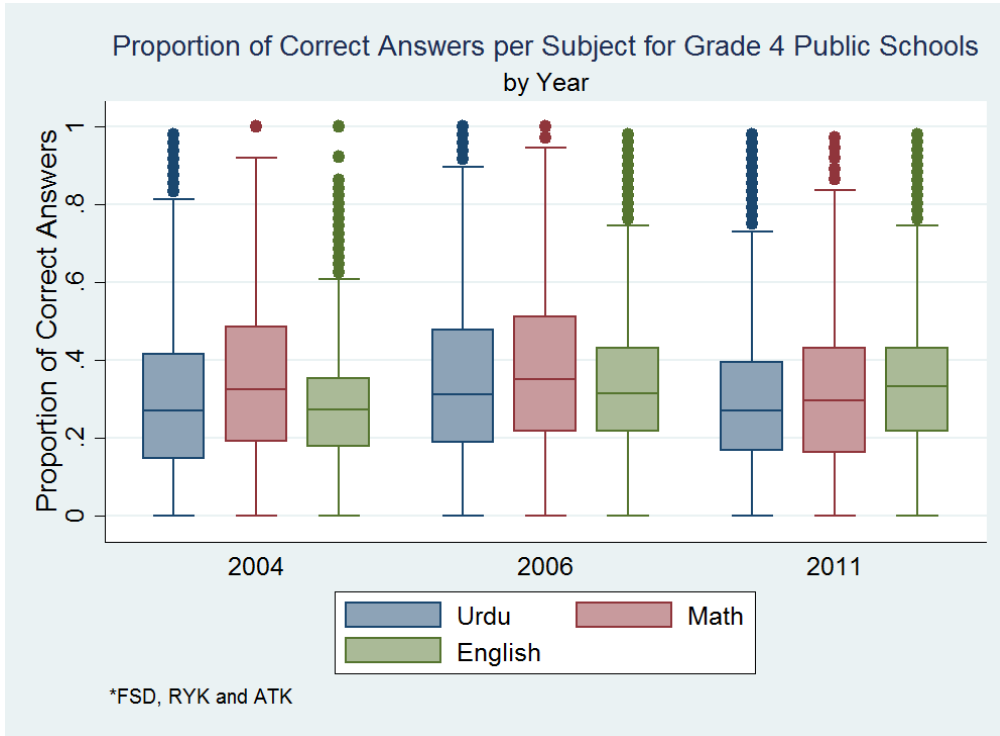
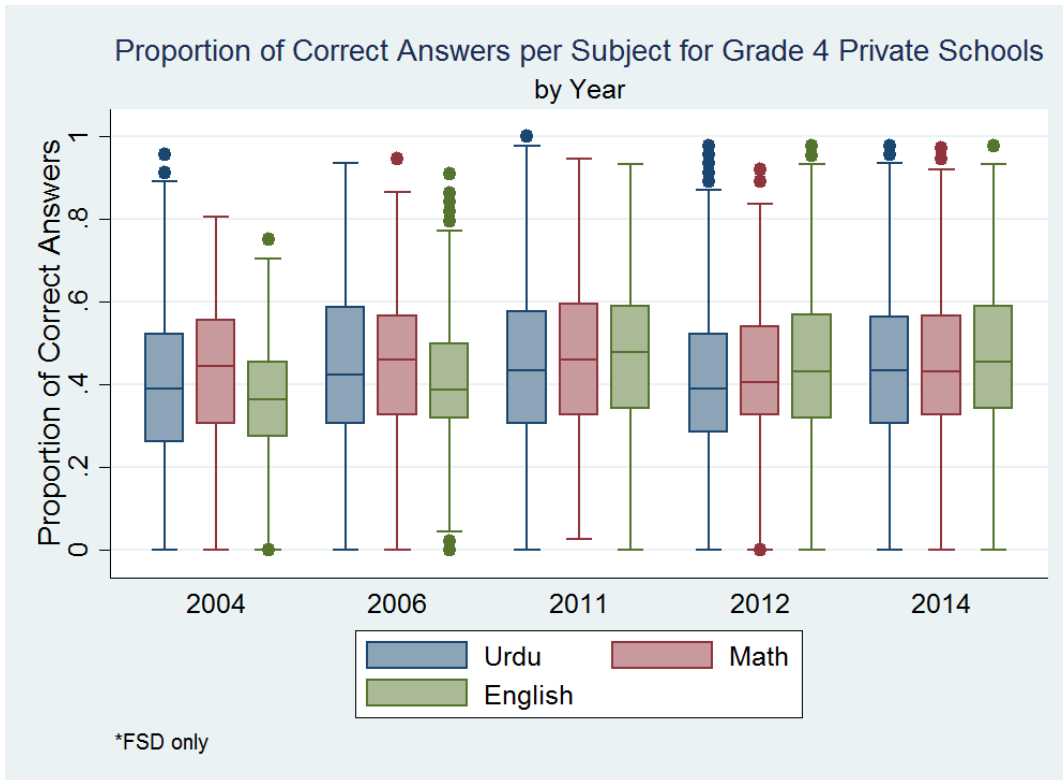


