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Paying for Education Outcomes at Scale in India

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ABSTRACT

With a flourishing social enterprise ecosystem and an appetite among NGOs and policymakers for testing new solutions, India is playing a leading role in its use of innovative financing for development. One such innovative tool is an impact bond, which is a type of outcome-based financing structure where upfront capital is given to service providers by investors. While evidence on outcome-based financing in education, and impact bonds specifically, is still emerging, there are key lessons to be drawn for the application of such tools to education in India.

Three impact bonds have been contracted in India to date, with two in the education sector. In the first—the Educate Girls Development Impact Bond (DIB)—the UBS Optimus Foundation provided upfront capital to Educate Girls to get out-of-school girls into the classroom and improve learning outcomes for boys and girls. After three years, the DIB had overachieved its enrollment and learning targets, and the investment was repaid by the Children's Investment Fund Foundation (CIFF).

The second project in education, the Quality Education India (QEI) DIB brings together four service providers—Gyan Shala, Kaivalya Education Foundation, the Society for All Round Development, and Educational Initiatives (Mindspark)/Pratham Infotech Foundation—to implement a range of interventions with the goal of improving learning outcomes over a four-year period through 2022. UBS Optimus Foundation provided upfront capital for the interventions, and if metrics are successfully achieved, the Michael and Susan Dell Foundation, together with a group of outcome funders convened by the British Asian Trust, will pay for the outcomes.

This study seeks to place these two education DIBs in the context of the Indian education landscape, and to investigate the overall potential and limitations of outcome-based financing for education in India. While impact bonds are by no means the solution to all the challenges the education system faces, judicious use of the tool has the potential to focus financing on impact, promote effective interventions and service providers, and reinforce the use of data and evidence in decisionmaking.

INTRODUCTION: LEARNING CRISIS

> *"The Right to Education Act focusses on input requirements for schools that have little bearing on learning outcomes, which have deteriorated alarmingly. Learning must be our central focus, with all schools, public and private, responsible for delivering a minimum level of basic skills to every child." (Rajan & Banerjee, 2019)*

We are facing a global learning crisis. Across low and middle-income countries, just four out of ten children will be on track to gain secondary level skills by 2030, and in lower middle-income countries, only 88% of children are completing primary school (Education Commission, 2016). More than half of children in India are in "learning poverty," or unable to read and understand a simple text by the age of 10 (World Bank, 2019a), and nearly three quarters of rural children in Grade 3 are unable to read at grade level (ASER 2019a).[1]

The 2018 World Development Report identified three key dimensions of the learning crisis: poor learning outcomes, particularly for the most disadvantaged; "immediate factors," which include unprepared learners, unskilled or unmotivated teachers, ineffective inputs, and weak management; and "deeper causes," or technical and political challenges (World Bank, 2018). The consequences of this crisis are far-reaching and costly to society. It is well established that low educational attainment has a direct negative impact on individual earnings, income distribution, and economic growth (Hanushek & Wößmann, 2007).

1 The ASER reading assessment uses a Std (Grade) 2 level text, which can be used as a proxy for "grade level" reading at Std (Grade) 3 (ASER, 2019a)

In the last decade, the Indian government has made strides in recognizing the importance of education for the country. India's flagship program for achieving universal elementary education, Sarva Shiksha Abhiyan (SSA), focused on four goals: access; bridging gender and social gaps; retention and attendance; and quality (Joint Review Mission, 2015). The Right of Children to Free and Compulsory Education (RTE) Act, 2009 placed a legal obligation on government to ensure that children aged 6-14 attend and complete elementary education, at no cost (MHRD, 2019).[2] Recently, the government also expanded its focus beyond elementary education: In 2018, the SSA (along with two other existing programs) was incorporated into a new program, Samagra Shiksha, for improving pre-primary to senior secondary education (Bordoloi & Kapur, 2019). A results framework was outlined to make the program outcome-oriented, including increasing enrollment, retention, learning outcomes, and infrastructure (MHRD, 2018).

India has made progress in school enrollment: elementary enrollment was at 97% and secondary at 80% in 2015-16, compared to 95% and 52% in 2005-2006 (Government of India, 2018). While public schools serve the majority of India's children, private school enrollment has risen from around 10% in 1996 to more than 40% in 2016-17 (Unified District Information on School Education data, cited by Central Square Foundation, 2019).[3] In rural areas, the number of children out of school has fallen, and the gender gap in access has narrowed (ASER, 2019b). Nevertheless, inequalities remain in school enrollment: In the age groups 11-14 and 15-16, rural girls are less likely to be in school (ASER, 2019a).

Learning quality is low for children currently in school (Sahni, 2015), and the rate of stunting, a strong correlate of poor learning outcomes in the future, is nearly 40% for children under five indicating that the next generation of children are on a similar trajectory (World Bank, n.d.). According to the most recent ASER report on rural India, with data from 2018 (2019a), 27% of children in Grade 3 are at grade level in reading, or able to read a Grade 2 level text, while only 28% can subtract. For basic reading skills, female students outperformed males in the age groups 8-10 and 11-13, while for basic arithmetic, girls performed less well than their male counterparts in all age groups 8-16. A key challenge is the wide variety of abilities within the same grade or age group (Banerji, 2019; Muralidharan, 2018).

