



Improving Service Delivery Via Top-Down Data-Driven Accountability: Reform Enactment of the Education Road Map in Pakistan

DeliverEd Initiative Working Paper

Rabea Malik and Faisal Bari



the
Education
Commission



IDAS INSTITUTE OF
DEVELOPMENT
& ECONOMIC
ALTERNATIVES

DeliverEd: Building knowledge on how to use delivery approaches to advance education reforms

The DeliverEd Initiative was launched in 2019 to strengthen the evidence base for how governments can achieve their policy priorities through delivery units and other delivery approaches. Globally, more than 80 countries have used such approaches to achieve better outcomes for policy reform and implementation. Forty-seven percent of those include an education focus, either as a single focus sector or as part of a multisector approach. But there was little empirical evidence, especially from developing countries, on the effectiveness of delivery approaches in delivering education outcomes or on the design choices, contextual features, and enabling factors that contribute to their performance.

DeliverEd has helped to fill this evidence gap and create a better understanding of the practices leaders can adopt to improve their policy delivery and reform efforts. It has conducted research within and across countries on the effectiveness of delivery approaches in improving reform implementation, with the key findings included in this final report. It has facilitated knowledge and experience sharing among countries—for example, through the Africa Policy Forum—to equip policymakers with a deeper understanding of delivery challenges and solutions to make informed decisions. It continues to increase awareness and the uptake of research to improve schooling and learning in low-income countries.

The Education Commission leads DeliverEd with Oxford University's Blavatnik School of Government and funding from the UK Foreign, Commonwealth, and Development Office (FCDO). Other partners include the University of Toronto, the Institute for Educational Planning and Administration (under the Auspices of UNESCO), University of Cape Coast, Ghana, Institute of Development and Economic Alternatives (IDEAS) in Pakistan, World Bank, and Georgetown University in the U.S. For more information about DeliverEd, and to view the country studies and other related research and policy engagement materials, please visit www.educationcommission.org/delivered-initiative.

We are very grateful to the Blavatnik School of Government and all our research partners for their in-depth research, especially during the COVID-19 pandemic. This DeliverEd Final report is the Education Commission's interpretation of the research. For the detailed research papers themselves, please see the next page.

DeliverEd Research Products

Anderson, K., Ibarra, A., & Javaid, N. (December 2022). [The Education Commission. A Case Study of the Sierra Leone Delivery Unit](#). DeliverEd Initiative Policy Note.

Bell, S., Asim, M., Mundy, K., Pius Nuzdor, H., Boakye-Yiadom, M., & Mensah Adosi, C. (May 2023). How do regions, districts and schools respond to the introduction of a delivery approach: Evidence from Ghana. DeliverEd Initiative Working Paper.

Bell, S., Leaver, C., Mansoor, Z., Mundy, K., Qarout, D., & Williams, M. (March 2023). [The Role of Delivery Approaches in Education Systems Reform: Evidence from a Multi-Country Study](#). DeliverEd Initiative Working Paper.

Boakye-Yiadom, M., Leaver C., Mansoor, Z., & Iocco, MP. (March 2023). [Management and performance in mid-level bureaucracies: Evidence from Ghanaian education districts](#). DeliverEd Initiative Working Paper.

Gulzar, S., Ladino, JF., Mehmood, MZ., & Rogger, D. (March 2023). [Command and Can't Control: An Evaluation of Centralized Accountability in the Public Sector](#). DeliverEd Initiative Working Paper.

Malik, R. & Bari, F. (May 2023). [Improving Service Delivery via Top-Down Data-Driven Accountability: Reform Enactment of the Education Road Map in Pakistan](#). DeliverEd Initiative Working Paper.

Mansoor, Z., Qarout, D., Anderson, K., Carano, C., Yecaló-Teclé, L., Dvorakova, V., & Williams, M. (July 2021). [A Global Mapping of Delivery Approaches](#). DeliverEd Initiative Working Paper.

Qarout, D. (November 2022). [The Accountability Paradox: Delivery Units in Jordan's Education Sector 2010–2019](#). DeliverEd Initiative Working Paper.

Williams, M., Leaver, C., Mundy, K., Mansoor, Z., Qarout, D., Asim, M., Bell, S., & Bilous, A. (April 2021). [Delivery Approaches to Improving Policy Implementation: A Conceptual Framework](#). DeliverEd Initiative Working Paper.

DeliverEd Policy Products

Anderson, K., & Bergmann, J. (2022). [The Education Commission. Design Choices for Delivery Approaches in Education](#), DeliverEd Initiative Policy Brief.

Anderson, K., & Carano, C. (2021). [The Education Commission. The Challenge of Delivering for Learning](#), DeliverEd Initiative Policy Brief.

Villaseñor, P. The Education Commission. (2021) [Delivery Approaches in Crisis or Conflict Situations](#), DeliverEd Initiative Policy Brief.

Abstract

This paper presents the findings from the qualitative component of the Pakistan case study for DeliverEd and traces the enactment of the delivery approach in the education sector and the impact on bureaucratic management practices in Punjab, Pakistan. We interview bureaucrats participated in the reform at the federal, provincial and district level during 2012 and 2018 to understand the intended design of the reform, and its operationalisation at various tiers of service delivery. In doing so, we document the ways in which management practices and routines changed as a result of the reform. The interviews also capture the perceptions and beliefs of the bureaucrats regarding the effectiveness of these routines and their experience of operationalizing this reform. Key findings suggest that while high stakes accountability introduced considerable activity in terms of new practices and routines at all tiers of service delivery, the cascade of reforms and the ways in which bureaucrats at different tiers interact with the reform varies significantly. Our findings contribute to the growing body of empirical work on middle tier bureaucrats.

Introduction

Driven by the global learning crisis, many countries are adopting approaches to help improve delivery and implementation of education reforms. Policy documents have evolved over the past decades, including in Pakistan, to more clearly prioritize learning achievement as the key goal of education systems (Punjab Education Sector Plan 2019–2024; Sindh Education Sector Plan, 2019–2024). Evidence on what works to improve learning has also been accumulating from a variety of contexts across the globe (World Bank, 2020; Cilliers et al., 2020; Araya et al., 2023). There are gaps in knowledge regarding the ways effective policies and reforms can be implemented at scale across different contexts. For a majority of countries, and certainly Pakistan, governments remain the largest and most significant service provider. The effort to effectively translate policy goals into tangible actions throughout very large systems over long periods of time remains a challenge for many countries (Williams et al., 2021). Delivery approaches offer countries a standard set of steps that can potentially improve service delivery. In developing countries, these approaches work with and through middle- and lower-tier bureaucracies for reform design and implementation (Williams et al., 2021). The bureaucratic structures are central for implementation and service delivery in large systems in these countries.

In this paper, using retrospective qualitative methods, we trace the enactment of the delivery approach in the education sector in Punjab, Pakistan between 2012 and 2018. We interview the bureaucrats who participated in the operationalization and implementation of the approach at the provincial, district, and sub-district levels to construct an understanding of the cascade of the reform from the provincial to the district and sub-district levels. We describe what the delivery reform mandated and for

whom, what routines were introduced to the bureaucratic functions at the provincial and district levels (including descriptions of the monitoring and accountability structures), and the ways in which the reform changed (or did not change) the perceptions, beliefs, and behaviors of the bureaucrats who were involved in the reform. In doing so, this paper constructs a narrative of reform enactment through the voices of the provincial and district bureaucrats.

We find that the high-stakes top-down accountability reforms introduced considerable activity through new routines and practices driven by a focus on selected indicators and targets. We find that it is possible in some contexts to orient the bureaucrats toward providing quite a high focus on specific delivery tasks. For example, the delivery approach in Punjab leveraged political signaling and political capital to convene the district executive administrators and to prioritize education above the 11 other service delivery functions at the district level. We find little evidence, however, of these changes enduring after the central driving forces (political and bureaucratic) receded or changed. Our findings align with the recent empirical work on management practices that find that less autonomy is associated with lower outcomes of management practices (Rasul et al., 2018). This study fills a gap in the literature on management practices at the middle layers of public systems and the ways in which these practices interact with service reforms.

The paper is organized as follows: Section 1 reviews the available literature on management practices and studies of what works to improve service delivery. We identify a gap in knowledge regarding middle- and lower-tier bureaucracies in terms of documentation of their practices, understanding of the ways in which they interact with reforms that are introduced, and their perceptions regarding the effectiveness of the reforms. Section 2 outlines the research questions and details the methodology that guided the research. Section 3 describes the country context in which the reform was introduced and the origin story of the delivery approach adoption in Pakistan. Section 4 describes the findings. Each sub-section addresses one research question and includes a discussion of the findings. Section 4.4 offers insights regarding political economy factors that enable (or stymie) the adoption of reforms. We conclude with key takeaways regarding data-driven accountability reforms in developing country contexts.

Section 1: Literature review

There are three types of gaps in the body of literature that is relevant for this study. First, there is a lack of empirical evidence on the processes, functions, and effectiveness of delivery approaches. Second, there is only thin empirical descriptive and analytic work on the practices of the “middle-tier” bureaucracies that are engaged in the implementation and governance of social services. Little is known of the ways in which they operate and how they interact with reforms. In Punjab, Pakistan, these middle-tier bureaucracies include the executive administrators at the district level and the administrators and managers working at the sub-district level (See Figure 1). Third, there is a lack of Pakistan-specific evidence on the functioning of this middle tier of bureaucracy or the effectiveness of delivery approaches generally. This paper contributes to all three gaps in different ways. Among the three gaps, we prioritize the second and its literature in our review, as it has the greatest insights to offer our analysis and contribution.

Global policy literature on delivery approaches predominantly employs before–after comparisons to establish associations with the introduction of the approach and significant improvements on some indicators (such as street crime, public infrastructure, school ranking, infant mortality, etc.) across varied contexts, including Malaysia, Chile, and Brazil (Williams et al., 2021). Rigorously generated evidence on the impact of these approaches, which employs counterfactuals and qualitative process-tracing techniques and triangulation, is not available.

Bureaucracies are important to the study of delivery approaches in developing country contexts, particularly in Pakistan, where the approaches are implemented through the hierarchical structures of provincial and district bureaucracies. Economics literature has considered the role of bureaucracies with regard to their contributions to macroeconomic development, and this literature is mainly focused on national-level bureaucracies (Woo-Cummings, 1999). Literature on politics has couched the analysis of bureaucracies in the principal–agent framework, which has a dimension of accountability of bureaucrats to politicians (Pepinsky et al., 2017). The principal–agent framework has been used to understand the ways of aligning the goals of bureaucrats more closely with political and development goals, performance pay, and other interventions to reduce corrupt practices (Chaudhry et al., 2006). Within this framework of analysis to improve certain management and service delivery practices (Hertzberg et al., 2010). This work is framed around notions of accountability with the view that poor governance is rooted in weak accountability. Pepinsky et al. (2017) review these studies and conclude that while accountability frameworks offer powerful insights, they narrow the understanding of bureaucratic motivations.

Education service delivery systems rely on the effective performance of the middle and lower tiers of bureaucracy to be successful. The performance of middle-tier bureaucrats becomes even more important when the reforms are being introduced and implemented and when considering the sustainability of any reform effort. However, there has been relatively little study of the management practices in the middle tiers or the middle layers of public systems with insights regarding the practices these bureaucrats use in their contexts, the challenges they face, and how they interact with reforms (Aldeman & Lemos, 2021; Pepinsky et al., 2017). There is a cross-disciplinary body of work that is beginning to address this gap. Recent studies in public administration are demonstrating that increased autonomy correlates with higher productivity of bureaucrats, whereas increased monitoring lowers the output by bureaucrats (Rasul et al., 2020; Rasul & Rogger, 2018). Similarly, Honig (2022) makes the case that “the focus on control and monitoring as the primary route to performance improvement” may not achieve the intended results. More or less autonomy is not a resolved issue in the discourse on bureaucracies and reforms. There are arguments that the allocation of authority over functions to different tiers should consider knowledge and incentives so that the functions are optimally allocated (Aldeman & Lemos, 2021). Personnel-related functions may be better allocated to local levels, while functions such as curricula may be better allocated to higher levels. In order to move forward on reforming systems in a way that can optimally balance autonomy and accountability, more knowledge is needed regarding the bureaucrats themselves, their decision-making processes, how they respond to challenges in their contexts, and how they interact with the reforms that are introduced.

A collection of qualitative and ethnographic work is emerging from South Asia that provides some initial and important insights regarding how middle-tier and street-level bureaucrats in some of the largest bureaucracies in the developing world view their work and their roles, and the practices they engage in for their work. Hayat (2020) documents and analyzes the everyday practices of bureaucrats in the irrigation department in Punjab, Pakistan, including the negotiations with various stakeholders and attempts to expand the scope and scale of the bureaucratic oversight of services, and Hayat highlights a feeling of devaluation rooted in the erosion of authority, limited information, and other factors. Aiyar & Battachariya (2016) provide a street-level administrator’s perspective in resolving implementation problems, and they report that street-level administrators in education departments in two Indian states see their role as that of a post office: they are only expected to do the bidding of higher authorities and ferry messages back and forth. For these authors, the voices and perspectives of the bureaucrats are important to understand if there are to be any changes to the everyday functioning of bureaucracies to improve implementation

and service delivery. In spending time at the block-level administration in two Indian states, the authors observe a great deal of activity and the bureaucrats telling them they are only cogs in a wheel with little or no agency .

This study contributes to these gaps in the literature by documenting the practices of middle-tier bureaucrats specifically within the education sector, qualitatively, and through rich description. These documented practices are systematically identified as being part of the functions activated by delivery approaches globally and are linked directly to the improvement of service delivery and implementation at scale. In doing so, the study contributes findings to address both gaps in literature identified above, those related to empirical knowledge of delivery approaches and bureaucratic practices.

Section 2: Research questions and methodology

This paper presents findings from the qualitative component of the DeliverEd Pakistan case study on delivery approaches. The qualitative component was set up as a retrospective study of the delivery approach in the education sector in Punjab between 2012 and 2018 to trace the origins and enactment of the reform. The research questions guiding this work emerge from the broader cross- country work of the DeliverEd research program on delivery approaches:

- RQ1: What type of delivery approach and specific goals/priorities or targets were formally mandated at the central/regional/district and school levels—by whom, for whom, and why?
- RQ2: Did the introduction of the delivery approach change management routines and practices at each administrative level?
- RQ3: How did attitudes and behaviors change among managers at each level?
- RQ4: What types/levels of outputs or outcomes were realized through the introduction and adoption of the delivery approach (intermediate/ultimate)?
- RQ5: What institutional or political features affect the adoption and operation of the reform and its contributions to improvements in service delivery?