Table 11: LEAPS and Grants Study Private School Test Scores 2004 - 2014



Source: Grants and LEAPS study data

These results suggest that despite vast changes to both financial and policy inputs over the past decade, public education in the Punjab has shown only marginal improvements to access and quality. This puzzle suggests various challenges that may have hindered the success of the education agenda:

1. Standardization and centralization has constrained the ability of schools to adapt to local needs and demands
2. Policy reforms encountered various barriers to implementation, such as poor planning, political interference, or resistance from key stakeholders groups, leading to incomplete or ineffective implementation
3. Reforms created confusion or conflicting incentives for those who were supposed to implement them, namely teachers and ground-level administrators
4. Education funding did not reach its intended target, and/or was allocated to inefficient or ineffectual projects
5. Despite an expansion of supply, demand for education remains low, particularly for girls
6. Education reforms need time to take effect, so positive results are not yet apparent

All of these confounders could help explain why a decade of reform would have little to no effect on educational outcomes. Each of these challenges, as well as many other barriers to success, merits greater investigation to determine its impact and relative importance.

Part II: Principal-Agent Analysis

One approach to understanding why social services are failing is to look at accountability-autonomy relationships between various agents and stakeholders. Improving quality of education relies on resolving a series of principal-agent problems (teachers-bureaucracy, parents-teachers/head-teachers, etc.), by striking a balance between the level of authority available to local decision-makers and accountability checks.

The 2004 World Development Report framework organizes these dynamics into four primary relationships: Politics (citizens as principals to the state as agent), Compact (the state as principal to provider organizations as agents), Management (schools/organizations as principals to front-line providers as agents) and Voice/Client power (parents as principals to front-line providers as agents). It also highlights four design elements—delegation, financing, information, and motivation—which are fundamental to these relationships.

The following section explores each of these relationships separately to analyze how they have developed over the past fifteen years of education reform in the Punjab. It emphasizes the ways in which the design elements have broken down, which plays a major role in the disappointing outcomes observed in the previous section.

Politics

In the Punjab, political pressure to improve the quality of public education is weakened by several factors. First, poverty and low levels of human capital curtail the ability of parents to voice demands. With little political capital and few financial resources to gain it, parents have limited ability to pressure the government to implement difficult but important reforms, such as firing or otherwise disciplining low performing teachers. This factor is especially impactful in rural areas, where poverty is higher and school quality is lower.

Second, the explosion of private schools has weakened the motivation for the public system to meet demands of parents. The more children who shift to private schools, the less political pressure there will be to improve the quality of public schooling. In fact, the government's recent initiative to fund private schooling through vouchers may seem as an effort to attenuate even further the demands of constituents around school quality.