Disparities remain between states, with large gaps in learning levels: While across rural areas of India 50% of students in Grade 5 can read a Grade 2 level text, in the state of Himachal Pradesh, the rate is 77%, compared to 34% in the state of Jharkhand (ASER, 2019a). Learning outcomes are also lower for the poorest students: Alcott & Rose (2017) find that students from the poorest households were 16 percentage points less likely to be able to subtract than those in the wealthiest households. These gaps also widen over the course of primary school, and the authors find that differences in learning trajectories between boys and girls are mostly driven by differences among disadvantaged households—with disadvantaged girls performing least well by Grade 5.

Quality education is crucial to serving the needs of India's young population: Of a total population of 1.3 billion, more than a quarter are aged 0-14 (World Bank, n.d.). Muralidharan (2018) argues that the most important education outcome in India is the achievement of universal functional literacy and numeracy by the end of Grade 3 by 2022, and outlines the need for investments in universal preschool, supplemental instruction for children falling behind, and independent measurement and monitoring of progress toward this outcome.

In 2017, the government of India established a committee to draft a new National Education Policy (PRS, 2019). In 2019, the committee published the draft of this policy, with a range of key objectives, including emphasizing the importance of early childhood care and education, foundational literacy and numeracy,

2 The RTE Act (The Gazette of India, 2009) also outlines the duties of the central and state governments, which are concurrently responsible for funding the obligations outlined in the Act. The responsibility for developing a national curriculum framework falls to the central government, along with standards for teacher training, and technical support to state governments on areas such as innovation and capacity building.
3 This average masks sizable differences between states (ASER, 2019b).

reintegration of school dropouts, the development of 21st century skills, as well as rigorous teacher preparation and transparent recruitment, inclusive and equitable education, and the appropriate integration of technology (Committee for Draft National Education Policy, 2019).[4] The policy has received praise in particular for its focus on foundational literacy and numeracy. In a recent interview, Ashish Dhawan, Founder and Chairman of Central Square Foundation, commented: "If we were to focus and get this one thing right, i.e., ensure all children have foundational literacy and numeracy skills, this in itself would have a tremendous impact on the education system." (The EDge Editorial Team, 2019). A review of the national curriculum will soon begin, examining content and teaching in schools (Pratim Gohain, 2019).

An increased emphasis on education outcomes is also evident: The think tank NITI Aayog, in partnership with a range of actors including the Ministry of Human Resource Development (MHRD), the States and Union Territories (UTs), and the World Bank, recently released a report on the School Education Quality Index (SEQI), which tracks education data across the States and UTs, to enable the assessment of policy interventions (NITI Aayog, 2019). The index tracks a range of indicators across two main categories: outcomes–which includes learning, access, infrastructure and facilities and equity outcomes—and governance processes aiding outcomes. The report finds high levels of variation in overall performance by geography, as well as improvements for most states and UTs between 2015-16 and 2016-17. Harnessing the momentum of the new draft national education policy, and the increased availability and focus on education outcomes data under initiatives such as SEQI will be critical to the future success of India's education system.

EDUCATION FINANCING

While education policies and strategies are essential to tackle the learning crisis, they are not enough on their own. Dedicated and guaranteed funding to education systems is critical. Recent estimates suggest that education financing in low- and middle-income countries needs to rise from the current spending of $1.2 trillion a year to $3 trillion by 2030 to achieve the ambitions of the "Learning Generation," outlined by the Education Commission (Education Commission, 2016). Globally, governments are the key funders of education, providing 79% of education spending, followed by 20% from households, and just 0.3% from donors—although in low- and middle-income countries, the donor percentage is 12% and 2%, respectively (UNESCO, 2018).

The government of India has budgeted Rs 949 billion for education for the fiscal year 2019-20, or nearly $14 billion[5]—an increase of over 13% compared to the previous year (PTI, 2019). With public expenditure on education at 3% of GDP in 2018-19 (budget estimate) and accounting for 10.6% of government spending (Government of India, 2019),[6] these figures are between the average amount spent on education in low-income countries and emerging market economies but well below the 5.2% of GDP spent by advanced economies (Gaspar et al., 2019). It is also lower than the 4-6% target for domestic education financing set in the Education 2030 Framework for Action (UNESCO, 2016). The majority of government expenditure on education in India is at the state level, which provides an estimated 75% of the total public expenditure on education (Committee for Draft National Education Policy, 2019).

[4] The draft policy has recently been finalized in a shorter document, which still needs to be cleared by the Union Cabinet and Parliament (Roy Chowdhury, 2019). Reported changes include a shift in position on the extension of the RTE Act from early childhood to Grade 12; the previous version strongly supported this extension, while in the final version the extension "will be considered" (News 18, 2019).
[5] Converted using oanda.com exchange rate on July 6, 2019
[6] Education expenditure in the budget includes Education, Sports, Arts, and Culture

The draft education policy recommends a gradual increase in education investment to 20% of public expenditure over 10 years and restates the existing commitment to raising public expenditure on education to 6% of GDP. The draft report also highlights the importance of increasing the efficiency of spending, as timely disbursement of funds is currently a challenge (Committee for Draft National Education Policy, 2019). Tables A1 and A2 in Annex A outline estimated additional public expenditure required across the education system. The report estimates that additional annual expenditures on schools, including teacher costs, will amount to a further 2% of public spending annually, with another 1.3% needed for food and nutrition and 1.4% for early childhood education.

Other sources of financing for education include the private sector and international aid. In a recent survey of impact investors in India, education and agriculture were found to be the most common sectors for investing (Ravi et al., 2019). Malani (2016) estimates that social enterprises in the education sector in India attracted approximately $52 million in equity deals from impact investors between 2010-2015.