To answer these questions we draw on primary data collected for this study from two provinces in Pakistan: Punjab and Sindh (Table 1). Interviews with the political actors and donors in Sindh and Punjab help identify the origin story of the delivery

approaches in Pakistan (RQ1). Interviews with bureaucratic representatives, academic and policy experts, and political leaders in Sindh and Punjab help describe the political economy factors and variations which make some contexts “delivery approach ready” (RQ5). Interviews at the provincial, district, and sub-district levels in Punjab (with top-, middle-, and lower-tier bureaucrats) provide data for the questions regarding the delivery approach, its enactment, and the impact on bureaucratic practices at different levels (RQ2 and RQ3).

The question of the types of outputs and outcomes that are realized through the introduction of the delivery approach (RQ4) is addressed in Gulzar et al. (2023), the second quantitative study for Punjab, Pakistan under DeliverEd initiative. The authors use large-scale administrative data generated in Punjab to rigorously assess the efficacy of the centralized monitoring system to flag districts performance on school and student learning outcomes..

The primary data collection method for the qualitative component was semi-structured, recall-based interviews with bureaucrats at the middle and lower tiers of Punjab’s bureaucracy . The interviewees included the executive district administrators and the education department bureaucrats who were responsible for implementation and service delivery in general, as well as the enactment of the delivery approach at the district and sub-district levels. Additionally, the key upstream stakeholders included the federal political leadership along with donors and international management consultants, as well as the provincial political leadership (specifically in Punjab and Sindh) and the provincial bureaucratic leadership. The political leaders at the federal and provincial levels were involved with the introduction of the delivery reform in Pakistan, and the provincial leadership in particular had a key role in the adoption and operationalization of the approach. Table 1 describes the sample for the study.

The delivery reform was introduced in all 36 districts of Punjab. We analyzed the published district rankings to narrow down the districts for the district administrator interviews. The analysis revealed that over the six years of the reform, some districts were consistently top performers on most indicators, others were always in the low-performing band, and others fluctuated. We selected districts from all three categories in the first round of sample selection; 12 of 36 districts were shortlisted. A complete list of executive administrators who served in these districts between 2010 and 2018 was constructed by seeking appointment information from the provincial offices in Punjab. We contacted all 45 district executive administrators and interviewed the 23 individuals who agreed to be interviewed and were available. The interviewees requested anonymity and all requirements have been upheld in the writing of this paper.

We selected five districts and interviewed the education bureaucrats in these districts in order to more deeply understand the cascade of the reform practices at the sub-district level. These districts were a subset of the 12 districts in which we conducted interviews with district executive administrators. A total of 38 interviews were conducted in the five districts.

Table 1: Description of the Qualitative Component Sample for the Pakistan Case

Stakeholders	Governance level	Interviews
Political, bureaucratic, and donor leadership	Federal and provincial level	<ul style="list-style-type: none"> – Tracing the origin story, including the intended theory of change of the reform, the original conceptualization, and the stakeholders involved
Executive administrators 25 interviews	District level 12 districts	<ul style="list-style-type: none"> – Account of participation in routines and practices introduced through the reform – Tracing changes in managerial practices Attitudes and beliefs regarding practices, accountability schemes, ability to deliver improvements Perceptions regarding effectiveness of routines, including intended and unintended process outcomes
Education bureaucrats 38 interviews	Sub-district level (education dept.) 5 districts	<ul style="list-style-type: none"> – Account of participation in routines and practices introduced – Tracing the cascade of routines and practices down the delivery chain to the sub-district level – Perceptions regarding the effectiveness of the routines
Academic and policy experts; government advisors	Federal and provincial level	<ul style="list-style-type: none"> – Identifying political economy factors that explain the variation in the pace of development between Punjab and Sindh, the adoption of reform, the investments made, and the challenges that remain

All interviews were semi-structured and guided by questions that were developed to gather information about the functions of the delivery approaches, the management practices and routines that were introduced, and the attitudes, behaviors, and perceptions of the bureaucrats who participated in the reform. The DeliverEd work on the functions of the delivery approaches globally (Williams et al., 2021) guided the framework for the Pakistan study. This work identified five key functions of delivery approaches globally: prioritization and target-setting; measurement, monitoring, and use of data; accountability and incentives; problem solving; and leveraging political sponsorship (Appendix 1). Each of these categories of functions is further made up of practices that were operationalized by the delivery approaches (and this operationalization was the reform itself). The adaptation of the framework for Punjab’s context involved adapting the definitions of the constructs.

Priorities and target setting involves setting priorities for the overall approach and setting targets on select indicators which reflect these priorities for each of the districts. The practice of target setting also involves communication of the targets down the delivery chain.

The monitoring and use of data function involves mechanisms and routines in place for data collection and the use of data for problem solving and course correction. The practices associated with this function include data collection, data management, progress tracking, and stocktake meetings.

The instruments for conducting the study operationalized the constructs from the cross- country conceptual framework, which classified typical routines and practices of delivery approaches, including the priorities and targets, monitoring and use of data, accountability and incentives, problem solving, adaptation, and autonomy within a system. A different set of instruments was developed for the interviews with the district executive administrators and the education department officials to reflect the difference in the level of governance and roles played as part of the governance routines. Most of the categories of questions and practices discussed, however, were similar so that we could capture the cascade of reforms down the delivery chain.

Data were analyzed using a combination of deductive and inductive coding (John et al., 2020; Saldana, 2009; Spencer 2011). The constructs from the theoretical framework (Williams et al., 2021) provided the basis for drawing up predetermined codes for the first round of coding, consisting of coding responses around practices and description of processes as well as perceptions and attitudes of bureaucrats at the provincial and district levels. The second round of coding looked for patterns in the data and response codes that emerged from the text itself.

Section 3: The policy context

Pakistan has a federated structure composed of five provinces. The federal government has a role in setting forth national education policy, being the residual claimant for the Sustainable Development Goals and other international commitments and treaties for social services. In finance allocation and overall guidance, however, the main responsibility of policy and reform implementation and financing has been with the provinces since 2010. In 2010, the 18th amendment to the national Constitution gave Pakistan's provincial governments oversight for teaching syllabi, planning, policy, centers for excellence, and standards of education. For the first time, Pakistan's provinces had the authority to develop curriculum, frame syllabi, and ultimately maintain standards in education (Khan & Mirza, 2011). To put this in context for our study, the government

of Punjab (along with other provincial governments) was now responsible for ensuring that all children in the province had access to schooling and were enrolled in school. The government of Punjab had the authority to plan and implement policies at the provincial and district levels.

Pakistan's 18th constitutional amendment had two significant implications for education governance and service delivery. First, article 25-A in this amendment stipulated that it was the state's responsibility to guarantee the right to free education of all children ages 5 to 16. Second, the amendment devolved the function of education planning, finance, delivery, and governance to the provincial level. Therefore, while there is a large private sector role in service delivery, the state and its bureaucracies remain key actors in the governance and delivery of social services. The delivery approach introduced in Pakistan was therefore adapted and designed for the bureaucratic structures at the provincial level.

There is considerable variation among provinces with education outcomes, political appetites for and ownership of reform, approaches to reform, and the pace at which reforms are adopted and implemented. Punjab is the most developed province, and it has the best education outcomes, followed by the provinces of Sindh and Khyber Pakhtunkhwa (KP). Balochistan province and the Gilgit-Baltistan (GB) area are behind. Punjab and Sindh, therefore, offer an interesting comparison of the political economy factors that impact service delivery and implementation as well as those that determine the adoption and success of reforms (described in Section 5).

3.1 Status of education reforms and outcomes in Punjab and Sindh

Pakistan has a total of 150,255 public schools and 818,300 public school teachers (AEPAM, 2017–18). While progress has been made on getting children into schools (a key goal for the Punjab Education Roadmap as well) age-appropriate enrollments remain low, with significant dropouts at the middle- and secondary-school levels (the net enrollment rate, or NER, for primary schools is 70 percent; the NER for middle schools is 41 percent; and the NER for high schools 30 percent) (PSLM, 2019, 2020; AEPAM, 2017–18). In 2016, the World Bank estimated that 6.6 million children of primary age were not in school. This number has likely increased following the COVID-19 pandemic (Geven et al., 2020). Access to schooling remains a bigger problem in Sindh province than in Punjab. There is a much larger proportion of children ages 6 to 10 that have never been enrolled in school in Sindh (20.4 percent), compared to that in Punjab (7.7 percent) (ASER 2015). The number of children estimated to be out of school in Sindh is twice the number in Punjab.

Punjab's investments in education infrastructure development are observable in upward trends across key indicators, including those in rural areas. Most schools in rural Punjab had usable water (87 percent), toilets (92 percent), and boundary walls (86 percent) by 2015. Rural Sindh, in comparison, was lagging; 58 percent of schools had usable water, 48 percent had usable toilets, and 63 percent had boundary walls, according to the 2015 Annual Status of Education Report (ASER), a citizen-led household-level education assessment initiative. Punjab had also achieved higher levels of teacher presence in 2015, while Sindh has struggled with low numbers. In 2015, ASER found high levels of teacher and student attendance (more than 90 percent in Punjab). In Sindh, however, teacher and student attendance are comparatively low, with 86 percent teacher attendance on the day of visit and 67 percent student attendance (ASER 2015).

Learning levels across the spectrum in Pakistan are very low. While indicators on participation and retention have improved, learning remains a challenge (Geven & Hasan, 2020). Though private school students do relatively better on literacy and numeracy assessments than government school students (Andrabi et al., 2007), very large proportions of children are not able to read or do basic math. According to the ASER surveys, 35 percent of the children in Punjab and 40 percent of the children in Sindh in class 1 cannot read letters. Half of the children in grade 3 in Punjab and 67 percent in Sindh cannot read sentences. In Punjab, 60 percent of students in grade 5 can read a story, compared to 37 percent in Sindh (ASER, 2021). Basic math competencies are also low, with a majority of children unable to recognize numbers in grade 1 (67 percent in Punjab; 86 percent in Sindh). A large number of children are also unable to do subtraction in grade 3 (45 percent in Punjab; 75 percent in Sindh), or division in grade 5 (48 percent in Punjab; 74 percent in Sindh) (ASER, 2021).

Punjab is particularly prolific in passing education reforms, and other provinces have similar levels of activity (Andrabi & MacDonald, 2019).¹ Punjab has made significant investments in improving governance and service delivery since the 1990s, building management information systems for schools, deepening the human resource capacity of the education departments to extend more specialized governance and support to schools at the sub-district level, and introducing reforms to improve teacher recruitment and making recruitment less prone to political interference (Rashid et al., 2014). These reforms are important to note in the context of this paper, as these investments are relevant for the fifth research question (RQ5), which asks, "what institutional or political features affect the adoption and operation of the reform, and its contributions to improvements in service delivery."

In the 1990s, the main focus of the reforms was on building infrastructure and putting in place teacher support mechanisms, but this effort had been unsuccessful in building capacity for the planning and implementation of reforms of provincial and district departments (Habib, 2013; Gazdar, 1999; Easterly, 2001; King & Malik, 2008). In the 2000s, the number and scale of reforms increased in Punjab. By 2014, a number of reforms had been introduced across a wide range of areas, including teacher recruitment, teacher training, school-level support (including coaching models), teacher accountability measures, and many other initiatives. During this time, provincial capacities for data collection, planning, and reform improved.

By 2012, Punjab had introduced reforms to create, stimulate, and sustain the demand for education, particularly for girls, in the form of stipends, conditional cash transfers, and vouchers (Habib, 2013). The Female Secondary School Stipend Program, introduced in 2004, was designed to address the constraints of affordability and distance for the girls. The Education Voucher Scheme, introduced in 2006 to assist low-income families in the city of Lahore, expanded access to private schools, where education outcomes tend to be better, especially for girls. By providing vouchers, the government encouraged the enrollments of children who would otherwise be unable to afford private school. A conditional cash transfer program started in 2013, called the Waseela-e-Taleem, was designed specifically to reduce the number of unenrolled children by targeting families with the lowest income levels, as identified by the largest national social safety net program in the country, the Benazir Income Support Program (BISP). In this program, “a beneficiary family is eligible for a cash transfer of [200 Pakistani Rupees] a month for up to three children on meeting the admission requirements of a verified school and fulfilling a 70 percent minimum quarterly school attendance criterion. In January 2013, about 50,000 families were enrolled in the program” (Nabi, 2013).

On the supply side, Punjab had introduced reforms for a merit-based policy for hiring teachers in an effort to reduce political interference and improve the caliber of candidates entering the profession. The new recruitment policy, instituted in 2013 (Alam, 2015), mandated that all candidates take a standardized test administered by an independent body called the National Testing Service (NTS) (Chaudhry & Tajwar, 2021). The Programme Monitoring & Implementation Unit (PMIU) played a vital role in coordinating with the NTS to consolidate data on the teacher candidates and applicants. In Punjab, the results of the NTS had a 10 percent weighting in the overall grading of the candidate, with candidates correctly answering 45 percent or more of the questions to pass the written test. The rest of the grading was dependent on academic qualifications (85 percent) and an interview (5 percent). Once the marks had been assigned, the selected candidates were notified of their respective postings

(Alam, 2015). In 2017, it was announced that all recruitment would happen at the district level, and the allocation of posts would be done jointly, by the chief executive officers and the district education officers (Government of Punjab, 2017). Under this reform, the pay scales of public school teachers were also increased to improve the pool of teachers. After being hired, the teachers also completed an eight-week induction program by Quaid-e-Azam Academy for Educational Development, the top teacher training institution in Punjab, to ensure the provision of an appropriate quality of teaching (Chaudhry & Tajwar, 2021).

This study compares certain political economy factors in Sindh and Punjab provinces that have determined the adoption and pace of reforms. This comparison is important, given the origin story of the delivery approach in Pakistan (in Section 3.3). Sindh has a smaller population than Punjab, and the former has fewer schools, fewer teachers, and a smaller budget for education. Sindh has historically lagged behind Punjab and has relatively high rates of illiteracy, unemployment, and poverty (Siddique et al., 2019). The province also has high numbers of unenrolled children and stark gender disparities (ASER 2021). Sindh faces multiple service delivery challenges, including poor quality of teaching, teacher absenteeism, high deficits in infrastructure, and poor management at the district level.

Sindh, like Punjab, has had a history of donor-led education-sector reform programs throughout the 1990s and 2000s. The major reform programs include the 2009–2012 Sindh Education Reform Program, 2014–2018 Sindh Education Support Program, and the 2019–2024 Sindh Education Sector Plan & Road Map. The reform efforts in the province have prioritized the improvement of learning outcomes by strengthening teacher performance and increasing equitable access to quality early childhood education as well as primary and secondary education. Reforms have also prioritized enhancing the equity of resource allocation, improving the fiscal sustainability and effectiveness of educational expenditure, addressing low literacy rates in women in rural areas, and improving governance and management.

One of the most prominent achievements of these reforms was the reduction in teacher absenteeism through the institution of biometrics, the introduction of merit- and need-based recruitment, and the capacity building of head teachers and teachers (World Bank, 2019). The origin story interviews highlighted how reforms in Sindh have had less political sponsorship than those in Punjab.