Finally, parents lack information on the quality of schooling, which is a critical feature of the principal-agent dynamic. Because national test score data is not publicly available, parents cannot document low levels of learning and inequality across schools. Pakistan also does not participate in PISA, which prevents the international comparisons that have helped create political momentum for reform in other countries. A recent study by the research team documents how important test score data can be for increasing learning outcomes. When given a "report card" of test score data for both public and private schools in the area, parents were successfully able to lobby for higher quality schooling at a lower price, as evidenced by rising test scores and lower fees (Andrabi, Das, and Khwaja 2017).

Compact

Over the past decade, decision-making power in the Punjab education system has become increasingly centralized. New emphasis on standardization in curriculum, testing, and teacher hiring has given increasing power to the central education apparatus to dictate these standards and exert greater control over school operations. For example, all decisions on curriculum and textbooks are made at the provincial level. Teacher hiring and postings are conducted centrally according to universal education requirements and standardized tests. New monitoring systems and province-wide testing provide greater information to education leaders, allowing them to ensure compliance with the standards. School spending is also tightly controlled through uniform

teacher salaries and requirements to meet infrastructure standards. Though some decisions are officially delegated to schools, in practice these decisions are made centrally and schools are directed how to use their discretionary funds. In essence, the delegation mechanism is too strong, leaving little real autonomy for schools to adapt to local contexts and use financial resources to meet local demands.

The state has less control over private school operations, though they have gained increasing influence in the last few years thanks to a new voucher scheme. The Punjab Education Foundation began their Education Voucher Scheme in 2011, and the number of beneficiary schools quickly grew to over 1,300 in 2016. This system has allocated increasing public financial resources to private schools. In return for this support, the PEF delegates that private schools must satisfy certain curriculum, enrollment, and quality requirements such as maintaining a low student-teacher ratio and targeting out-of-school children for new registrants. They monitor fulfillment of these requirements via regular testing of children and enrollment reviews. Though private schools retain many more degrees of freedom in their operations relative to public schools, the centralized voucher system allows the state to have some power in shaping private education.

Management

While numerous reforms have impacted teachers in the past few decades, there are three major areas of change that have impacted the principal-agent dynamic between the state and teachers. First, the government has fluctuated between promoting and then banning contract teachers. Prior to 2002, all teachers were recruited into permanent civil service contracts based on academic and professional qualifications. Between 2002 and 2008, however, new teachers in the Punjab were hired on a contractual basis. This arrangement likely improved the motivation of

teachers because they were not guaranteed an automatic contract renewal, however in practice the penalties for high absenteeism and low performance were not strictly enforced. After protests from contract teachers regarding lower pay, the government switched to a policy of automatic regularization after a contract teacher meets certain criteria, so any benefits of greater accountability for this group due to temporary contracts were eliminated.

In a second major reform area, the state has vastly expanded the monitoring system to collect information about teacher performance. In the Punjab, three parallel mechanisms exist: the traditional education field officers, the District Monitoring Officers (DMOs) and their field teams, and recently the District Teacher Educators (DTEs) employed by the Directorate of Staff Development (DSD). Anecdotal evidence suggests that the introduction of new monitoring mechanisms have begun to reduce absenteeism, although there is concern that the three structures may overlap and introduce undue bureaucracy. Furthermore, the new information collected through the monitoring process does not often lead to disciplinary actions for low performers, especially because of the tendency for teachers or the union to pursue legal action to prevent teachers from being fired. District officials therefore continue to focus on transfers and postings as rewards to strengthen the motivation of teachers.

A third area of reform is the in-service training and pre-service education requirements for new teachers. Even if all elements of the accountability framework – delegation, finance, information, and motivation – function perfectly, the principal-agent relationship will break down if the agent is not sufficiently capable to fulfill the duties specified by the agent. To improve the capacity of teachers, the 2009 National Education Policy required all primary school teachers to hold at least a B.Ed. and all secondary teachers to hold a Ed.M. New teachers also had to pass centralized exams, though anecdotal evidence suggests that corruption and bribery

may allow teachers to evade this requirement. In addition, nearly every reform over the past decade has made some change to teacher training, such as to increase the frequency of sessions and introduce mentoring programs. The fact that test scores have remained flat despite these efforts, however, suggests that there are other gaps in the accountability chain which prevents teachers from using their new skills and knowledge.