In India, certain companies are mandated to spend 2% of their three-year average net profit on corporate social responsibility (CSR) (Tripathi, 2019). In the 2017-18 fiscal year, the amount of CSR spent on education was Rs 47 billion (approximately $723 million)[7] (Ministry of Corporate Affairs, 2019). In the same year, a survey of the top 100 listed companies found that education received the highest CSR expenditure, and together with health made up 51% of the total (KPMG, 2018). CSR finance also offers a potential source of outcomes funding—stakeholders in India have been engaged in efforts to allow for the use of CSR escrow accounts to hold outcomes funding over multiple years. A recent amendment[8] to the Companies Act would make this possible: It would allow for CSR funds to be held in an escrow account for 3 years which could facilitate their use for outcome-based financing (ET Bureau, 2019).[9]

Despite the need for increased financing outlined above, globally, international aid for education has fallen, and now amounts to just $10 per child in developing countries (Education Commission, 2018) In 2017, of a total of more than $12 billion in education official development assistance (ODA) disbursed globally (OECD, n.d.), India received the third largest amount, following only Bangladesh and China. In this year, $464 million was provided in ODA to India for education, down from $634 million in 2016, marking a four-year low (UNESCO data, cited in Nanda, 2019).

All of these trends together underscore that government—and particularly state government—is the key player in education financing in India, and the draft National Education Policy calls for increased spending to achieve its vision.

[7] Converted using oanda.com exchange rate on March 31, 2018
[8] It is worth noting that the CSR amendments are currently on hold (Srivats, 2019).
[9] If the money is not spent after this time, it must be transferred to a government CSR fund.

OUTCOME-BASED FINANCING IN EDUCATION

> *"We need more resources for education, but we must also utilize existing resources more effectively. We need to raise new resources, cut waste, and ensure that every dollar delivers real learning."* (Education Commission, 2016, p.3)

In addition to the need for *more* financing in education, international actors have also recognized the need to ensure that existing financing is *better spent*. As outlined above, in India, input requirements and increases in school access have not translated into quality learning for all students. More financing is only part of the story, and paying for inputs does not always lead to impact—particularly if resources are not deployed effectively. For example, teacher absenteeism alone costs India's education system around $1.5 billion per year (World Bank, 2016). Increasing data availability—for example through efforts such as SEQI—has the potential to increase accountability, and direct attention toward both over and underachieving areas. Linking payment to the achievement of outcomes is another strategy to ensure that education financing is directed toward interventions that achieve meaningful goals.

While paying for results is not a new concept—it has been used widely in infrastructure and military procurement, as well as in development finance primarily in the health sector (Gustafsson-Wright, 2017)—a broad spectrum of outcome- or results-based financing (RBF) are increasingly being used in the education sector globally. At the World Bank, for example, the Results in Education for All Children (REACH) program funds RBF programs in 23 countries (Lee & Medina, 2019), while the Global Partnership for Education (GPE) allocates 30% of country-financing based on the achievement of results (Global Partnership for Education, 2019). In the UK Department for International Development (DFID)'s Girls' Education Challenge (GEC), 15 out of 37 projects used a payment by results mechanism, which in most cases tied financing to education outcomes (Holden & Patch, 2017).

A variety of payment by results (PbR) mechanisms are possible—these vary according to who takes on the risk of failure to deliver results (Gustafsson-Wright, Gardiner & Smith, 2016). Within education, this could include results-based aid (RBA), where the government is the primary risk holder, teacher performance pay, where teachers are rewarded based on performance, or conditional cash transfers to families, where cash benefits are tied to the fulfillment of specific conditions. It also includes RBF to service providers or local governments delivering education interventions.[10] It is important to note that while all of these PbR mechanisms fall under the same category, one should exercise caution in applying conclusions from one type of PbR to another.

Historically, aid agencies typically disbursed contingent payments based on physical outputs or laws, while more recent RBA programs have transferred funds from one government to another contingent on outcomes, or outcome proxies (Perakis & Savedoff, 2015). Within education, there are a limited number of RBF programs at the national level that have been evaluated (Lee & Medina, 2019) making it difficult to draw conclusions about their impact. The evaluation of the DFID RBA program for lower secondary education in Ethiopia (Cambridge Education, 2015) was unable to conclude that the program increased educational performance. Funding was contingent on two outcomes: increases in students sitting the Ethiopian General Secondary Education Certificate Examination, and increases in students passing the exam, with differing amounts for boys and girls and for emerging and non-emerging regions. While DFID made payments of £15.6 million (approximately $24 million),[11] and the number of students sitting for and passing the exam increased over three years, "none of the estimated impacts on the numbers of either boys or girls sitting the EGSECE were either statistically significant or reasonably attributable to the RBA pilot" (Cambridge Education, 2015, p.iii). Several key recommendations emerged from this

[10] There are a variety of terms used within the field to denote financing contingent on results, and while these distinctions can be helpful, we use results-based financing, outcome-based financing, and payment by results interchangeably throughout the report as umbrella terms. See for example Results for Development (2016) for a discussion of this topic.
[11] Converted using oanda.com conversion rate for December 1, 2014

evaluation, including that local ownership and buy-in of innovative approaches such as RBA are essential, and the importance of getting the payment metrics right. Similarly, the evaluation of DFID's RBA program in Rwanda (Upper Quartile, 2015) found mixed evidence: While approximately 60% of RBA funds were distributed, the evaluation found that at least some of the increases in enrollment would have happened without the program, and that the baseline and endline surveys used to measure an increase in English language proficiency were not comparable to each other.