In addition to the lack of political support in Sindh, the historical political context of the province was very different from that of Punjab, for example, with *wadera*

culture,² or preference given to assembly members of Sindhi descent, etc. These differences, along with rural/urban disparities (public/private school distribution) between the two provinces, made adapting a systemic reform framework to the Sindhi context a difficult task. An international development consultant who was part of the original donor team setting up the delivery approach in Pakistan said in an interview, “In Sindh there was a very lukewarm reception to the [donor] team and the idea [of a delivery approach for education], even though the national task force had top-level leadership backing from the president of Pakistan and party leader at the time [Pakistan People’s Party]. There was no enthusiasm for shaking up the current structure.”

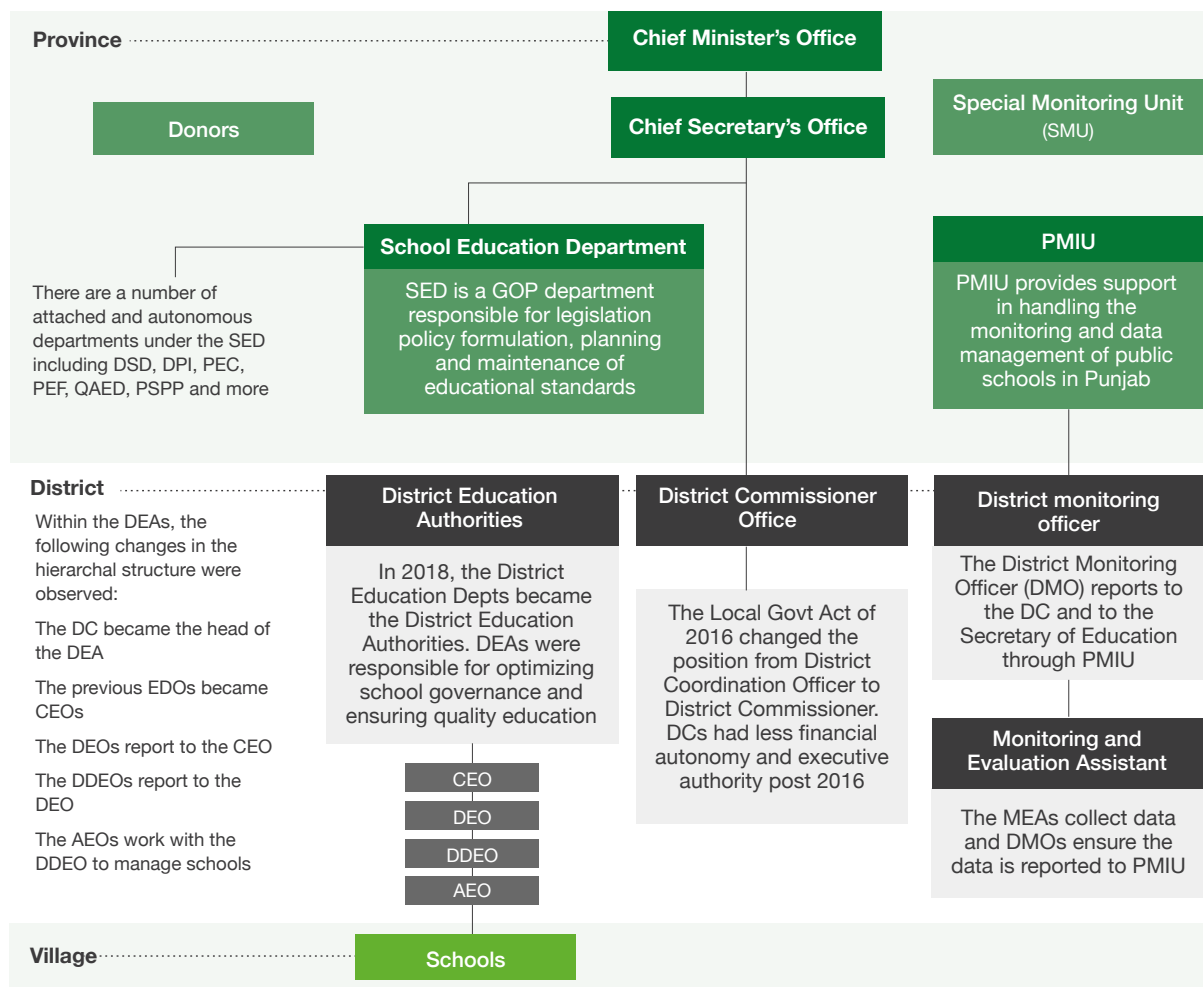
Sindh province has also not built up the depth of human resources in the provincial and district education departments that can support schools and teachers effectively. The management information system in Sindh produces and collates data from the school level at the provincial level, but these data are not used for monitoring targets in the same way as in Punjab. This paper includes a comparison of political economy factors between the two provinces in the final part of the findings section.

3.2 Education service delivery chains in Punjab and Sindh

Figures 1 and 2 depict the delivery chains in Punjab and Sindh, which are organized hierarchically with important functions at the provincial and district levels. Reform and policy planning takes place at the provincial level, involving political, donor, and bureaucratic stakeholders. Policy implementation is carried out at the district level. The district education department was converted into what are called district education authorities in 2016. Between 2010 and 2018, education and health functions were very closely coordinated by the chief minister’s department. The school education department of Punjab is responsible for 150,000 public schools, grades *katchi* (nursery) to grade 10, and 350,000 public school teachers.

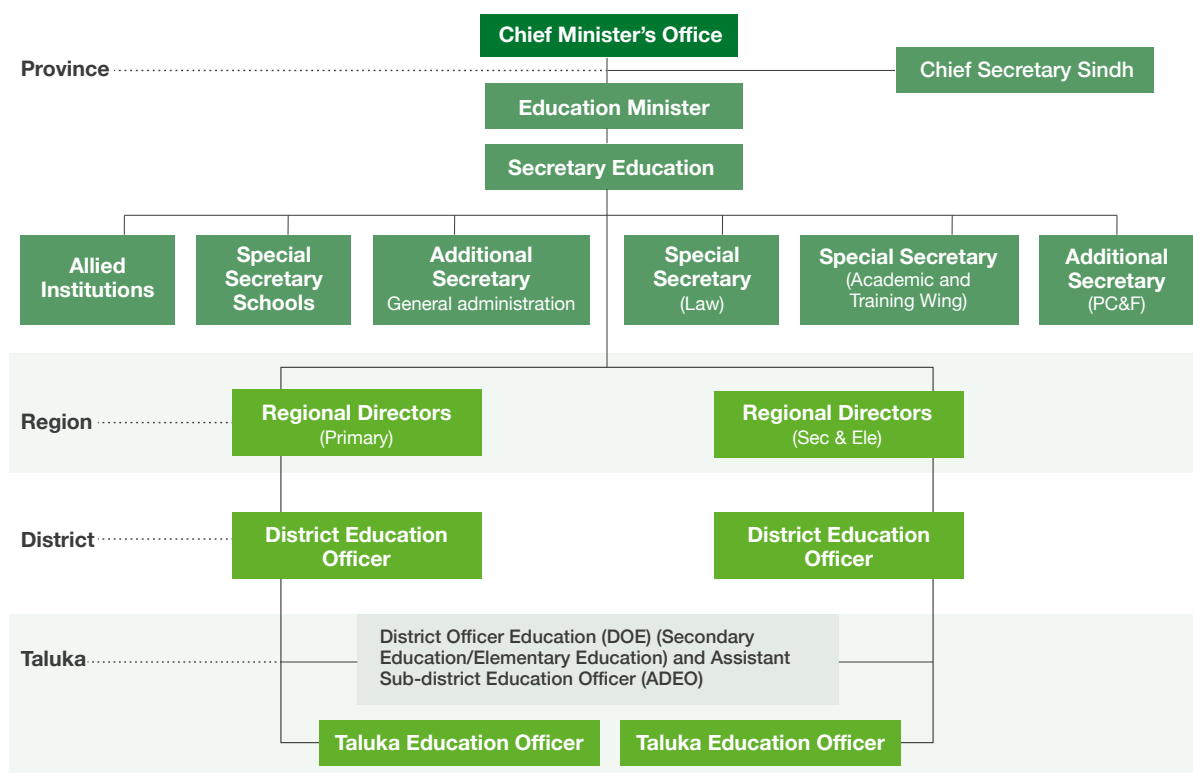
² Wadera culture refers to the heavy influence wielded by a relatively small group of powerful landowners.

Figure 1a: Punjab's Delivery Chain



Source: Author

Figure 1b: Punjab’s Delivery Chain with Sub-Units



Source: Author

In Punjab, the bureaucratic delivery chain has a provincial office led by a senior bureaucrat for a number of sub-functions of education services: higher education, special education, school education, finance, planning, and development. The secretary of the School Education Department (SED) is the highest-ranking bureaucrat at the provincial level who is responsible for education service delivery and governance. The SED oversees certain sub-departments, for example: the Directorate for Staff Development (the body responsible for teacher training) and the PMIU. The PMIU is a delivery unit set up in the early 1990s by the donors to channel financial aid toward education reforms, including reforms linked with data collection and usage. The PMIU has served as a data repository for the Punjab Education Management Information System.) Together these departments and sub-departments are responsible for service delivery, reform implementation, and governance at the provincial level.

At the district level, reporting to the secretaries are district-level executives within the education department. Until 2016 these officers were called executive district officers (EDOs). They report at the district level to the district commissioners and at the provincial level to the education secretary. The district commissioners are the top bureaucratic executives at the district level, with a mandate to oversee 7

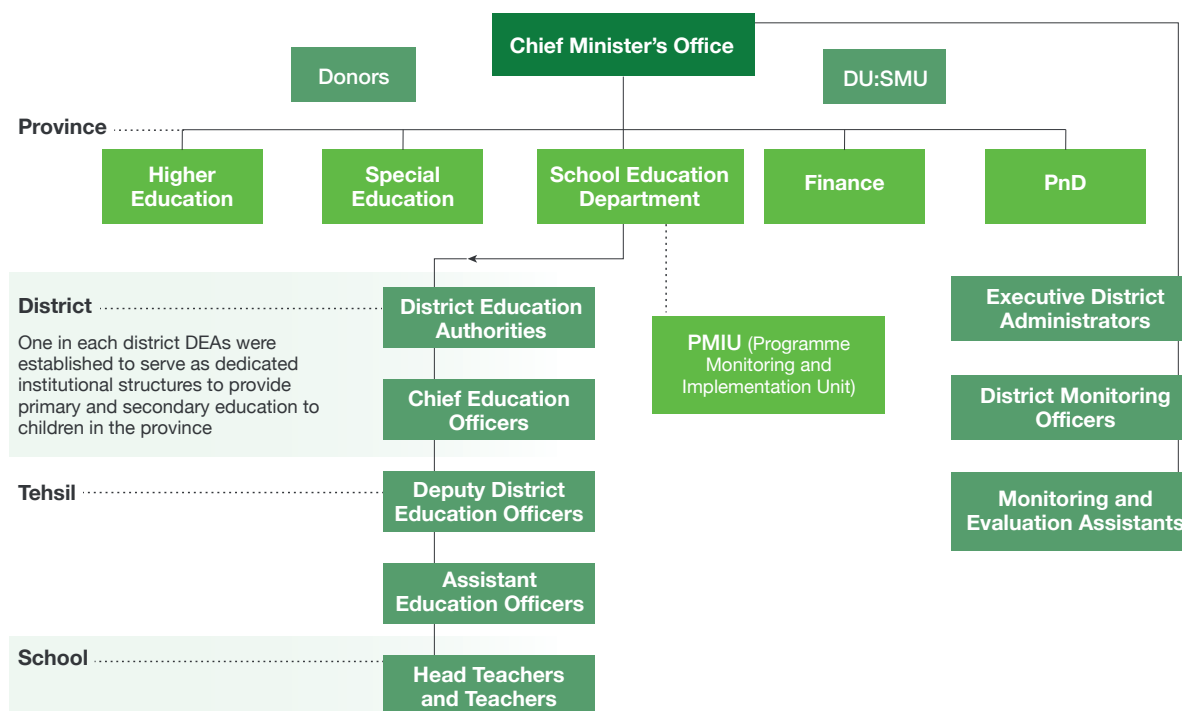
to 11 services, of which education is one. The district commissioners (or district coordinating officers as they were called before 2016) report directly to the Office of the Chief Minister.

Districts have, in recent years, assumed significant importance as units of civil administration at the provincial level. Districts typically consist of multiple cities and towns of different sizes, along with designated rural areas, and districts have grown larger as population numbers have grown. Today, the population of an average district in Punjab is 3 million people, and the population of an average tehsil (a lower sub-unit of provincial civil administration) is slightly more than 0.7 million. Punjab has 36 districts that are subdivided into 144 tehsils (Cheema & Farooqi, 2019).

Pakistan has been steadily decentralizing its governance and service delivery functions for a number of years. The 18th amendment to the Constitution, passed in 2010, deepened and institutionalized administrative and financial decentralization and integrated it with local political processes. Through the 2013 Punjab Local Government Act (PLGA), the province changed delivery structures in social services, including education, in several significant ways. First, education management was devolved to the district education authorities, which were created to replace the district-level education departments. Second, the office of the deputy commissioner was revived. Third, The office of the deputy commissioner was replaced, and all of its powers shifted to the chief officer (PLGA, 2013). This restructuring aimed to increase oversight and ownership of education management at the district level and optimize school governance to ensure the quality of education. The PLGA was also designed to increase the oversight by local leaders of education service delivery.

The local government changes outlined in the 2013 PLGA took effect in 2016 through the Civil Administration Ordinance. The revival of the office of the DC through this legislation effectively meant the institution of changes in the authority of the executives at the district level, with regard to financial distribution from provinces to districts, as well as changes in the roles of the sub-district management. With regard to finances, prior to 2016, the district coordinating officers had considerable financial autonomy and could distribute and utilize the district budgets at his discretion. However, after the 2013 PLGA took effect, these powers were taken away. For education, a fixed lump-sum budget was received by each district and assigned directly to the District Education Authority (DEA).

Figure 2: Sindh Education Delivery Chain



Source: Author

The delivery chain in Sindh province (Figure 2) is similar that in Punjab. Education service delivery is managed by the School Education and Literacy Department, with a number of other sub-departments looking after other functions, such as higher education and special education. Sindh has bureaucrats at the district and sub-district levels. However, Sindh has less depth to its education service delivery bureaucracy, compared to Punjab. Many of the functions of head teacher support and capacity building are yet to catch up. Sindh has a data management information system for its government schools, and the province collects data on enrollment, teacher and student presence, and infrastructure. Sindh also collects data on learning. According to interviews with Sindh’s provincial bureaucrats, there are no practices at the provincial level that use these data to monitor progress or track reform. The latest education sector reform plan—the Sindh Education Sector Plan and Road Map 2019—includes a chapter on an implementation strategy and the word Road Map (Government of Sindh, 2019).