In the private sector, the accountability mechanism between teachers and school owners is much stronger. School directors can more directly delegate tasks, monitor inputs and outputs, and tie wages and job security to performance. This stronger system of accountability is evident in the fact that test scores are higher in the private sector even though private school teachers have much lower qualifications and receive much lower wages than their counterparts in the public sector. Private sector wages are approximately one fifth of wages in the public sector, suggesting that public sector wages are inefficiently high given student learning outcomes.

Voice/Client Power

Parents can formally exert pressure on front line providers via School Management Councils. Efforts to form these councils began in the early 1990s, though they were implemented incompletely and primarily supported by donor funding. The councils received greater support following the 2009 National Education Policy and devolution to the provinces. The first Punjab Education Sector Reform Program (PESRP) in 2009 established councils in 56,000 schools and sought to provide financial and procedural training to members. The second PESRP increased funding for the councils and expanded capacity building programs.

Despite these efforts, school councils remain fairly weak. Low capacity, time, and possibly interest among parents limit community involvement, so these bodies have served primarily to increase the role and power of head teachers. The councils also have limited de facto

autonomy and financial power, particularly after the repeal of the laws promoting contract teachers.

While government school councils are weak, private schools offer a more direct accountability path for parents to exert client power. Parents can directly specify their demands, and schools' ability to collect fees is dependent on their fulfillment of these demands, so the effect of parent preferences on school motivation is much stronger.

The ability of parents to put pressure on private schools, however, is dependent on the existence of other enrollment options such as public schools or competitor private schools. If the state withdraws support for public schools or reduces private sector competition then parents can no longer credibly threaten to withdraw their child if demands are not met, thereby weakening the principal-agent relationship.

Part III: Research Agenda in the RISE Framework

The following section details each component of the RISE research agenda in Pakistan and ties it to the relevant component within the WDR framework.

Study A1: Report Cards Longitudinal Follow-up

The objective of this study is to examine the longer-term impact of information provision on educational markets, especially school and child impacts. In order to do this we will take advantage of a pre-existing intervention that we were involved in: the randomized provision of child and school level report cards in 2004 in half of the original hundred plus villages in the LEAPS sample. While our previous work looked at the short-term impact of the information provision 1-2 years after the intervention, we now will be able to examine how this impact evolves over a ten-year-plus period. Since the children affected in the original intervention are now in their early-to-mid-twenties, we will also be able to examine the impact of informational provision on the transition from schooling to early labor market experience.

This study directly addresses the information element of the Voice/Client Power relationship. Our previous work in this area documented that giving additional information about school quality to the principals (i.e. the parents) improved their ability to exert pressure on schools (i.e. the agents) to provide better quality at a lower fee. Our follow up study will allow us to examine the impact of greater information on labor market outcomes, which may further elucidate the benefits of this intervention.

Study B1: Public School Funds Follow-up

As part of an effort to boost the resources in public schools, the Punjab Education Department (PED) initiated a reform starting in 2004 that brought about a large increase in locally available funds in public schools (on the order of 2,000-4,000 USD per school). The

reform was implemented in our study sample between 2006 and 2011. These reforms were intended to allow public schools to locally allocate resources in an appropriate way for their specific context so as to best enhance their students' learning outcomes. The idea is that centrally provided inputs may not be able to provide the bespoke services or resources needed for a specific school, and that it is preferable to allow each school to decide which inputs are best suited to its needs, rather than force uniform inputs.