Results for Development (2016) analyzed 24 outcome-based aid (OBA) education projects where at least some performance risk for achieving payment-linked results lies with the service provider.[12] The organization found that OBA may be most appropriate within education subsectors where there are user fees and/or costs are high, and where service providers have greater levels of autonomy, such as with private sector providers. It also found that government support for private provision may be more forthcoming in non-compulsory subsectors which the government cannot provide for free at scale, and therefore may exclude children and young people from poor families; additionally it found that OBA can be used to target services to marginalized populations. Using these criteria, the subsectors identified as most promising were early childhood development, vocational training, and higher education.

An examination of DFID's Girls' Education Challenge (GEC), in which providers were mainly non-governmental organizations, found that the use of PbR highlighted the role of rigorous evaluation, which in turn focused attention on the key learning outcomes—benefiting both PbR and non-PbR projects (Holden & Patch, 2017). However, the report found that the use of PbR did not incentivize innovation—in fact, the mechanism may have made providers more risk averse. It was also unclear how far PbR drove adaptive management: While there was some evidence that PbR encouraged adaptation, programs that did not have a PbR component were just as likely to make project changes to achieve outcomes.

Another potential use of RBF in education is teacher performance pay. In India, Muralidharan and Sundararaman (2009) investigated the use of two types of teacher performance pay—a group bonus for improved outcomes at the school level, and an individual teacher bonus for improved outcomes by their students–in government primary schools in Andhra Pradesh. They found positive effects of both types of bonus payments on math and language outcomes. While the effects were similar in the first year, in the second the schools with individual-level incentives performed better. In parallel, the study also randomly assigned two other sets of schools to receive increased inputs, and found that the schools with incentives outperformed those with just increased inputs.

The World Bank's REACH trust fund examined the use of RBF interventions in education at four different levels: RBF for teachers, students and families, schools, and governments (Lee & Medina, 2019). The results were mixed: While incentives to students and families such as cash transfers have boosted attendance, teacher incentives did not consistently improve education outcomes, and evidence on the success of performance-based grants to schools is limited. The report investigated the use of RBF for government through a survey of staff at development agencies: Respondents considered political commitment the most important factor for successful RBF, and thought results focus was the key advantage of RBF over input-based financing.

[12] Results for Development (2016) define OBA as "A form of results-based financing in which service providers are contracted to improve education access and/or quality, especially for disadvantaged populations, whereby service providers assume some degree of performance risk for specific outputs/outcomes upon which payments are contingent." (p.1)

While much of the research explored in this section comes from outside of India, there are useful lessons emerging from the global evidence base. For example, the mixed findings from the literature on paying for results in the education sector highlights the need for further research and perhaps even further innovation in the design of PbR mechanisms. There remains much to learn about the various types of PbRs and their intricacies. A greater understanding of incentives among various actors within the education system, governance issues such as management capacity, and other bottlenecks that could impede desired education outcomes is needed.

In the following section we explore impact bonds, which have explicitly sought to address some of the shortfalls of traditional PbR models.

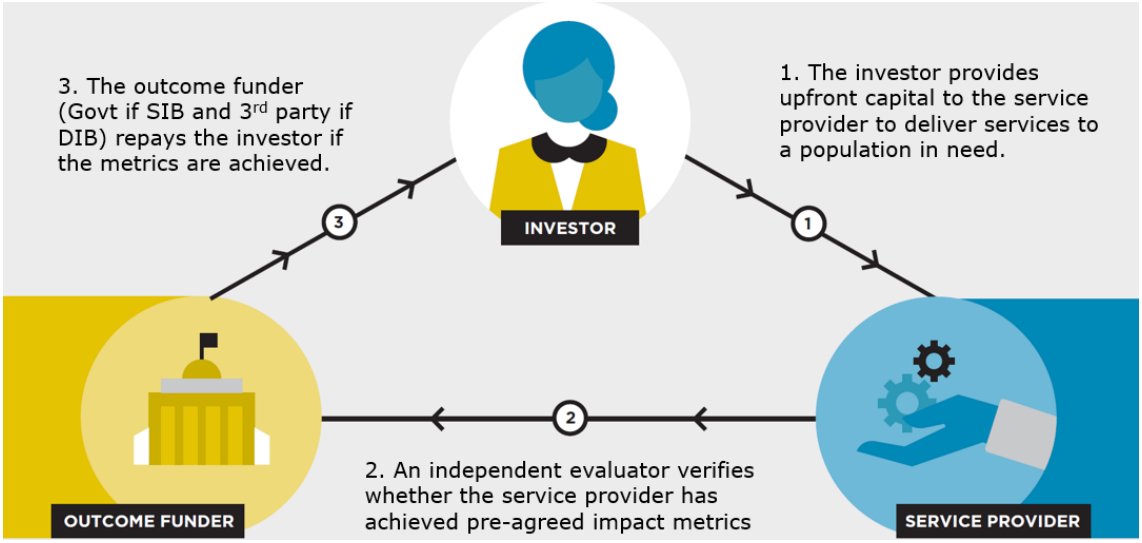
INTRODUCTION TO IMPACT BONDS

Impact bonds are a variation of the traditional payment by results model, where private investors provide upfront capital, which is repaid conditional on the achievement of pre-determined metrics.

In high-income countries, where impact bonds were first developed, the outcome funder is typically the government—these deals are called social impact bonds (SIBs). In low- and middle-income countries—where government may not be ready to engage as an outcome funder—third parties, such as donors or foundations, may play this role; these contracts are called development impact bonds (DIBs). Nevertheless, SIBs could just as well be utilized in low- and middle-income countries, and in fact middle-income countries are beginning to use them.