3.3 The delivery approach in Pakistan: the origin story

The findings presented in this section draw on interviews conducted with key actors in Sindh and Punjab provinces, and at the federal level, regarding who introduced the delivery approach, why, and for whom.

In Pakistan, the delivery approach was introduced in 2010 under a broader donor agenda on education and development following bilateral engagement by former Prime Minister Gordon Brown and President Asif Ali Zardari. A federal-level education task force was established, and it was co-chaired by Michael Barber (of the Department for International Development, DFID and Special Representative for Education in Pakistan) and Shahnaz Wazir Ali (Special Assistant to Prime Minister on the Social Sector and Education between 2008 and 2012) (Chaudhry & Tajwar, 2021). DFID funded and supported the initiative. One of the first duties of the task force was to speak to all four provinces (at the time) to assess the readiness and willingness to adopt the delivery approach. Delegations comprising members of the task force and technical advisors toured the four provincial capitals for this purpose. This was because the 18th amendment to the Constitution had devolved authority for education planning, reform, and implementation to the provinces. Interviews with members of the education task force and representatives of the technical assistance teams reveal that meetings were held with all provinces to ascertain the level of political engagement with the idea of introducing delivery approaches and also conduct a preliminary assessment, albeit one that is superficial, of the status of delivery and governance infrastructure in each of the provinces. Punjab was the first—and at the time, the only—province to move ahead with instituting the delivery approach. Sindh opted not to adopt the delivery approach or set up a delivery unit. Our interviews with senior policy actors involved in the high-level dialogue with donors at the time revealed that there was very little enthusiasm from the political leadership in Sindh at the time and no political buy-in for introducing delivery approaches.

Punjab began to develop its delivery approach in December 2010, during the political tenure of the Pakistan Muslim League (Nawaz) government under the helm of then Chief Minister Shahbaz Sharif, and the delivery approach was called the Education Road Map (referred to also as the Road Map). One of the senior political advisors we interviewed, who was involved in the introduction of the approach at the time, shared that Punjab was deemed in many ways the most suitable for adopting the Road Map reform, with immediate engagement from the provincial political leadership.

Regarding Sindh, members of the task force revealed in interviews that they were unable to find much traction with the political leadership in the province. The political economy structures in Sindh made it less inclined for ambitious service delivery reforms. These structures include relatively weak political competition, the absence of a strong political champion for a top-down accountability reform initiative, and a difference in the culture of the political–bureaucratic relationship. All three have emerged as important factors for introducing and sustaining support for delivery

approaches.³ Sindh also had not made the investments in teachers, data, schools, and other related areas to make it as reform-ready as Punjab and Khyber Pakhtunkhwa provinces.⁴

The PMIU data was the gold mine, because no other system had this level of data, and the moment we had this data, suddenly we realized the data is being collected, but it is not being used for managerial purposes. Because when they used to take two months to analyze the data, we tried to ensure that the data should come in time. ... There's this little program in our technical system which enabled the PMIU to develop the monthly reports, which the [deputy commissioners] could use. So if the DC of [the Punjab city of] Rahim Yar Khan can see the data for him, he would certainly have three pages saying you had 1,800 schools, your 1,600 schools are great, but your 200 schools are having roughly 40 percent absenteeism of teachers, and these are the names of the teachers. Can you just send your people to them and ask them to come on time? So basically the things that the DC could fix. – Senior Policy Advisor Education, DFID

Pakistan was not poised to achieve all of its international commitments in 2010, including on enrollments and learning (Government of Pakistan Planning Commission, 2013; Government of Pakistan Bureau of Statistics, 2021). The country was spending considerable amounts on education, and there was considerable reform activity, however there were few visible and significant improvements in the outcomes within most areas, particularly rural and less developed regions, in all provinces, including Punjab and Sindh (Andrabi & Macdonald, 2019). The general public discourse on education highlighted an education emergency. This discourse was particularly resonant in Punjab. There was a perception among the policymakers in Punjab that the supply side was weak, with not enough teachers and schools, and that was the reason for slow progress toward improved outcomes. Technical experts within donor organizations had also identified efficiency gains that were to be made within the existing system that could result in improvements in outcomes. One key stakeholder who was closely involved with planning and implementing reforms in the 2010s described how there were many ideas for reform, but the political leadership was not sure how to implement the reforms. One interviewee said,

DFID wanted to address the “how to” issue by calling it the delivery approach. So, then they came up with the fact that we must have roadmaps, we must have markers. We must have milestones. What are the critical reform elements? ... It was

³ Although Section 4.4 discusses some political economy factors, this study does not engage in a full analysis of the political economies of Sindh and Punjab provinces.

⁴ There was interest and engagement from Khyber Pakhtunkhwa province as well. While there was interest from Balochistan, conversations and engagement in the province stalled over the need for investment in building the governance and delivery capacity, as well as particular challenges of the province's geopolitics and terrain.

reasonably good, the education policy, but you know, it's really operationalizing [it that was the key issue].

The design for the delivery approach in Punjab drew on the theory and experience of delivery units globally, particularly Britain's experience. Chaudhry and Tajwar wrote in 2021,

The implementation strategy for the delivery approach in Punjab rested on six key fundamentals, namely: (i) ambitious standards, (ii) good data and clear targets, (iii) devolved responsibility, (iv) access to best practice and quality professional development, (v) accountability, and (vi) an increased focus on low performing schools... [and] ...the foundation of focusing on a limited number of core policies and strategies, and working on them in tandem while ensuring strong leadership at the top that does not lose sight of the intended focus.

In Punjab, the reform was structured to leverage the authority of the chief minister to create ownership of reform throughout the service delivery chain and to catalyze large-scale improvement in schooling access and quality over a relatively short period of time. One of the advisors involved with the initial design referred to it as the "political oversight model." This model is centralized with the top political leadership, contrary to other systems, which view local politics and engagement with grassroots providers as central to the design of accountability-based reforms.

Buy-in from the political leadership of Punjab was secured on the promise of the delivery approach helping to achieve universal learning gains at scale, and on the possibility of making reforms work at scale by following few steps. These steps included: high levels of visible political backing for reform, data-driven monitoring schemes, and a high-stakes system of rewards and incentives. The technical assistance team was able to refer to the work of delivery units in the UK as evidence of the effectiveness of these reforms. Furthermore, the idea of improving district-level service delivery also resonated with the plans that the political leadership in Punjab had for district-level development. These arguments were persuasive for the political leaders, who were keen to learn from international reform approaches and identify ways of implementing reforms at scale (Javed, 2018).

We [donors] had some more technical assistance people. So from December to April, the system was that we went from agency to agency and tried to see what can be changed and what cannot be changed. And on that basis, [we] came up with 13 indicators or so, which we thought that we should be able to [achieve progress on] in the next three years. Now, the difference was that to us, classical technical assistance normally focused on very big, very

difficult things, whereas delivery approaches actually start with things that you can change in a very short time. Because the entire deal is that you need to maintain the political focus of the chief minister, and if [you] don't ... show him the success, you will lose the entire thing.
– Senior Policy Advisor, Education, DFID

At the core of the delivery approach's design was the leveraging of political interests and political capital to orient the bureaucratic structures involved in service delivery toward improvements at a fast pace. While the approach identified all of the agencies involved in education service delivery and their respective roles and interconnectedness, there is little evidence (or documentation) to suggest that there was a deeper thinking about rigidities in the system or the ways these issues could be fixed.

The second key component of the reform was “the data regime,” as detailed in this interviewee comment:

Political will is foundational [for reform]. It is important, but it is not enough. Because if you have the political intent, the second thing you need is the technical ability to convert that intent into programs... So that's when we brought in the data regime. So the moment we brought in the data regime, that became very real, because suddenly the discussion was, we used to produce heatmaps in which we used to show [the Punjab city of] Bahawalpur as red and [the Punjab city of] Rahim Yar Khan as green, and suddenly the whole onus was on why Bahawalpur was still red and why have they not followed up on teacher and student absenteeism and basic facilities. – Senior Policy Advisor, Education DFID

The reform was designed to be top-down, to act on the directives of the district commissioners. All hierarchies of the system were aligned as such, according to a former member of the delivery technical assistance team, who said,

The EDO offices had the most potential to carry out whatever the chief minister had asked. At that time they were reporting directly to the DCs. So the DC and EDO nexus was the most effective thing you saw [in the government], more[so] than the bureaucrats at the provincial education department. So monthly meetings started with the DCO and EDOs. They were provided with data to build their capacity. They were told this is the data that the PMIU is collecting. Colorful charts were made for them, and they were shown how to interpret them. Then [we] would drill down into the data and provide them details by AEO [assistant education officer], by tehsil and told them that “this is what is happening in your tehsil.”

This top-down model of accountability for reform brought changes to the usual ways that services were governed and delivered in Punjab. Accountability and data were central to the regimes that were set up. The reform was introduced at the provincial level and cascaded to the district level.

Section 4: Findings

In this section, we present findings about the routines and practices that were introduced by the delivery approach at the provincial and district levels, and we explore the perceptions, attitudes, and beliefs of the bureaucrats at both of these levels. These findings address the second and third cross-case research questions. The presentation of findings is followed by analysis for each of the questions that become the main takeaways for discussion. Each of the sub-sections (4.1 to 4.3) will discuss the functions of the delivery approach (prioritization and target setting, monitoring and use of data, accountability, problem solving and adaptation and political sponsorship), describing what the district executives and the education department staff at the sub-district level have relayed in their interviews with us about the routines and how they were enacted in practice.

The Education Road Map reform introduced a number of routines and management practices at the district and provincial levels: these include target setting, using data to monitor progress on targets, convening regular stocktake meetings for a collective discussion on progress on targets, and incentives (positive and negative for the executive officers). These practices are typical of those associated with delivery approaches around the world (Mansoor et al., 2021). The practices were first introduced at the provincial level, and then the practices cascaded down to the district level. For example, while the quarterly stocktake meetings were convened by the chief minister at the provincial level to monitor district performance, district review committee (DRC) meetings and pre-DRC meetings were convened by the district coordinating officers (DCOs) to review the progress of sub-district units to prepare for the stocktake meetings (described below). In this section we describe the management routines and practices that were introduced at each level.

4.1 Changes in practices and routines

4.1.1 *Prioritization and target setting:*

Priorities (and targets) for the delivery approach introduced in Punjab were set centrally at the provincial level, and these priorities were broadly in line with the national education policy goals (Government of Pakistan Planning Commission, 2013). The priorities for the first phase (2012–2013) of activities for the delivery approach focused on i) setting targets and building routines to monitor progress; ii) improving district effectiveness; iii) improving the quality of teacher training mechanisms; and iv) expanding private school provision through support for education foundations (Javed, 2018). These priorities were expanded in a second phase (2013–2014) to include the improvement of textbooks, strengthening of student assessment, and strengthening of school leadership (Javed, 2018). These priorities were a combina-

tion of outcome and process areas toward which the targets, monitoring, and district level improvements were to lead.

While Punjab had a history of target setting (Government of Pakistan Planning Commission, 2013; National Education Policy, NEP, 2018),⁵ the delivery approach introduced some significant new routines and practices. These changes included setting targets for much shorter periods of time (every three months, or quarterly). The changes also made review of targets routine, broke the targets down by district, and made the district executive responsible for target setting.

The early priorities and associated indicators in 2013 emphasized increasing enrollments, improving missing facilities, and the provision of infrastructure (see quotes in Box 1). Almost all of the district executives and the education department officials that we interviewed at the district level spoke to the heavy focus on enrollment and facilities improvements in the earlier years. Over time, the targets evolved to include student attendance and teacher presence. The interviewees described how the actual list of targets received at the district level was a long one and included many different dimensions, including the number of visits by the administrators and whether data was collected. These indicators determined district performance. This finding from the interviews is corroborated by reports documenting the process of the delivery approach in Punjab: In 2018 Javed wrote, “Much of the early phase of implementation focused on setting up back-end procedures (as tracked by the indicators), such as policies, guidelines, staffing, capacity building, and technical assistance for teachers and district managers, integrating different components of the reform process, and improving financial flows to the district level.” Learning was not made a target until 2016, and a key reason for this was a lack of reliable learning data. The district executives we interviewed spoke about the importance of including learning and teaching quality (indicators of the outcomes of an education system) as part of the tracked targets. One district executive noted that they could not comment with certainty on whether the delivery approach design was well-suited for making improvements on targets with much more complex processes.⁶

⁵ Education sector plans—official documents that guided three- to five-year education planning and policy implementation—included five-year goals which were broad and long-term. Similarly, national and provincial policy documents also included 5- and 10-year targets for education.

⁶ In response to RQ4 we note that it remains undemonstrated whether or not the system of data collection and monitoring linked with high stakes for the district executives could lead to improvements in learning. Exploring the debate about the nature of the targets themselves, i.e. the efficacy of focusing only on input-level indicators, is beyond the scope of our study.