The main focus of our evaluation, a collaboration with PED, is to examine the direct (short- and long-term) impact of the above-mentioned grants on public school performance, especially in terms of child learning. In doing so we hope to also be able to examine the specific channels through which these schools brought about any observed changes, i.e. what investments were made. Finally, we will investigate how these changes have impacted the private sector. Even though this sector did not receive any funds, our previous work on the Pakistani educational marketplace suggests that the public and private sector do compete with each other and therefore improvements in one sector can cause complementary reforms and improvements in the other. Our preliminary findings are encouraging and show both positive impacts on learning outcomes in public schools and positive spillovers to private schools.

This study examines the financing component of the Compact relationship. By giving schools greater flexibility to use financial resources, the state may improve the ability of schools to fulfill the overall objective of improving student learning. On the other hand, if the delegation mechanism is so strong such that schools can only use their resources for specific purposes, then allocating additional funds to schools may not allow for the desired level of flexibility.

Study B2: Low Cost Private Schools Grants Study and Study B3: Education Financing

In collaboration with the Aman Foundation, a philanthropic organization in Pakistan, and Tameer MicroFinance Bank (TMFB), one of the most innovative micro-finance providers in Pakistan, we are working on two studies to analyze and explore solutions to capital constraints among low cost private schools. For the Grants study, we worked with the Aman Foundation to cash grants worth roughly 500 USD each to approximately 350 LCPS in the Faisalabad district of Punjab. This grant value was equivalent to about two months' worth of revenues and half a year-worth of profits for the median school, and payments were administered through TMFB. An important policy question in the SME literature is whether the returns to capital differ based on how many schools in a village have access to increased resources. Therefore the grants were offered in two forms – “low saturation,” where only one (randomly selected) LCPS in a selected village was offered the grant, and “high saturation,” where all LCPS in the village were offered the grants.

The Grants study provides important lessons on the extent and nature of LCPS credit constraints, but ultimately, sustainable impact in alleviating financial resources faced by schools can only be addressed by having mainstream financial providers offer financially viable and popular financial products that are designed to serve the needs of these schools. In focusing on this need, we have partnered with Tameer MicroFinance Bank, our implementing partner in the previous study, to design and evaluate promising financial products for LCPS at scale in Pakistan.

This collaboration is now in its third year. In the first year and a half we worked with TMFB to pilot several different loan products to over 100 LCPS. The pilots led to finalizing two distinct financial products – a loan whose terms, maturity, structure and collateral requirements have been designed to fit the needs of the LCPS sector, and a first-of-its-kind micro-equity

product where the school's repayments are tied to its quarterly revenues. The loan amounts offered are up to Rs 150,000 (1,500 USD, roughly 6 months' revenue or 1.5 years' worth of profits) and have tenure up to three years. The two products offered under this partnership have been designed and tested to be compliant with regulatory requirements and to address school needs while providing the lender with competitive profits. While both products can help enhance learning outcomes by alleviating credit constraints, the equity-based instrument hopes to take this a step further by introducing a risk-sharing element that may encourage schools to take on innovative investments that can lead to even higher learning gains. In past work, schools often report not undertaking more innovative "softer" investments – e-learning, modern ideas on curricular reform, teacher enhancements, etc. – because they are concerned with the risk associated with such investments.

Collectively, these studies explore the importance of the Financing element among private schools. Greater financial resources may improve the ability of LCPS to meet the demands of parents and provide better quality schooling, however there is little existing research on this dynamic, especially in development contexts. Indirectly, they may also affect the Motivation element among public schools because as the quality of private alternatives grows, the pressure on public schools to keep up may grow as well. Alternatively, if many students shift out of the public sector, the pressure for the state to meet citizen demands in the Politics relationship may decrease because fewer parents are relying on quality public schooling.