The structure has three key players: a service provider, who provides the intervention; an investor, who offers upfront capital; and an outcome funder, who delivers payment if results are achieved. The complexity of these deals means that an intermediary organization often helps structure the deal, raise capital, and provide performance management. See Figure 1 for more details.

Figure 1: Typical impact bond structure



As of November 1, 2019, 170 impact bonds had been contracted across 31 countries. The majority of these deals (155) are in high-income countries, with just 15 contracted in low- or middle-income countries. Of these 15, six are SIBs, and nine are DIBs. Most of the impact bonds globally are in social welfare and employment, although several have also been contracted in health, education, criminal justice, and environment and agriculture.

Globally, just 19 impact bonds have been contracted for education. Several of these have focused on early childhood interventions, such as the provision of preschool or home visitation programs. Others have included wrap-around or supplementary services, such as academic support outside of school, mentoring, social support, or a focus on a particular set of skills, such as computer programming. Interventions have also tended to focus on specific target populations, such as children from low-income families or disadvantaged areas.

Impact bonds in India

In India, three impact bonds have been contracted so far: two for education, and one for maternal and newborn health. The Educate Girls DIB was the first impact bond contracted in India, as well as the first DIB for education worldwide. Contracted in 2015, the service provider Educate Girls implemented interventions to boost enrollment for out-of-school girls and to improve learning outcomes. The evaluator, IDinsight, found that the project had enrolled 768 of the out-of-school girls identified at baseline, or 92%, against a target of 79%. The intervention achieved student learning outcome gains equivalent to 160% of the target (IDinsight, 2018). See Table 1 for more details.

Table 1: Educate Girls DIB[13]

Outcome metrics	Student enrollment and learning outcomes (improvement in Hindi, math and English levels on the ASER test, relative to the control group)
Beneficiaries	Students in Grades 3-5 in 166 treatment schools (7,318 students were in Grades 1-5 in treatment schools at baseline)
Upfront capital committed	$270,000
Maximum outcome funds	$422,000
Investor returns	IRR of 15%
Timeline	Contracted 2015 Ended 2018
Key milestones	One outcome payment disbursed in final year
Validation methodology	Pre-post test using validated administrative data (enrollment) Randomized controlled trial (learning outcomes)
Service providers	Educate Girls
Outcome funders	Children's Investment Fund Foundation
Investor	UBS Optimus Foundation
Intermediary	Instiglio
Evaluator	IDinsight

The Utkrisht DIB for maternal and newborn health (see Annex B for further details), and the QEI DIB were both contracted in 2018. While the Educate Girls DIB was a small project, with just over 7,300 children served by the intervention, the Utkrisht and QEI DIBs are on a much larger scale. The Utkrisht DIB has the potential to reach 600,000 pregnant women in Rajasthan (Gustafsson-Wright & Boggild-Jones, 2017), while the QEI DIB aims to improve literacy and numeracy outcomes among more than 200,000 students in Grades 1-8 in Delhi, Gujarat, Maharashtra and Uttar Pradesh. The three Indian DIBs serve over 90% of the targeted beneficiaries across all contracted impact bonds in developing countries.

The Educate Girls DIB was intended to be a proof of concept for the innovative model, while the QEI DIB (Table 2) is considerably more ambitious in its remit. Instead of just one service provider, there are four—each implementing different intervention models, at different price points. One of the wider aims of the DIB is to build a market for outcomes and to identify the cost per student. With more information about the costs of achieving education outcomes, funders have the potential to increase accountability and efficiency, ensuring that financing is directly targeted at resolving the learning crisis. The investor, UBS Optimus Foundation, has provided $3 million in upfront capital to the service providers, which will be recycled into the project each year if outcomes are achieved. The consortium of outcome funders has agreed to pay up to $9.2 million in outcome funds over a period of four years.

[13] Boggild-Jones & Gustafsson-Wright (2018a)

Table 2: Quality Education India DIB[14]

Outcome metrics	Learning outcomes: improvement in literacy and numeracy outcomes relative to comparison group Payment metric: number of beneficiaries multiplied by improvement in learning
Beneficiaries targeted	200,000 students in Grades 1-8
Upfront capital committed	$3 million upfront, with capital recycled each year if outcome metrics are achieved
Maximum outcome funds	$9.2 million over 4 years
Investor returns	IRR of 8% if targets met
Timeline	Start of services: April-June 2018 Contracted: August 2018[15] Yearly results released: July 2019, 2020, 2021 Final results: July 2022
Key milestones	Performance reviewed annually, with outcome payments disbursed each year
Evaluation methodology	Quasi-experimental design—learning improvements measured relative to a comparison group
Service providers (see Table 4 for further details)	Gyan Shala SARD KEF Educational Initiatives (Mindspark)/Pratham Infotech Foundation*
Outcome funders	Michael and Susan Dell Foundation (MSDF) and consortium of funders convened by the British Asian Trust (Tata Trusts, Comic Relief, Mittal Foundation, British Telecom)
Investor	UBS Optimus Foundation
Intermediary	Dalberg
Evaluator	Gray Matters India

*Year 2 onward

The intervention models in the QEI DIB include the direct provision of education services, as well as teacher and principal training and technology interventions (Table 3).