Box 1: Interviewee comments regarding the targets and their evolution

When we were working as district coordination officers, then it was a big role, and there was involvement, and whatever time there was, [that time] was spent dealing with the education sector. The education sector reform program was underway. And [we] had the whole roadmap; there were district rankings. There were multiple indicators, including infrastructure [and] provision of facilities. Another important thing that started was the provision of missing facilities at the schools which had boundary walls, toilets, electricity, drinking water—there was a lot of focus, because as I remember, in 2009, there were a lot of deficiencies. Infrastructure was very deficient. So I think after 2009 there was a lot of focus by the government, and there was funding too. And I think [that] by the time we reached 2016–2017, as I remember I think we had almost 90 percent of the basic facilities in Punjab. At that time there was big focus on the infrastructure deficit. – District commissioner (DC) of the Punjab city of Dera Ghazi Khan

Target setting was mainly regarding the missing facilities. And the next best thing was enrollment targets. We were given targets of 100 percent enrollment. There was a lot of data fudging back then for enrollment, because if the data fell below 95 percent, the AEO would be suspended, and there would be a disciplinary action against them. There would be a lot of data fudging around it, but this was still one of the parameters [on] which everyone would work together. Even I held multiple seminars to make children aware about enrollment. So this is the thing, roughly a snapshot of what I roughly remember. – DC Chakwal

Initially, as a first-year set of targets, those targets were good. They were all around infrastructure, the number of schools, number of teachers present. The district high performers got incentives; low-performing ones would get [a] scolding. Quite serious work was put into this reform. However, after a few years we should have moved to quality indicators. The targets were reasonable, and target setting did not have any issues. However, the targets probably needed to change after the first few years, but this did not materialize. Monitoring systems were set up, [retired] army officers were hired [for data collection], but following that, quality was not focused on. – DC Okara

In my view, [the process of target setting] was quite simple. [The provincial team] started very low. As the districts met the set benchmarks, the targets were increased. [The targets included] student attendance, teacher attendance, cleanliness, drinking water, boundary walls, classrooms, and enrollment. Tests were later introduced as well. – DC Nankana Sahib

The target setting process was top-down. In principle, many district executives accepted the top-down approach to target setting and complied with the guidelines. The majority believe it was appropriate for targets to be set by an external entity and for progress to be monitored externally as well. Target setting was incremental with regard to the initial position for each district. To that extent, the approach to target setting was realistic. The district executives described operational details that were taken into consideration for each district when setting targets, such as whether a district had the budget to meet the targets or not. One district commissioner explained,

Our input was taken. We were asked about how much enrollment [in a district could] be enhanced. In that case, we would tell them that we [could] manage 5,000, 10,000, 20,000. We were asked whether we have funds available, and what we can do with them. So it's not like the targets would come from the top. Because, in that case, if there is no budget, then how will it happen? How much are the salaries of the teachers, and how much can they be increased? So, it was a mixture. For some things, they would take input from us, and for the others, they would use their analysis system. – DC TT Singh

However, the question of whether or not targets are realistic and appropriate relates to the district's sociopolitical and geographical context, as well as its historical development trajectory. For example, the district coordinating officers in Punjab's southern districts (a historically underdeveloped region) found it difficult to make progress on achieving targets due to constraints that were specific to those regions. Districts in the south are not only less developed but also have large rural areas that are far from large cities. If a district needed to hire teachers to address shortages and improve rates of teacher absenteeism, finding local teachers to hire was more difficult in the southern districts. This meant that districts in the south made less progress on achieving their targets of no teacher absenteeism. That said, one district commissioner noted that the districts in the south were given more resources in recognition of the challenges they faced.⁷

We find that the targets forced a simplification of a complex context. There is considerable variation among districts with regard to their level of development as well as geopolitical challenges. The interviewee comments in Box 3 below illustrate how the district executives viewed the importance of context and felt that the context needed to be reflected more clearly in the targets that were set.

Other complexities relate to system-level issues that an oversimplified focus on reductive target indicators is unable to solve. For example, the targets for teacher presence required all teachers to be present in the school. Many schools in Punjab are severely understaffed, with one or two teachers where each school should have at least five teachers. This problem is worse in rural areas and less developed districts that are further from provincial capitals. For a school with only one or two teachers, having a teacher on medical leave the day of a surprise inspection for data collection

⁷ We know that 11 districts in the south were designated as those requiring special focus. For these districts, DFID prioritized development schemes for early childhood education and special education, among other initiatives.

would mean either 50 percent of the staff is absent or the school is closed. Such an incident would result in the school being flagged. One of the district executives told us that to meet the targets set for reducing teacher absenteeism, he banned teachers from taking unapproved holidays. In response the head teachers started sanctioning leaves retrospectively. This example illustrates that some of the responses from the district executives to problems that were identified were of a “firefighting” nature, most likely because of the high-stakes nature of the accountability regime.

Box 3: Comments on how setting targets across diverse contexts led to oversimplification across various dimensions

Perhaps in the provincial headquarters it seemed like the indicators were all right, but when you're in the field, you realize that there is a “one jacket fit for all” approach. The indicators had a number of problems. [...] One thing is that indicators should match [the] ground reality and another [thing is] that quality-related indicators should be part of [what is being monitored]. So if this [is] to be done another time, I would ask for these points to be taken into consideration.
– DCO Chakwal

The PMIU was within the education system and [it] monitored [the entire reform effort], including standard-setting. They would gather all the data centrally in Lahore and send us a PDF with 50 or 100 pages. It was quite an elaborate document created after every review. So it was all done in Lahore. Yes, there were some problems. For example, we learned that [the district of] Okara always performs better, and this was because of its proximity to Lahore. They had better teachers. These issues exist when you are trying to standardize things for a province as big as Punjab. But then again, by and large the standards were fine. – DCO Chakwal 2

This was [the] understanding used at that time. So this was one disadvantage of the deliverology approach. Because there was one target. There were some three to four more experts. They created a set of 70 [student learning outcomes]. We said that no, no, these are a lot.

Trying to lessen them, they came to 18–20. So that became a target of ours. So this was a disadvantage of the deliverology approach, that you had to see visual gains. We had to bring out something that would help us in learning as well because, of course, that was our intention; that this data set will come, and we will use this data set to push them toward this direction. – Member of the technical assistance team

The targets cascaded down from the district to the sub-district level through notifications and documents shared by the provincial offices with the district education departments and the district executive’s officers. As a quote above illustrates, reams of information and instruction traveled from the provincial level down to district levels. Interviews with education department bureaucrats at the sub-district level confirm that the targets were set centrally and the sub-district bureaucrats saw their jobs as being only to execute the directives.

4.1.2 Incentives and accountability:

The core design of the delivery approach was to improve service delivery at the district level by holding the district executives responsible for improvements in key education indicators in their area. To facilitate this, stocktake meetings were introduced. These stocktakes were provincial-level meetings where progress on districts was monitored by the chief minister. Also attending these events were donor representatives; members of the provincial education, finance, and planning bureaucracy; senior political advisors; and the entire group of 36 district executives. All other practices of priority setting, target setting, and the use of data for monitoring fed into the construction of this accountability mechanism that was arguably central to the design of the delivery approach that was instituted in Punjab.

With the delivery approach in Punjab, designed to center around the district executive head at the time, the district coordinating officers (DCOs) were held accountable for their district's performance on the education targets that were prioritized and tracked as part of the Road Map reforms. Our interviewees stated that at the time the delivery approach was instituted, in 2012, the DCOs were “all powerful” at the district level. In the absence of elected local political representatives, the DCOs had the legal mandate to manage the district, and they had financial and administrative autonomy to do so. Furthermore, the district education department reported to the DCO (Husain, 2012; Cheema & Farooqi, 2019).⁸ At the district level, the teams that worked together to deliver the reforms included: the DCO (district executive head responsible for 11 service delivery functions); the executive district officer (EDO, the head of the district education department); and the deputy district education officers (DDEOs). Another team involved with the delivery approach at the district level was the office of the district monitoring officer (DMO). This office was mandated to channel data collected from all schools to the provincial PMIU and manage the many data collectors called the monitoring and evaluation assistants (MEAs). The DMO at the district level reported to the DCO as well as the provincial secretary and the head of the PMIU.

It is important to note that no formal changes were made to the performance evaluation rules of the district executives. Our interviews with district executives confirm that the annual confidential reports—yearly reports serving as the key official records of a bureaucrat's performance, documents that are officially recognized—were not changed to include any links with the Road Map reform, or any other delivery approaches in other sectors. It can be argued that the structure of the bureaucracy and the core set of incentives that the bureaucrats were trained and conditioned to

⁸ This changed in 2016, when a new local government law was passed that brought about a number of changes at the district level, including the mandating of many district management functions to an elected political leader (as opposed to a district coordinating officer, who was a bureaucrat). This limited the financial and administrative autonomy of the district coordinating officer (now called district commissioners) and created the role of district education authorities in the district education department, making this independent from reporting to the district commissioner.

respond to had remained unchanged prior to, during, and after the institution of the delivery approach in Punjab.

A system of incentives specific to the delivery approach was introduced; this system was active during the years of the delivery approach, and it was discontinued afterward. The DCOs (but not other members of the team) for the five top-performing districts **received** salary bonuses after the quarterly stocktake meetings. District heads for the worst-performing districts were transferred to less appealing positions; this was seen as a demotion, or a red mark of sorts. While our interviews for this study have not yielded any concrete examples of transfers directly linked to the delivery approach and stocktake meetings, other reports describe how these transfers occurred (Javed, 2018).

The accountability mechanism for the district executives worked through two channels. With the first channel, the chief minister chaired the stocktake meetings, reviewing targets for each district and asking questions about any lack of progress (Box 4). The second channel involved competition among peers (Box 5). There were 39 stocktake meetings held over the six years that the reform was active. Many of these meetings lasted three to four hours. The data were presented in the form of heatmaps, with the districts that were performing well marked green and those performing poorly marked red. All meetings were chaired by the chief minister. His presence in all of the meetings, referenced by many interviewees, indicates to many that he had full ownership of this reform, and his presence signaled to the bureaucracy that civil servants were to take the initiatives seriously.

Box 4: Comments regarding the stocktake meetings

It used to be a very interesting and difficult time, when those meetings were scheduled after every two months. There was a reform unit in the chief minister's office. They used to make presentations to the CM, where they would show with green and red colors what was on track and what was not. There was a lot of preparation for these meetings. The meetings were taken very seriously, because there used to be a lot of accountability in the meetings by the chief minister—at the highest level for all areas where the targets weren't met or the progress was slow. So that was very effective. Because everyone was on their toes. – DC Dera Ghazi Khan

There was a reward system as well. When the district performed well, the DC would get money. The DC was financially incentivized to perform and push for his district to be better. This was for the first three positions. So what I would do as a DC is I'd pick these young energetic AEOs, identify problematic schools and arrange [for] these AEOs to visit [the] schools and train teachers. ... an entire machinery was coming into sync under these education authorities. I believe that all of Punjab's results improved dramatically. – DCO Chakwal

The chief minister at that time was himself very, very motivated, and he would make it a point to not miss any of the meetings. I'm telling you this as his staff officer, when I used to schedule these meetings, and then when I was on the receiving end, as a DCO. So I wouldn't say it was fear necessarily, but the point is that the quarterly rankings and the performance accountability caused a lot of concern. Education is a matter of passion, and everyone takes it very differently, but usually every DC used to be on their toes because when those top[-performing] three and [the underperforming] three districts were interrogated—[there was a lot of pressure;] they used to be in this performance accountability [mode]. Even DCOs used to be transferred on this basis. – DCO Rawalpindi

When these [rankings] flashed on screen, we were also asked, the political leadership would definitely ask, [Prime Minister] Shahbaz Shareef would ask as well, and below him his chief secretary would as well, and the secretary under him: "what's wrong with you, DC Mianwali? This indicator is very low in your district." Now DC Mianwali is caught there. I was DC Mianwali so I can take my name here. I get firsthand knowledge now that something is wrong. You can say the data played this role. – DC Mianwali

[Chief Minister] Shahbaz Sharif used to ask very difficult questions. "Why aren't there any improvements?" The meetings used to be very long. Only the red [underperforming districts] were reprimanded, and [the green top-performing districts] were appreciated. The ones in amber were left alone. And [for] those who were constantly in the green, he'd say a word of congratulations or give a pat on the back. He would use really, really strong words for those in the red zone. – DCO Chakwal

The constant monitoring by the chief minister and the chief secretary played a very critical role. The stocktake [meetings] used to happen after every three months. The system itself was also set up in a way [that it created an incentive]. Now I am sitting here [in New York, in a new position], there is a WhatsApp group of 40 [bureaucrats] and trade figures [who] are shared in this WhatsApp group, so it adds sort of a peer pressure. So to have a system of ranking which ranks after every three months, is itself an accountability mechanism. Because you [the bureaucrat] have to ensure your future promotions also, you are also going to get transferred. So it was a very big factor that the chief minister himself after three months would chair the meeting, and the top three district executives would get congratulated and the three bottom ones would get reprimanded. – DC Mianwali

Almost all of the district executives we interviewed believed that the stocktake meetings were to be taken seriously and could result in serious consequences for the districts that were constantly ranked in the bottom three or five of Punjab's districts (Box 4). The top three or five districts and the bottom three or five districts received the most attention—the former with bonuses, and the latter through public shaming or transfers. Many of the district executives reported that they wanted to avoid both types of attention and keep their districts in the middle tier. The district executives were keen to show improvements, but they were not keen to find themselves at either extreme end of the rankings. There was, however, a competitive spirit among the district executives.

Box 5: Comments on the competitive spirit among district executive administrators

We were two to four friends, so we would, at night, share our notes, going like, “which position is your district?” Some would say, “I’m in the red,” then say a few curse words that “the EDO got me killed this time.” So in this [way], to some extent, DCOs would coordinate between each other. So that was fear plus passion; it became a routine of ours to run the roadmap for education as well as health. – DCO Nankana Sahib

In our society, a lot of things that drive you [have] to do with convention and respect, and we have drawn the parameters of respect ourselves. We do not want to be punished in front of our colleagues. We don’t take criticism as criticism, we take it as punishment or a bad word. So because that happened, people would work really hard. – DCO Chakwal

The incentives and accountability measures cascaded down the delivery chain in complex and arguably incomplete ways. While some practices cascaded effectively (the meetings for monitoring and high-stakes accountability measures), other practices did not (such as bonuses for good performance). Interviews with individuals involved with the design of the delivery reform say that new routines at the district level were introduced specifically to improve district-level preparedness and participation in the stocktake meetings. These routines included setting up district review committees and pre-district review committees that were held monthly or as needed (Box 6). In the meetings, the district executives reviewed school-level data to identify the schools that were underperforming on various indicators, to either respond to the problems immediately or develop an action plan prior to the stocktake meeting. The district education department staff attended the monthly DRC and pre-DRC meetings, where members of the district bureaucracy could come together to solve problems. Within a couple of years of the approach being instituted, and because of political signaling by the provincial political leadership, there was complete compliance with

the routines and practices that had been introduced and adapted, and compliance continued until the approach was discontinued in 2018.