Study C1: Education Support Services (ESS)

This study seeks to understand what factors limit the development and adoption of innovative ideas in the educational space. Our past work shows that while there are abundant markets for "hard" investments (e.g., desks, chairs, and other physical infrastructure), there are

few for “soft” investments, such as curriculum development, school assessments, teacher training and other Educational Support Services (ESS). The lack of an ESS marketplace aimed at LCPS prevents schools from taking advantage of these services and incorporating education innovations into their teaching practices. To address this market failure, we are engaged in an ongoing study that works with ESS providers to create an opportunity for them to develop and test the relevance and appeal of their services and help create a marketplace where LCPS can try out these products and purchase them at affordable prices. Through this work, we hope to also examine the extent to which access to such services can help foster better learning outcomes in the educational sector.

This study explores the Motivation aspect of the Voice/Client Power relationship among private schools because it seeks to expand the capacity and therefore the likelihood that schools can provide quality education as demanded by parents. The ESS marketplace introduces new ideas to school owners and encourages them to direct resources towards quality-enhancing investments rather than hard infrastructure investments that can only improve access.

Study D1: Labor Market Returns to Education/Longitudinal LEAPS study

This study seeks to look at the impact of schooling on early adult labor force outcomes, occupational choice and family formation stratified by gender and access to schooling heterogeneity. In order to document these longer term returns to education we propose a longitudinal follow-up of the LEAPS families (1,800) and children (5,000) who have been tracked from 2003 onwards. The main outcome variables are early adult labor force outcomes, occupational choice and family formation outcomes stratified by gender. As a first pass, we will produce descriptive evidence on the associations between schooling and outcomes for young adults. That is, we are interested in questions in the style of: What is the link between test scores

in primary school and young adult outcomes? Do these differ by socioeconomic groups? Do they differ by whether the child went to public or private school? The descriptive analysis will open up further enquiry into the causal links between school attendance and young adult outcomes, as well as the causal link between private school attendance and young adult outcomes.

This study will also shed light on the functioning of the overall system. While it does not focus on a specific design element or relationship, it will allow us an unparalleled opportunity to assess the effects of private and public education on individual students. In this way, the study is an important accompaniment to the symptomatic overview because through panel data it will give greater insight details that are masked by summary statistics across all students. It will also allow us to learn about students who drop out and are not well represented by the summary data in the first section, but who comprise a critical part of the mission to improve educational outcomes.

Study D2: Pay and Productivity

In this study, we examine the connection between pay and productivity in the teaching workforce. We do so by using existing LEAPS data to compute teacher value-added (TVA) models. These models are useful to understand the correlates of teacher performance and can therefore inform teacher selection. They also help us understand the link between pay and productivity in the teaching sector.

This study directly explores the Motivation component of the Management relationship. Salaries and bonuses are among the greatest rewards that the state can offer teachers, along with posting location and job security. If teacher performance has no bearing on pay, then the motivation of teachers to meet the objectives delegated to them will be weak.

Study D3: Teacher Recruitment, Compensation, Retention and Evaluation

Our third area of work within this theme explores teacher recruitment, compensation and retention (RCR) and the interaction of RCR with evaluations of teacher effectiveness. Building on existing relationships with private school networks, we seek to understand teacher hiring, firing, promotion, teacher assignments to schools and classrooms and compensation within these schools. The combination of the low predictability of observed characteristics on TVA and virtually zero attrition in the public sector implies that “bad” teachers maintain their positions throughout their careers. In contrast, high turnover in the private sector suggests that good teachers leave frequently, and that the returns to investment in teachers are low. Thus it is also important to know how teachers respond in their career decisions to different teacher evaluation models.

This study further addresses Motivation within the Management relationship by detailing other incentives that teachers face aside from pay. As discussed in Part II, even though recent reforms have sought to increase punishments for low teaching performance, the effect of these policies is wholly contingent on implementation, which is likely to be incomplete since teachers are almost never fired. It is thus essential to explore the actual outcomes of these changes, rather than relying on the policy as stipulated in legislation, to understand the consequences for teacher motivation. This study also touches on the Information component by exploring how teachers are evaluated and the sources of information that the education bureaucracy collects about their performance.