[14] Boggild-Jones & Gustafsson-Wright (2018b)
[15] Contracts finalized after implementation started

Table 3: Intervention details

	Location	Intervention	Total beneficiaries targeted	Number of schools
Gyan Shala	Ahmedabad and Surat, Gujarat	Operation of learning centers in slums. Teachers are provided a daily guide that follows the national curriculum.	Students in Grades 1-3	340 learning centers per year
Society for All Round Development (SARD)	North Delhi	Remedial education provided by SARD facilitator to 30 students per grade in math and Hindi (direct model), along with teacher training sessions.	Students in Grades 3-5	30 schools
	North Delhi**	Math and Hindi training for teachers focused on pedagogy and teacher misconceptions. Trainers work with most teachers in a school, providing 6-8 thematic sessions throughout the year (indirect model).	Students in Grades 3-5	100 schools in year 1
Kaivalya Education Foundation (KEF)	Ahmedabad, Gujarat	School leadership development program, for one principal, one literacy teacher, and one numeracy teacher per school.	Students in Grades 1-8	216 schools
	Mumbai. Maharashtra*		Students in Grades 1-8	70 schools
Educational Initiatives (Mindspark)/Pratham Infotech Foundation*	Lucknow, Uttar Pradesh	Students exposed to Mindspark computer-based adaptive learning software for math and English in school learning labs. Teachers are given support on data, literacy and assessments.	Students in Grades 1-8	55 schools

*Services commence in year two of the DIB
**Teacher training intervention discontinued after year 1

After the first year of implementation, 40% of schools in the DIB met or exceeded their learning targets, and both Kaivalya Education Foundation (KEF) and Gyan Shala overperformed relative to their targets. The Society for All Round Development (SARD)'s teacher training intervention did not achieve the learning outcome goals and will continue only with their remedial education program for the remainder of the DIB. In year two onwards, Pratham Infotech Foundation will deliver Educational Initiatives' Mindspark adaptive learning program.

A range of areas for impact bond projects in India have potential, including clean fuel and sanitation facilities in rural areas, increased power reach throughout India, and slum rehabilitation programs (Impact Investors Council, 2016). Grameen Impact has provided upfront capital for three "SDG Impact Bonds" through its Grameen Outcome Accelerated Lending (GOAL) scheme, including a project for women's empowerment and livelihoods (implemented by ChildFund India), another for youth skilling and

employment with Acumen Fund[16] (implemented by five social enterprises), and a final project for women's economic empowerment (implemented by Jaipur Rugs Foundation) (Grameen Capital, 2019). The SDG Impact Bonds differ from the three contracted DIBs discussed above: for these projects, Grameen Impact provides the upfront capital to service providers, and outcome metrics are set, before outcome funders are finalized, which is intended to reduce contracting delays. In each case, Grameen Impact and implementers will work together to engage outcome funders once the project is underway, and if outcome funders are not identified, the service provider repays Grameen Impact the principal and a reduced interest rate. Other projects in the works in India include a DIB for cancer care.

Other methods of innovative financing have already been tested in India, including the use of variable interest loans to school finance companies. The Michael and Susan Dell Foundation has provided loans to the Indian School Finance Company (ISFC) and Varthana, which in turn provide loans to low-fee private schools. If student learning outcomes improve, the schools can receive a rebate on their loan, and the financing companies pay back lower rates of interest (Rangwala, 2018).

This section has explored the existing impact bonds market in India; while the lessons from the first three contracted impact bonds will be highly valuable for the future of outcome-based financing, the current evidence base on impact bonds in India is relatively thin due to the youth of the market. The next section will explore the global evidence base, with particular attention to how these lessons apply to the Indian context.

[16] Acumen Fund will provide a first loss deficiency guarantee

EXISTING EVIDENCE ON IMPACT BONDS

Impact bonds are still a relatively nascent tool; with only about nine years of use in high-income countries and four in developing countries, there remains much to learn about their design, implementation, and appropriate application. Nevertheless, this near-decade of experience has provided a number of learnings about the potential and limitations of the tool. This evidence base can be leveraged to understand whether, how, and under what conditions, impact bonds make sense for funding education outcomes in India. This section will explore 10 common claims about what impact bonds can achieve and their potential challenges. Lastly, this section will review facilitating factors for the use of impact bonds in the education sector.

10 common claims about impact bonds

Brookings research has explored 10 areas around the potential of impact bonds over the past five years and examined evidence from the market thus far. Our 10 common claims (see Table 4 below) about impact bonds emerged from a review of the literature about what impact bonds have the potential to achieve (Gustafsson-Wright, Gardiner & Putcha, 2015). We currently find evidence for five out of the 10 claims.[17]

Table 4: Testing the ten common claims

Yes	Maybe/too soon to say	No/not yet
Invest in prevention	Reduce risk for government	Crowd-in additional private funding
Focus on outcomes	Sustain impact	Achieve scale
Drive performance management		Support experimental interventions
Incentivize collaboration		
Build a culture of monitoring and evaluation		

First, many of the impact bonds currently contracted do **invest in preventive services, or services that reduce negative social outcomes and remediation costs over the longer term** (Gustafsson-Wright, Gardiner & Putcha, 2015). In the social welfare sector, for example, this includes family support programs to keep children with their families. In employment, there are a number of impact bonds focused on trainings for vulnerable young people who are out of work. In India, thus far impact bonds have focused on education and maternal and newborn health—sectors where interventions have the potential for considerable long-term private and public benefits. The emphasis on education is reflected not only in the two education DIBs mentioned, but also in the emergence of the Education Outcomes Fund for India (EOF), a project which seeks to raise $1bn to finance education outcomes. The EOF identified five initial areas of focus for outcome-based financing in India: early childhood education, primary education, secondary education, inclusive education, and school to workforce transition.