Box 6: Comments by education department bureaucrats on the DRC and pre-DRC meetings held at the sub-district level

In the roadmap, in my opinion, [the] most effective aspect was the regular [district review committee meetings], because before this, there were no regular meetings, and neither was there anyone to question anyone. But as soon as stocktake [meetings] started, DRCs got regular as well. By this, what happened was that DC sahib had to prepare for the stocktake, and the DRC[s] started happening, so because of this, all work finished [on] time and properly as well. But only DRCs were effective; not meetings on every other day. – DEO Lahore

DRCs ... happened with our DCO, and in this, all the parameters that were there in the roadmap, they were on [a] one-by-one level ... even at [the] school level, they were discussed. [The] DRC [meetings] would happen in the first week of every month. Since the start of [the chief minister's] roadmap, [the] DRC [meetings] also started then. Whatever observations came in [the prior] month from the monitoring dashboard, we would display it ... in the meeting, one by one ... the schools that did not have good performance, action was taken against their heads. In these meetings, we would not do things ourselves; everything was done on the order of seniors, and we would comply with [the orders]. – DEO Kasur

Within [the DRC meeting system], all DEOs and DDEOs were called. ... Wherever our district was lacking, and the weak areas that were there were discussed so that we [could] improve the performance of those areas. [The] DRCs were where we would prepare for the main stocktake meeting. Everyone did not join to solve problems; instead the orders that seniors gave, we would just work on those orders. Pre-DRCs were where we prepared for DRC[s]. DC sahib would not come to this; instead, there was a representative [at the] district level from the chief minister who would attend this meeting. And [they] would give guidelines about what are the weak areas that need work done on them. In this [meeting], missing facilities, teacher [attendance], and student attendance was also discussed. And we were given tips on how to improve the indicators. – DEO 3 Lahore

In these meetings we would see the performance of our areas and our regions, and whatever issues there were, we would form an explanation before the DRC and ... have an answer ready. The EDO would sit with us, and we would look at each and every indicator, and we would prepare everything ... [so] that if a target was being achieved, we would share [our] experience about that, and if we were low in some [area], we would have to give [a] genuine and valid reason for it. In this meeting we would prepare for the DRC as well, because we would have to satisfy the DC as well

Before DRC[s] there [were] pre-DRC[s]. Because the DC would not come to every meeting. He would only come to [the] DRC[s]. So in [the] pre-DRC, we would come ourselves, and we would prepare for the DRC. And we would solve those issues [that were preventing us from meeting] our targets. And in [the] DRC[s], we would have to go and discuss ... these [issues] with the DC. We would check the schools in our area with weak performance in [the] pre-DRC [before] we had to go in the DRC to report to the DC. And he had to report in the stocktake [meeting]. – DEO Lahore

The accountability measures cascaded, but the incentives did not. The main incentives of the approach were structured with the DCOs or the district executives as the key actors to be held accountable at the district level. In reality, the district executives (DCOs) described themselves as coordinating officers only, with their role being to coordinate and oversee the actions taken by the education department. They worked with the teams at the education department—the EDOs, the district education officers (DEOs), the deputy DEOs—who executed the tasks required to ensure that the targets were being met. This education service delivery workforce, or grassroots bureaucrats, were also the ones who were the final and closest link to the schools and teachers in the delivery chain. They did not receive bonuses. The new routines and accountabilities did not change their reporting mechanisms.

BOX: 6a The sub-district teams did not get bonuses

Target setting has been going on since the roadmap reform came. But when it was introduced, that I don't remember exactly. And speaking [of] bonus[es], we never got it, only DCO[s] got it [at the] district level. – DEO 2 Lahore

I think bonuses were only given to DC[s] or EDO[s], but everyone should have gotten them, because [it] was through collective efforts [that the] targets were achieved. So if everyone who [was] involved [had] got[ten] [bonuses], then it would have encouraged them. So I found this least effective, giving the bonus to just the upper management. – DEO Rawalpindi

4.1.3 Data for monitoring:

The delivery approach updated and instituted new practices around data, linking these practices with the overall accountability process. Data was central to the other practices that were introduced, including target setting (Chaudhry & Tajwar, 2021). While Punjab had a well-established mechanism for data collection from schools prior to 2012, the practice of using this data for monitoring progress and linking it to performance accountability was a practice that the Road Map reform introduced and formalized. Our interviews and Javed (2018) found that the practice of streamlining the data, expanding its availability, aggregating the data at the district level, and presenting the heatmaps heightened the importance of the overall accountability processes.

The Project Monitoring and Implementation Unit (PMIU) took on great importance during the Road Map reform years and within the architecture of this reform effort. The PMIU was an office at the provincial level to channel aid funds and reform projects. This office set up monitoring and evaluation mechanisms that allowed

donors to collect information to monitor the progress on donor-assisted projects. The District Monitoring Office, at the district level, oversaw the monitoring and evaluation assistants, who were responsible for collecting school-level data, and reported to the PMIU (Figure 1a). The PMIU in Punjab has acted as a data repository since the early and was the foundational structure for building on a more sophisticated data collection regime that could be used for monitoring targets. As part of the delivery approach in Punjab (Road Map), the basic education management information system (EMIS) and annual school census (ASC) were updated to collect data on an expanded set of indicators, including those linked with attendance. Data to measure learning achievement was added in 2014.

The data were used to construct heatmaps, which showed how districts were progressing toward achieving the targets. The heatmaps were presented at the stocktake meetings. Data were also used during the DRC meetings.

One particular practice at the sub-district level was the flagging of schools at the level of the *markaz*, or cluster of schools. This was done to hold the assistant education officers (AEOs) accountable for the performance of the *markaz*. The AEO is a street-level bureaucrat within the Punjab education system. S/he is responsible for providing support to between 6 to 10 schools in a *markaz*. AEOs are not inspectors; they are mentors and coaches. According to Gulzar et al. (2023), AEOs have the power to censure underperforming school staff and “can be seen as a layer of hierarchy above school principals and thus complete the chain of command from senior management to the school level.” The data on the performance of the cluster of schools that make up a *markaz* were discussed during the pre-DRC meetings, which were chaired by the education department representatives (or DEAs) and held every month. These meetings involved AEOs whose *markaz* were flagged red for underperformance getting censured in front of peers. The AEOs whose *markaz* were not flagged red did not receive any reward.⁹

⁹ In the quantitative component of this study, Gulzar et al. (2023) utilize the administrative data and this practice of flagging at the *markaz* level to estimate the effects of accountability practices on outcomes at the school level.

4.1.4 Autonomy and problem-solving

Many of the district executives we interviewed reported that when held accountable, it was important to be able to have the authority to respond to the problems identified. Up to 2016, due to the 2001 Local Government Act, the district executive had considerable financial and administrative authority and the autonomy to respond to district problems. During this time, district executives could take many actions, and sub-district bureaucrats responded. The 2013 Punjab Local Government Act removed many of these powers.

Box 7: Comments by district executive administrators regarding autonomy needed for effective response

One plus point that we [DCOs] had which the later DCs did not have is I think that as the DCO we used to have financial resources and autonomy. When we used to plan for [the] provision of missing facilities, the DCO was the executive head of the coordination office. We had our own system and our own budget. We used to have the resources. We used to finance our own planning. So we were able to take decisions, while doing school inspections, about school repairs, about enrollments, about boundary walls for girls' schools. So a lot of the development planning at the local level was immediately executed, because the district government had the resources, execution [powers], and approval authorities. – DC Dera Ghazi Khan

At that time, the DCO was not only the district coordination officer; he was also the administrator. There is a big difference. [Being the] administrator means he has the authority of the elected political leadership as well as the district council [which controls the budget]. [The DCO was setting the priorities and also budgeting for them.] You can call this all-powerful—I am not very good with words. In such a position, the Road Map worked very well. now the DC does not have control over finances. Now they can't even fund one school. When I was DCO I could call head teachers and ask what they needed and provide it for them as well. Now the DCs cannot do that. Now the DC cannot meet the targets, [and] he does not have the administrative or financial authority to execute on decisions. – DC Nankana Sahib

The general narrative is that the routines and practices of the Road Map were discontinued in 2018 because the political leadership changed. These interviews seem to suggest that even before the change in political government, legal changes to the authority and autonomy of the district executive meant that the Road Map routines could not have continued as they had. The quick responses from the district executives were no longer possible under the new rules. In other words, the ability of the DCOs to problem solve was severely restricted.

While the bureaucrats speak of teams working together at the district level, we

have found little evidence of truly collaborative bottom-up problem solving that is delinked from the main purpose of reporting during accountability meetings. While the DRC meetings were being held with the intent to discuss and solve problems, the bureaucrats felt they were being told, not asked, what to do. One DEO told us:

We were just given orders; we were not asked. If there was any issue as well, then seniors were told; if someone would get punishment or if a solution was given they would not ask us. We would only comply with orders of the seniors. We were told that this is the issue and this is the solution ... and they would ask for answers and would write them explanations. And would further give answers. – DEO 2 Lahore

To summarize, we have so far provided details practices and routines at the core of the delivery approach. We identified several key takeaways about the impact and sustainability of the delivery approach's practices. First, these practices generated a lot of activity and compliance; meetings were organized as mandated, and data from long-established management information systems were used for monitoring. However, many of the corrective responses to the problems identified during these years were of a firefighting nature. The use of granular data for monitoring made it possible to identify schools that were causing the district averages on various indicators to come down. During DRC meetings, these schools were identified, and teams were deployed with immediate effect to address the problems. Most of the solutions were short-term (Box 8a). Second, it is unclear whether the practices continued once the political backing receded. Interviews with district executives and many of the grassroots education department bureaucrats reveal that the practice of target setting and holding meetings to monitor progress are no longer held. Stocktake meetings at the provincial level have not been held since change of government in 2018, and the incentives and bonuses for the district executives were discontinued as the reform effort concluded in 2018.

BOX 8a: Comments from grassroots bureaucrats about the continuation of DRC meetings after the reform effort ended

After 2018, this format [ended]. Indicators, targets, red light[s], green light[s]—all finished. Review meetings kept happening, but the same level of focus did not remain. ... with a change of governments the system [concluded] as well. ... the focus decreased. The funding allocation for infrastructure after 2018 declined. We don't see the same type funding any more that we used to see before. – DC Dera Ghazi Khan

[The] change that came was [that] the non-salary budget (NSB) fund that was given shook up the education roles. [Even very senior bureaucrats do] not know how to make a quotation, [or] how to do [a] comparative statement. I would say this, that there is no change that came in the ways of district management. – DCO Kasur

After 2018, all these practices are next to nothing, since the reform is finished, would ... practices [introduced as part of the roadmap] happen? – DEO Lahore

The ways of management are the same; work is still happening on quality education, and improvement, [it's] just that now the accountability is not the same as before; regular meetings don't happen now. – DEO Rawalpindi

Since the roadmap reform ended, such meetings have not happened. We don't have too many meetings now. When there was [the chief minister's] roadmap, we used to have a lot of meetings but after the reform finished, the meetings have decreased. Sometimes the CEO gets called or DC gets called and [discussions are] held regarding issues. – DEO 3, Lahore

Third, the practices introduced with the reform effort triggered some responses from the system that were unintended (Box 8b). We were told by interviewees about attempts to bypass the reporting and accountability mechanisms and incidents of gaming (manipulating or “fudging”) the data to make the outcomes appear better than they were.

Box 8b: Comments regarding unintended consequences of the delivery approach practices

The targets were received from the top. They were definitely defined, and sometimes they were unrealistic. It used to happen that there would be fudging sometimes, and [those who did the fudging] would also get caught. But to your specific question about whether we could go back to the [chief minister] or the provincial government—we absolutely could. But my context was slightly different; I had worked as a staff officer, so I used to be direct [with the chief minister]. I also had experience related to health.¹⁰ – DC Rawalpindi

[Manipulation of the data] happened because the meetings were at a very high level, so the stakes were very high as well. [The chief minister] would chair the meeting himself, and those [responsible for the lowest-performing districts] would be questioned and scolded. ... this was a high-level meeting and ... in order to avoid falling at the bottom of the rankings, they would do data manipulation. – DC Okara

4.2 Attitudes, perceptions, and behaviors

Our third research question asks, “how did attitudes and behaviors change [with the delivery approach] among managers at each level?” We answer this question by drawing on perceptions of the district administrative executives as well as grassroots bureaucrats regarding the effectiveness of the routines that were introduced. We interpret “attitudes” to mean what the bureaucrats thought about the routines and practices that were introduced. The perspective of the executive bureaucrats was that the incentives were good for many of the routines, including the target setting and stocktake meetings. The bureaucrats felt that the public accountability at the stocktake meetings fostered a competitive spirit, which drove the executive heads to respond to the challenges that were identified in their districts regarding education service delivery. The use of data for monitoring was perceived to be a good practice that provided visibility on progress toward the targets (Boxes 9 and 10). On the other hand, the grassroots bureaucrats perceived that the number of meetings and high-stakes nature of the meetings added considerable stress to their professional lives. They spoke of a culture of fear and also of there being too many meetings.

¹⁰ The delivery/roadmap approach was also introduced in the health sector.

Box 9: Comments from grassroots bureaucrats regarding delivery approach practices

This [large number of meetings] was least effective because in a week we should have at most two meetings, but the meetings happening every other day, we would get quite disturbed and it would impact us as well. – DEO Lahore

The least effective were the limitless meetings ... we would move away from the main point of focus and we would start focusing on unimportant things. – EDO Lahore

The stocktake meetings and DRC stocktake meetings, I found them somewhat least effective in my opinion ... because of these meetings there was fear, and there was this tension that had an effect on our health and our personal life as well. And targets that were given sometimes were such that they were unachievable and not realistic. So I found these things a little negative. The rest was fine, the performance of schools improved a lot because of this. – DDEO Kasur

The stocktake meetings and DRC meetings were probably the least effective part of the reform in my view. . As I said before, there was a real sense of fear and foreboding due to these meetings. There was a tension that also impacted our health and our personal lives. And sometimes we were given targets that were not achievable nor realistic. So these things I found a bit negative. The rest of it is that school performance improved because of these practices – DDEO Kasur

Least effective were the meetings and the stress that was because of them, in my opinion. – EDO 2 Lahore

Everything [in terms of effectiveness] was 50/50. Because when these meetings used to happen, we used to forget the real purpose, and we would get busy trying to fulfill these tasks [that we were asked to do]. The real purpose is to teach the children, and that would get neglected. The tension of the meetings and monitoring was the least effective [aspect of the reform] because the entire work week would go into preparing for these meetings. – DDEO 2 Rawalpindi

The incentive that we used to get was least effective. The reason being that when the whole team was working hard and when the incentives are given to one person, ... for the rest there was no motivation. In [district] Attock we did this once that there was Shakeel sahib over there, he was DC there. So when we got an incentive once, the DC said that this is not for me, and he called the entire team. So, he called everyone at the Tarbela Dam and he gave everyone a very nice dinner. This increased everyone's motivation level. – DEO, Rawalpindi

At the sub-district level, the new routines that were introduced generated a great deal of activity and compliance. Meetings were organized as mandated. At the provincial and district level, data were used for monitoring. Steps were taken by the district education department and overseen by the district executive to meet targets, including building boundary walls and toilets, reducing teacher absenteeism, and holding many meetings. It is unclear whether these activities were sustained, though changes in behavior happened for the time that the reforms were being implemented. Interviewees at the sub-district level seemed almost surprised to hear the question about continuance of practices, because in their minds, the reform was introduced for a finite period of time (Box 8a).

As noted earlier in the section on practices, bonuses were only given to the district executives (the lower tiers were excluded), while the accountability regimes did trickle down—making the system high-stakes yet unbalanced for the teams that helped the district executives comply with provincial demands and achieve targets.

The interviews reveal that considerable activity was generated at the sub-district level and there was compliance at these tiers as well. However, there was also a culture of fear regarding the consequences if outcomes did not improve, regardless of whether there was compliance with the process. Multiple interviewees describe their considerable stress due to the meetings and compliance requirements during the years of the delivery approach (Box 9). Overall, there is a sense of lack of ownership of the delivery approach reform at the grassroots tier.

4.3: Perceptions regarding the effectiveness of routines and the potential impact

Full analysis of the impact of the delivery approach on school-level outcomes is included in the 2023 paper of Gulzar et al., which provides rigorous econometric analysis of the administrative data from Punjab. However, in the interviews with the district executives, as well as the sub-district education department representatives, we asked questions regarding their views about the impact of the delivery approach. This section includes a description of the responses.

Interviews with the executive district administrators suggest first that the routines introduced as part of the delivery approach in Punjab created bandwidth for greater focus on education service delivery. Some interviewees attribute the improvements in infrastructure and other inputs to the introduction of these routines:

Now I do not have qualitative or quantitative data so I can only tell you my impression. My impression is that attendance improved; teachers started coming to school. We assumed that if the teacher is showing up in school, that they are also teaching something to the children. Apart from that, school facilities really improved. Children started receiving books. Otherwise the books were going unclaimed. So these kinds of things [improved]. – DC Chakwal

The most effective [thing] was that we improved teacher and student attendance. But we ignored the quality of education. For instance, when I would go visit a school, the attendance there was 90 percent, and the teachers would be present too, so two of our indicators were fulfilled. However, what happened was the teacher would [sometimes] sit in the class and they would not teach anything; this would affect quality education a lot. – DEO 2 Lahore

The regular meetings provided some space for deliberation, which allowed matters of service delivery and structural issues at the district level to be discussed.

Box 10: Perceptions of bureaucrats regarding the effective aspects of the Road Map

The benefit of the roadmap was that our shortcomings were becoming clear. ... Micro-level differences in service delivery became apparent. The practices of target setting and breakdown by districts were useful, because they highlighted intra-district variations in service processes. For example, in [district] Faisalabad, in a town, an advanced machine for ultrasound was working very well, because the people there [have the training and education to make the best use of the machine]. Whereas in Mianwali, another district, even nurses weren't showing up to the [basic health unit]. ... these practices began to illuminate for the district heads and provincial leadership where the problems lay and the different reasons underlying the problems. – DC Mianwali

While there was attention [on how to improve education and health services, the provincial leadership] did not have any foundations on which to make decisions. The decisions were not informed decisions. So with the roadmap type of thing[s], for the first time, there was some benchmarking available. The leadership knew that in Lahore, there is 20 percent [of the] population that is out of school; in Rajanpur there is 25 percent. Gradually, [a] comparison was drawn [across districts]. It became clear that even in the provincial capital there was a problem, which was being driven by overpopulation. Rajanpur also had an out-of-school children issue, but the problem was completely different: it was so underdeveloped that it had not succeeded in getting children from homes into schools. Different incentive designs were needed for different districts. – DC Mianwali

First of all the benefit [that both the roadmap approach and the stocktake meetings] had was that the district leadership could no longer keep [education services] on the back burner. Because there are usually many things to look after, we are usually on a war footing. There are many priorities. So then education [services]—which has a long term effect but no immediate effect—get missed... The biggest benefit of the stocktake [meetings] was that education services remained in focus. There used to be at least one three- to four-hour meeting per month at the district level about education administration, in both Rawalpindi and Mianwali. All the relevant district officers used to be present as well. – DCO Mianwali

Compliance with the routines that were introduced improved certain observable indicators, such as infrastructure. However, it was not demonstrated over the six years of the reform program's enactment that the delivery approach could successfully improve the more complex process aspects of education service delivery, such as teaching and learning. Indicators on teaching and learning were always referenced as long-term priorities, to be addressed once the foundational improvements were made. There is considerable international work being done to tangibly measure effective teaching practices. There may be room within such a system to evolve to include such indicators. However, it remains to be seen whether top-down accountability-led compliance mechanisms will improve the more intangible indicators that are about outcomes and not inputs.

4.4 Political economy factors affecting the adoption and operation of the delivery approach

Political economy analysis on Pakistan's context includes factors related to politics (local and national) as well as larger public service governance structures and issues that are important for improving social service delivery outcomes and the general welfare of citizens. These factors explain the appetite for reform (including investments made to strengthen governance structures), the preparedness for reform, and the nature of the reforms adopted in a region. To that end, the factors identified in political economy literature on Pakistan are important for our analysis of the institutional and political factors that impede or promote the adoption of delivery approaches in different contexts.

Hasnain (2008) argues that there is a correlation between political party structures and the quality of service delivery in education (measured by expenditure patterns, such as the relative emphasis on non-salary expenditure). In provinces with higher degrees of factionalism,¹¹ the fragmentation and polarization of political parties is higher. There were also greater incentives for patronage, expenditures were less focused on development, and there were greater problems in the governance sector. The quote below is representative of what the development and policy experts in Sindh say about ethnic fragmentation and the fissures it creates, weakening electoral demands and dividing people along ethnic lines. The tensions between the politics of Karachi, Sindh's provincial capital, and those of the rest of Sindh provide an example of the impasses that have developed due to political fragmentation.

¹¹ By factionalism we mean division within political parties, a forward or splinter bloc. Higher levels of factionalism would imply a less cohesive political party.

I think this [rural–urban disparity in development in Sindh] mainly has to do with the ethnic politics in Sindh; the us vs them situation between the political parties representing the Urdu-speaking urban cities and the [rest of the] Sindhi-speaking province. There are too many old conflicts between these two parties. The Urdu-speaking urban political parties have some political clout in other cities, like Hyderabad and Sukkur. But they do not have any importance in the rest of Sindh, nor are they interested [in building a presence] or being involved. So I think the ethnicity divide made sure that such reforms that were scalable or replicable were not [implemented]. Because there is a very evident conflict between [urban and rural Sindh]. – Development expert who served in Sindh

These interviews reveal that such dynamics make Sindh a much more fragmented polity, making political consensus around ambitious tough reforms that need to pull the system together more difficult.

Higher levels of political competition are linked with higher levels of economic growth (Chaudhry & Mazhar, 2019). Large portions of the Sindh polity have faced very little political competition, as compared to Punjab. One of the policy experts we interviewed in Sindh linked the lack of electoral incentives in Sindh for the political parties with the slow pace of reform. Punjab, however, has experienced rising levels of electoral competition between two large political parties, of which one has adopted and supported the delivery approaches (see the origin story).

In a country that is plagued nationally by the mismanagement of government institutions, Sindh performs the worst among the provinces, in terms of the rules and procedures followed for processes like government procurement and the recruitment of government servants, including teachers (Hasnain, 2008).¹² Recruitment based on patronage rather than merit is linked to staff absenteeism, and higher degrees of political interference weaken political and managerial accountability mechanisms. While elite capture and political patronage are responsible for Pakistan’s comparative lack of development and economic growth even among regional and income tier peers (Easterly, 2001), Sindh—as compared to other provinces—has a longer and more deeply documented history of elite capture, political interference, and political patronage at all tiers of governance (provincial, district, and local). While Punjab did not fare much better than Sindh in Hasnain’s analysis of distortions in management practices in the 1990s and early 2000s, Punjab undertook a series of reforms in the 2000s and 2010s that were explicitly aimed at reducing political interference in teacher hiring. Furthermore, our interviews with development experts (economists, political economists, and education sector specialists) in Sindh reveal that the sociogeographic organization of rural communities in Sindh present particular challenges in improving delivery and realizing efficiency gains.

¹² Hasnain notes, “In Sindh only 58 percent of the sampled cases of recruitment, 38 percent of procurement, and 41 percent of site selection followed the required criteria. By contrast, in [the North West Frontier Province (NWFP), now called Khyber Pakhtunkhwa (KP)] these figures were 91 percent [between 1998 and 2001]” (p. 136).

Section 5: Conclusion

Punjab introduced top-down data-driven accountability reforms in education with the intent to improve service delivery. The reforms introduced a set of routines within the provincial and district governance structures typically associated with delivery approaches, and these routines included target setting, collective measurement and monitoring of progress through high-level meetings, and explicit and visible political ownership. Considerable political capital was utilized to operationalize the ambitious reform plan, to convene the bureaucracy, to orient it to adopt the functions of delivery approaches, and to sustain these functions over an extended period of time. The approach was housed and operationalized within the provincial bureaucracy by a group of national and international stakeholders (including donors), and the approach was enacted through the district bureaucracies. Management practices changed in response to the introduction of the reforms, and considerable activity was generated at the provincial as well as district level. These activities were focused primarily on using data for monitoring the progress of districts on targets that were set at the provincial level. New routines included regular meetings for reviewing progress. At the provincial capital these meetings were called stocktakes, while at the district levels they were called pre-DRC and DRC meetings. The district executive officers were chosen as the key actors who were responsible for progress at the district level, and they were either penalized or rewarded based on progress. Additionally, one specific practice included flagging clusters of schools at the lowest rung of service delivery to hold the frontline bureaucrat in the delivery chain accountable.

Our tracing of the enactment of the delivery approach in Punjab reveals that the routines and practices that were introduced directed the bureaucrats to focus on education more than other services at the district level. Target setting and the use of data at the school level to monitor districts performance were broadly considered to be practices that helped improve district-level governance mechanisms on education. Targets evolved over time, with the first generation of targets focusing primarily on inputs and processes, such as infrastructure and attendance, and later iterations focused on students learning. However, learning outcomes did not become a target until 2016. The district executives that we interviewed stated that in their opinion, the focused and increased attention to specific targets helped improve certain inputs, such as infrastructure and attendance. We conclude that top-down accountability approaches are likely to result in a lot of activity and compliance, which may help in achieving results on basic targets that are easy to observe and deliver. There is little to no evidence that more complex aspects of education service delivery, such as the

teaching and learning process inside the classroom, can be improved via high-stakes top-down accountability approaches.

We find that many of the new practices and routines disappeared as the political sponsorship receded. The responses to top-down accountability measures seem more likely to be ad hoc, short-term in nature, and resemble firefighting than they are to result in a sustained culture of collective problem solving. With top-down accountability approaches that are pushed through by leveraging political capital (where available) and forcing the system to respond, the responses do not necessarily mean the practices have been internalized or are fostering higher levels of motivation, particularly at the grassroots levels of bureaucracies. We conclude that unless there is ownership and understanding of the reform effort at the middle and grassroots levels, changes to practices and routines may disappear and reforms will not be sustained.

We find that the cascade of the reform effort from the central to lower units happened in arguably incomplete or in unintended ways. Some of the features of the reform scattered and transformed as they moved from the provincial to the district and then to the sub-district level. For example, monitoring and accountability routines motivated the executive bureaucrats at the district level to compete with one another to bring about improvements. However, the same routines created a culture of fear further down the chain at the sub-district level. We conclude that the appeal and ownership of the reform, and the ways in which bureaucrats interact with it changes through levels of the cascade. We recommend that the design of delivery approaches consider the ways in which the street-level bureaucrats receive, interact with, and adapt to the reform. This will have implications for the sustainability of the reform.

One implication of our study is that the ways bureaucratic practices interact with reforms remain a salient and important question in all types of reforms. The practices and routines that the bureaucracy adopts and adapts have implications for the implementation, outcomes, and sustainability of reform programs. It is therefore valuable to study the attitudes, perceptions, behaviors, and practices of bureaucrats at the middle as well as ground levels, taking into account the longstanding structures (standard operating procedures) that govern bureaucratic practice. Any delivery approach that succeeds and endures over time needs to take into account the ways bureaucratic practices are affected at various tiers through the delivery chain down to the school level, and the intended and unintended incentives the approach creates.

References

- Adelman, M., & Lemos, R. (2021). *Managing For Learning: Measuring and Strengthening Education Management in Latin America and the Caribbean*. World Bank Group. <https://documents1.worldbank.org/curated/en/664871619676586259/pdf/Managing-for-Learning-Measuring-and-Strengthening-Education-Management-in-Latin-America-and-the-Caribbean.pdf>
- AEPAM (Academy of Educational Planning and Management, Ministry of Federal Education and Professional Training, Government of Pakistan). (2020). *Pakistan Education Statistics 2017–2018*. <http://library.aepam.edu.pk/Books/Pakistan%20Education%20Statistics%202017-18.pdf>
- Aiyar, Y., & Bhattacharya, S. (2016). The Post Office Paradox: A Case Study of the Block Level Education Bureaucracy. *Economic & Political Weekly*, 61–69. <https://www.epw.in/journal/2016/11/special-articles/post-office-paradox.html>
- Alam, A. (2015, May 1). The state of teacher recruitment in Pakistan. *The Express Tribune*. <https://tribune.com.pk/story/973856/the-state-of-teacher-recruitment-in-pakistan>
- Andrabi, T., Das, J., Khwaja, A. I., Vishwanath, T., & Zajonc, T. (2007). *Learning and Educational Achievements in Punjab Schools (LEAPS): Insights to inform the education policy debate*. World Bank. <https://documents1.worldbank.org/curated/en/997531468090281061/pdf/437500WP0PAK021Box0327368B01PUBLIC1.pdf>
- Andrabi, T., & Macdonald, H. I. (2019, May 10). *The Analytical Angle: Why Haven't Past Education Reforms Had More Effect?* Rise Programme. <https://riseprogramme.org/blog/analytical-angle-past-education-reforms-effect>
- Araya, M., Rolleston, C., Rose, P., Sabates, R., Tiruneh, D., & Woldehanna, T. (2023). *Understanding the Impact of Large-Scale Educational Reform on Students' Learning Outcomes in Ethiopia: The GEQIP-II Case*. RISE Programme Working Paper Series 23/125. https://doi.org/10.35489/BSG-RISE-WP_2023/125
- ASER (Annual Status of Education Report) Pakistan. (2018). *National Education Policy Framework 2018*. [https://aserpakistan.org/document/2018/National Eductaion Policy Framework 2018 Final.pdf](https://aserpakistan.org/document/2018/National_Eductaion_Policy_Framework_2018_Final.pdf)
- ASER (Annual Status of Education Report) Pakistan and Idara-e-Taleem-o-Aagahi (ITA). (2015). *Annual Status of Education Report*. [http://aserpakistan.org/document/aser/2015/reports/national/ASER National Report 2015.pdf](http://aserpakistan.org/document/aser/2015/reports/national/ASER_National_Report_2015.pdf)
- ASER (Annual Status of Education Report) Pakistan and Idara-e-Taleem-o-Aagahi (ITA). (2021). *Annual Status of Education Report*. [http://aserpakistan.org/document/aser/2021/reports/national/ASER report National 2021.pdf](http://aserpakistan.org/document/aser/2021/reports/national/ASER_report_National_2021.pdf)
- Chaudhry, A., & Mazhar, U. (2019). Political competition and economic policy: empirical evidence from Pakistan. *Economics*, 13(1). <https://www.degruyter.com/document/doi/10.5018/economics-ejournal.ja.2019-1/html>
- Chaudhury, N., Hammer, J., Kremer, M., Muralidharan, K., & Rogers, F. H. (2006). Missing in Action: Teacher and Health Worker Absence in Developing Countries. *Journal of Economic Perspectives*, 20(1), 91–116. <https://www.aeaweb.org/articles?id=10.1257/089533006776526058>
- Chaudhry, R., & Tajwar, A. W. (2021). The Punjab Schools Reform Roadmap: A Medium-Term Evaluation. In *Implementing Deeper Learning and 21st Century Education Reforms* (pp. 109–128). Springer, Cham. https://link.springer.com/chapter/10.1007/978-3-030-57039-2_5
- Cheema, A., & Farooqui, A. *Strategic Assessment of Punjab's 2019 Local Government Reforms in Punjab*. IDEAS Working Paper No. 01–17.