[17] Note that in our first report, Gustafsson-Wright, Gardiner and Putcha, 2015, we also state that we find evidence for 5 out of the 10 claims. In a subsequent report, Gustafsson-Wright et al. 2017, we include "reduce risk for government" in the demonstrated evidence section, resulting in six claims in this category. As the market developed, however, we have shifted this claim to an intermediate category of "maybe/too soon to say."

The evidence gathered thus far also supports the claim that impact bonds have the potential to **focus attention on outcomes**, and to **incentivize collaboration** by aligning interest around these outcomes. In the UK, where impact bonds have the longest history, Carter et al. (2018) identify two SIBs where collaboration emerged through stakeholders coming together to meet the complex needs of beneficiaries: the first SIB for criminal justice in Peterborough prison and the West London Zone SIB for children and young people. Another example is in South Africa, where a SIB for youth employment brought together a broad range of actors to secure quality employment for excluded young people: After an initial year of implementation, the program added new service providers, investors, and another outcome funder for the remaining three years (Boggild-Jones & Gustafsson-Wright, 2019). The QEI DIB also demonstrates collaboration across many stakeholders given the presence of multiple service providers and outcome funders.

Impact bonds also **drive performance management** and **build a culture of monitoring and evaluation**. The need to collect data on outcomes, and iterate service delivery to move closer to those outcomes, can build the capacity of service providers. In the Educate Girls DIB, this was reflected in the gain in learning outcomes between years two and three: Improvements to the curriculum, changes to teaching groups, and an increased number of sessions resulted after learning levels had fallen below the outcome target (Boggild-Jones & Gustafsson-Wright, 2018a). In the first year of the QEI DIB, the three service providers entered with different experiences of performance management, and therefore have received different levels of support from Dalberg, the performance manager, benefitting the organizations in their practice.

For some of the claims, the evidence base is not yet substantial enough to argue yes or no: These we classify as too soon to say. For example, one key claim concerns whether impact bonds are **reducing risk for government**. A core assumption of this claim is that the impact bond model shifts the financial risk of a program from the outcome funder to the investor: The outcome funder only pays if results are achieved. However, thus far it is difficult to tell whether impact bonds are actually very risky. Aside from a pay for success project at Rikers Island jail, which was discontinued after it failed to meet its outcome targets (Parsons, Weiss & Wei, 2016), and another SIB in Austria which made no outcome payments to investors, most completed impact bonds with publicly available data have achieved outcomes and repaid investors their principal plus a return. But without counterfactual evidence as to what would have happened in the absence of the impact bonds, it is impossible to say that the impact bonds have actually reduced financial risk for government. Furthermore, there are other types of risk that outcome funders face, such as disbursement risk in the case that outcomes are not achieved. In India, government has not yet engaged as an outcome funder– that role has been played by third party actors, mostly foundations, as well as a bilateral (USAID) in the case of the Utkrisht DIB. Since the market is less than a decade old, future research is needed to determine whether impact bonds can **sustain impact**. To do so, it will be important to plan and budget for evaluations that follow beneficiaries after the completion of the impact bond contract. Nevertheless, there is evidence in a few cases that impact bonds have contributed to policy changes or increased funding for particular interventions or service providers: in the state of Utah in the United States, for example, an impact bond led to legislation aimed at improving the quality of preschool education and expanding access to early childhood education programs (Utah Department of Workforce Services, 2019).

As more evidence has emerged, our perspective on the different claims has shifted in some cases. Since the first report, we have adapted the language of the first claim to emphasize crowding in *additional* private funding. This is important, since the discussion around impact bonds often raises the idea that the financing mechanism can bring more money into priority social sectors. However, it is crucial to emphasize that in cases where outcomes are achieved, the outcome funder is responsible for repayment. While impact bonds may encourage private or impact investors to engage in sectors or geographies where they had not previously worked, the outcome funding is still committed by the government (in SIBs), or third parties, such as foundations or donors (in DIBs). Hence, we do not find that impact bonds **crowd-in *additional* private funding**.

One of the reasons why impact bonds have not appeared risky for investors is perhaps related to the fact that thus far the interventions in impact bonds have not been truly **experimental**—i.e., the impact bond is not the first time the program has been tried. In our scan of the first 38 SIBs, we found that all interventions had been implemented before (Gustafsson-Wright, Gardiner & Putcha, 2015). Similar experiences have been reported in DIBs: For the QEI DIB the service providers were identified over a five-stage selection process from an initial list of over 200 providers, based on criteria including their ability to scale, existing track record, and relationships with government. When the longlist was narrowed, the later stages of due diligence included a focus on the organizational culture of the different organizations, to ensure those selected were open to adapting their interventions in response to evidence, and for external monitoring and evaluation. This exercise also underscored that a relatively limited pool of service provider organizations in the education sector are ready to engage in outcome-based financing. Additionally, while impact bonds remove the need for implementers to self-finance their programs upfront, so far this has not necessarily widened the pool of service providers able to engage. Edmiston and Nicholls (2017) conclude that in the U.K. "far from granting smaller third sector organisations a place at the table in outcome-based commissioning, SIBs have principally been awarded to larger third sector organizations deemed to be 'investment-ready'" (p.73).