Cilliers, J., Fleisch, B., Prinsloo, C., & Taylor, S. (2020). How to Improve Teaching Practice? An Experimental Comparison of Centralized Training and In-Classroom Coaching. *Journal of Human Resources*, 55(3), 926–962.

Dawn. (2010, October 11). 18th Amendment and education. <https://www.dawn.com/2010/10/11/18th-amendment-and-education-by-dr-shahid-siddiqui/>

Easterly, W. (2001). *The Political Economy of Growth Without Development: A Case Study of Pakistan*. Paper for the Analytical Narratives of Growth Project, Kennedy School of Government, Harvard University. https://williameasterly.files.wordpress.com/2010/08/9_easterly_thepoliticeconomyofgrowthwithoutdevelopmentpakistan.pdf

Gazdar, H. (1999). *Policy failure, political constraints and political resources: Basic education in Pakistan*. Working Paper (5). Asia Research Centre, London School of Economics and Political Science. http://eprints.lse.ac.uk/25204/1/_lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_Asia%20Research%20Centre%20Working%20Papers_ARCWP05-Gazdar.pdf

Geven, K., & Hasan, A. (2020). *Learning Losses in Pakistan Due to COVID-19 School Closures: A Technical Note on Simulation Results*. World Bank. <https://openknowledge.worldbank.org/server/api/core/bitstreams/7b7c4865-231a-5e5d-9ce4-0be66c6a675d/content>

Government of Pakistan Bureau of Statistics. (2021, July). *Pakistan Social and Living Standards Measurement (PSLM) Survey (2019–20) National / Provincial / District*. <https://www.pbs.gov.pk/publication/pakistan-social-and-living-standards-measurement-survey-pslm-2019-20-provincial>

Government of Pakistan Bureau of Statistics. (Retrieved April 17, 2022). *Pakistan Social and Living Standards Measurement: Brief on PSLM Survey [2010–2020]*. <https://www.pbs.gov.pk/content/pakistan-social-and-living-standards-measurement>

Government of Pakistan Planning Commission. (2013). *Pakistan Millennium Development Goals Status Report*. <https://www.bisp.gov.pk/SiteImage/Misc/files/23.pdf>

Government of the Punjab. (2019). *Punjab Education Sector Plan 2019/20–2023/2024*. <https://www.globalpartnership.org/sites/default/files/document/file/2020-19-Pakistan-Punjab-ESP.pdf>

Government of the Punjab Local Government & Community Development Department. (2013). *Punjab Local Government Act, 2013*. <https://lgcd.punjab.gov.pk/system/files/PLGA%202013%20amended%20upto%20%2012.10.2015.pdf>

Government of the Punjab School Education Department. (2013). *Punjab School Education Sector Plan 2013–2017*. http://aserpakistan.org/document/learning_resources/2014/Sector_Plans/Punjab%20Sector%20Plan%202013-2017.pdf

Government of Sindh School Education & Literacy Department. (2019). *School Education Sector Plan And Roadmap for Sindh (2019–2024)*. <https://www.globalpartnership.org/node/document/download?file=document/file/2020-19-Pakistan-Sindh-ESP.pdf>

Gulzar, S., Ladino, J. F., Mehmood, M. Z., & Rogger, D. (2023). *Command and Can't Control: An Evaluation of Centralized Accountability in the Public Sector*. DeliverEd Initiative Working Paper.

Habib, M. (2013). Education in Pakistan's Punjab: Outcomes and Interventions. *Lahore Journal of Economics*, 18, 21–48. <http://lahoreschoolofeconomics.edu.pk/EconomicsJournal/Journals/Volume%2018/Issue%20SP/02%20Masooma%20Habib.pdf>

Hasnain, Z. (2008). The Politics of Service Delivery in Pakistan: Political Parties and the Incentives for Patronage, 1988–1999. *The Pakistan Development Review*, 47(2), 129–151. <https://www.jstor.org/stable/41260826>

- Hayat, M. (2020). The Bureaucrat's Wage: (De)Valuations of Work in an Irrigation Bureaucracy. *Anthropology of Work Review*, 41(2), 86–96. <https://anthrosource.onlinelibrary.wiley.com/doi/10.1111/awr.12207>
- Hertzberg, A., Liberti, J. M., & Paravisini, D. (2010). Information and Incentives Inside the Firm: Evidence from Loan Officer Rotation. *The Journal of Finance*, 65(3), 795–828. <https://onlinelibrary.wiley.com/doi/10.1111/j.1540-6261.2010.01553.x>
- Honig, D. (2022). Managing for Motivation as Public Performance Improvement Strategy in Education & Far Beyond. *CID Faculty Working Paper Series*. Center for International Development at Harvard University. <https://www.hks.harvard.edu/centers/cid/publications/faculty-working-papers/managing-motivation-public-performance>
- Javed, U. (2018, July 12). Implementing complex reforms: The Roadmap approach in Pakistan. *Pakistan's Growth Story*. <https://devpakblog.com/2018/07/12/implementing-complex-reforms-the-roadmap-approach-in-pakistan/>
- Javed, U. (2021). *Performance Evaluation of DFID's Punjab Education Sector Programme (PESP2)*. E-Pact: Oxford Policy Management and Itad. https://iati.fcdo.gov.uk/iati_documents/90000014.pdf
- Khan, A. M., & Mirza, M. S. (2011). Implementation of Decentralization in Education in Pakistan: Framework, Status and the Way Forward. *Journal of Research & Reflections in Education (JRRE)*, 5(2), 146–169. <https://ue.edu.pk/jrre/articles/52005.pdf>
- Mansoor, Z., Qarout, D., Anderson, K., Carano, C., Yecaló-Teclé, L., Dvorakova, V., & Williams, M. J. (2021, July). A Global Mapping of Delivery Approaches. *DeliverEd Initiative Working Paper*. Education Commission and Blavatnik School of Government. https://educationcommission.org/wp-content/uploads/2021/07/A-Global-Mapping-of-Delivery-Approaches_DeliverEd_July2021.pdf
- Nabi, I. (2013, September). Two Social Protection Programs in Pakistan. *Lahore Journal of Economics*, 18 (Special E), 283–304. <https://ideas.repec.org/a/lje/journal/v18y2013ispp283-304.html>
- Pepinsky, T. B., Pierskalla, J. H., & Sacks, A. (2017, May). Bureaucracy and Service Delivery. *Annual Review of Political Science*, 20, 249–268. <https://www.annualreviews.org/doi/abs/10.1146/annurev-polisci-051215-022705>
- Rashid, A., Awan, A. A., Muzaffar, I., Butt S., Aslam, A., Khan, A. S., & Dar, F. (2014). *Education Monitor: Reviewing the quality of key education inputs in Pakistan (2014)*. Society for the Advancement of Education (SAHE). <https://www.sahe.org.pk/services/education-monitor-reviewing-the-quality-of-key-education-inputs-in-pakistan/>
- Rasul, I., Rogger, D. O., & Williams, M. J. (2018, September). *Management and Bureaucratic Effectiveness: Evidence from the Ghanaian Civil Service*. World Bank Policy Research Working Paper, (8595). <https://documents1.worldbank.org/curated/en/335361537384686708/pdf/WPS8595.pdf>
- Rasul, I., Rogger, D., & Williams, M. J. (2021, April). Management, Organizational Performance, and Task Clarity: Evidence from Ghana's Civil Service. *Journal of Public Administration Research and Theory* 31(2), 259–277. <https://academic.oup.com/jpart/article/31/2/259/5974047>
- Saldana, J. (2009). *The Coding Manual for Qualitative Researchers* (1st ed.). SAGE Publications.
- Siddique, M. A., Tagar, A. A., Khoso, Z. A., & Tagar, H. K. (2019). Role of Infrastructure to improve quantity and enhance quality of School Education in Sindh Province of Pakistan. *Advances in Social Sciences Research Journal*, 6(3), 198–206. <https://doi.org/10.14738/assrj.63.6289>
- Spencer, S. (2011). *Visual Research Methods in Social Sciences: Awakening Visions*. Routledge.
- Williams, M. J., Leaver, C., Mansoor, Z., Qarout, D., Bilous, A., Mundy, K., Asim, M., & Bell, S. (2021, April).

Delivery approaches to improving policy implementation: A conceptual framework. DeliverEd Initiative Working Paper. Education Commission and Blavatnik School of Government. <http://educationcommission.org/wp-content/uploads/2021/04/Delivery-Approaches-to-Improving-Policy-Implementation.pdf>

Woo-Cummings, M. (1999). *The Developmental State*. Cornell University Press.

World Bank. (2019). *Implementation Completion And Results Report (IDA 5218-PK) For The Second Sindh Education Sector Project*. <https://documents1.worldbank.org/curated/en/290501563299133095/pdf/Pakistan-Second-Sindh-Education-Sector-Project.pdf>

World Bank. (2020). *Cost-Effective Approaches to Improve Global Learning: What Does Recent Evidence Tell Us Are “Smart Buys” for Improving Learning in Low and Middle Income Countries?* <https://www.worldbank.org/en/topic/teachingandlearning/publication/cost-effective-approaches-to-improve-global-learning>

World Bank. (Retrieved December 20, 2022). *Education Statistics (EdStats): Country at a Glance – Pakistan*. <https://datatopics.worldbank.org/education/country/pakistan>

World Bank. (Retrieved March 14, 2022). *Population, total—Pakistan Data*. <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=PK>

Appendix 1

Operations, Prioritization & Targets	Monitoring & Use of Data	Accountability & Incentives	Autonomy: Problem Solving and Adaption
<p>1. Operations</p> <p>Whether there are standard processes for operational management, policy and reform implementation at the district level.</p> <p>Are these procedures lean and efficient?</p> <p>The intent is to capture the extent to which there are ad hoc elements.</p>	<p>4. Monitoring</p> <p>Captures information about mechanisms and routines in place for data collection, and use of data for planning and course correction; where these routines originate(d), and their sustained use.</p> <p>Including practices related to:</p>	<p>5. Accountability</p> <p>What constitutes good and bad performance for DCs and the structures to which they respond. The ways in which DA-linked accountability mechanisms functioned.</p>	<p>7. Flexibility and Innovation</p> <p>Captures information on:</p> <p>The extent to which the district office can choose practices to meet targets</p> <p>The extent to which there is space for the district (or sub-district) staff to introduce innovative practices</p>
<p>2. Priority setting</p> <p>Whether there are clear priorities for the district; what is the role of the district commissioners (DCs) office in realizing these priorities; what is the DCs' knowledge of these priorities; DCs' perceptions of how relevant these priorities are for their district context.</p> <p>Also captures the ways in which these priorities are translated into KPIs, targets for achievement.</p>	<p>Data collection</p> <p>Data management</p> <p>Progress tracking</p> <p>Stocktake meetings</p>	<p>6. The Road Map</p> <p>Asks questions specific to the roadmap that are not covered in other sections, including those related to the political economy lens. Questions related to the role of donors in the introduction and adaptation of the delivery approach, the role of the nongovernmental actors.</p> <p>Questions about before and after.</p>	<p>8. Feedback loops</p> <p>Captures information on the existence and use of mechanisms for deliberation on performance trends, problems with implementation, and routine challenges</p>
<p>3. Targets: Setting and communication</p> <p>Practices related to target setting and communication of these targets to sub-district level. Whether targets are aligned to goals, are realistic and achievable.</p>			<p>9. Problem Solving</p> <p>Captures information on approaches to problem solving and where these originate</p> <p>10. Adaptation</p> <p>Captures information on whether targets (and approaches to implementation) are adapted in consultation with stakeholders</p>

Appendix 2: Coding framework

Master Code	Definition (as stated in section definition)	Sub-code: Pre-defined (Deductive)	Sub-code: Emergent (Inductive)
Personal History			
Operations	Records information about the extent to which there are standard procedures for operational management, policy implementation, reform implementation, and financial and human resource management. Are these documented, or are there ad hoc elements? Are these processes lean and efficient?	Roles and responsibilities Evolution Administrative Planning and policy	
Priority Setting	Captures whether there is a clear set of priorities for the district, what is the role of the DC office in realizing these priorities, what is the DC's knowledge of these priorities? Their perception of how relevant these priorities are for their district context. Captures the way in which these priorities are translated into KPIs and targets for achievement.	Priorities exist Process of priority setting Involvement in priority setting Link with education goals Relevance of priority KPIs to operationalize priorities	Degree of variation in priorities; Overlap with own priorities (meaning the DC's own or context district)
Target setting	Records information about practices related to target setting and communication of these targets to the sub-district level	Department has targets (code can be 1/0) Target setting process - Evolution? - Top-down / Participatory? Relevance Realistic Measurable Communication to/with/at sub-district - DRC meetings	Target setting process - Predates Road Map Communication to/with/at sub-district - Gaming
Monitoring	Captures information about mechanisms and routines in place for data collection, and use of data for planning and course correction	Progress-tracking routines - Level - Data used - Variation at school level Role of DEA Performance - Informs budgets - Informs allocations	

Autonomy and Discretion	For each of the task types indicated above, this section will ask about the extent to which the officers have autonomy (could ask about exercising here or separately).	Discretion <ul style="list-style-type: none"> - New work practices - Operate outside rules of business - Initiating change Steps to identify problems Adaptation of reform <ul style="list-style-type: none"> - Road Map routines Rejection of reform <ul style="list-style-type: none"> - Road Map routines 	
Accountability incentives		Good performance – example Poor performance – example	

List of acronyms

Acronym	Definition
AEO	assistant education officer
AEPAM	Academy of Educational Planning and Management (Ministry of Federal Education and Professional Training, Government of Pakistan)
ASC	annual school census
BISP	Benazir Income Support Program
DA	Delivery approach
DC	district commissioner
DCO	district coordinating officer
DDEO	deputy district education officer
DEA	district education authority
DEO	district education officer
DFID	Department for International Development (UK)
DMO	district monitoring officer
DRC	district review committee
EDO	executive district officer
EMIS	Education Management Information System
GB	Gilgit-Baltistan (province of Pakistan)
KP	Khyber Pakhtunkhwa (province of Pakistan)
KPI	key performance indicator
MEA	monitoring and evaluation assistant
NTS	National Testing Service (Pakistan)
PESP	Punjab Education Sector Programme
PLGA	Punjab Local Government Act (2013)
PMIU	Programme Monitoring & Implementation Unit
PR	Pakistani Rupee
SAT	student achievement test (Pakistan, elementary school learning assessment)
SED	School Education Department