The preference for experienced service providers is perhaps unsurprising, as investors are unlikely to want to fund completely untested programs. On the other hand, part of the anticipated value-add of the model is the opportunity for service providers to improve, and there is evidence that the model encourages service providers to adapt. For example, the evaluation of the seven Fair Chance Fund SIBs in the UK found "clear evidence that the SIB and PbR funding arrangements enabled providers to take an adaptive approach to delivery, evolving their models to meet challenges and priorities as they emerged" (ICF, 2019, p.5). Thus, the smaller or less established service providers who are not engaging in impact bonds may be missing out on opportunities to improve and adapt.

In terms of **achieving scale**, thus far impact bonds have tended to be small, both in terms of upfront capital- and number of beneficiaries. The average number of beneficiaries targeted across impact bonds is 12,243, but more than half target 500 people or fewer. It is worth noting, however, that the DIBs in India have been much larger than average—indeed, the Utkrisht DIB targets around 600,000 potential beneficiaries, making it the second largest impact bond contracted globally. While over $400 million has been committed in upfront capital across all impact bonds, the average for each impact bond is just $3.29 million. For the Utkrisht and QEI DIBs in India, upfront capital amounts have been around this average; in QEI upfront capital is $3 million, while for Utkrisht the largest disbursement is $2.9 million.[18] In both cases, capital is recycled as outcomes are achieved. Sainty (2019b) explores what we mean by 'scale' in the context of impact bonds, and argues that larger SIBs (in terms of upfront capital) are unlikely to come about in the future for three reasons: longer-term projects can self-fund as outcome payments are made; the size of target populations are small; and SIBs tend to fall between the untested interventions and the 'tried-and-true,' where governments or service providers may be comfortable taking on the risk.

The 10 common claims are a useful device for analyzing the potential benefits of the impact bond mechanism. Education stakeholders in India will need to think carefully about whether the specific problems they are trying to solve will benefit from a focus on outcomes, or improved performance management—or any of the five common claims for which we find evidence (column 1 in Table 4)—if so, an impact bond structure may be the right tool. If, on the other hand, they are seeking to resolve issues in the third column of Table 4, there is currently limited evidence that an impact bond will support these aims.

[18] Total disbursement is $6.2 million over 6 installments

Challenges

In addition to the potential benefits of impact bond contracting, evidence on their challenges has also been building. A range of criticisms have been levelled at the financing mechanism, including the potential for perverse incentives and the high transaction costs associated with deals coming together, as well as potentially burdensome data requirements.

Impact bonds typically target a specific beneficiary population, which will depend on the social issue the intervention is trying to solve. Many impact bonds target vulnerable groups, such as young people out of work, individuals experiencing homelessness, or families with children at risk of entering out of home care. One concern about using a results-based financing mechanism for groups of beneficiaries with complex needs is that service providers may feel pressure to target those individuals with a higher chance of achieving outcomes and may therefore fail to target those most in need. There is some evidence among existing impact bonds for this critique. For example, the evaluation of the Innovation Fund impact bonds, which targeted disadvantaged young people in the UK, found that projects focused on children still in school, who were easier to recruit and engage, rather than those already outside of the school system. This meant that the program may have missed some of the young people most in need: "In virtually all projects…the very hardest-to-help young people who were not attending school and unlikely to achieve an outcome within the timeframe of the programme, did not generally find their way onto the programme" (Insite Research and Consulting, 2016, p.66). This finding highlights the importance of tightly defining the intended beneficiary group of an intervention, a point further echoed in the evaluation of the London Homelessness SIB, which recommended defining the beneficiary group carefully: "in this SIB the cohort was broad and heterogeneous and a more tightly defined cohort could focus support on the most entrenched" (Mason, Lloyd & Nash, 2017, p.87). To avoid incentivizing providers to target beneficiaries close to an outcome threshold, metrics can be designed to reward progress, rather than achieving a particular level, or goal. Within education, where learning outcomes are a key measure of success, this means paying for improvements—rather than for the number of children achieving a specific level. Within both the Educate Girls DIB, and the QEI DIB, the metrics tied to learning outcomes reward *improvements,* rather than for achieving specific thresholds. Further design aspects of an impact bond can also help to ensure that the most vulnerable are specifically targeted. Some impact bonds could, for example, provide additional incentive payments for outcomes achieved among marginalized populations.

An additional critique of impact bonds is the time and expense required to contract deals, and whether this cost is outweighed by the benefits. The multiple parties necessary to contract an impact bond, and the fact that many organizations still need time to learn about the financing mechanism, can lead to delays in contracting. Unfortunately, information about the cost and time commitment of the different parties across existing impact bonds is limited, so it is currently not possible to comprehensively evaluate costs relative to benefits across all deals. Furthermore, the actual costs in traditional grant-based financing or traditional RBF versus in an impact bond transaction has not been explicitly compared. It has been noted, though, that often in traditional RBF where upfront capital may not be provided, service providers, out of necessity, build into their project costs the high cost of borrowing capital (P. Nicholas,

presentation, May 15, 2019)[19]. Understanding costs is one component of an independent evaluation of the DFID DIBs pilot program, which seeks to reduce costs and increase benefits in DIB project design and delivery (Ecorys, 2018). Early evidence from the evaluation indicates that several strategies can be employed to reduce transaction costs, including using existing data to identify interventions, sharing information, and clearly defining roles and strong collaboration among stakeholder management (Ronicle, 2019).

Managing toward outcomes requires service providers to collect, analyze, and respond to data. While above we explored the potential for this process to improve performance management capacity, for some organizations the data requirements may be quite onerous. For the 10 Innovation Fund impact bonds in the UK, the data and performance management requirements were reportedly a "culture shock" for many service providers (Insite Research and Consulting, 2016, p.11). As explored earlier, experiences in the education service provider market in India have also revealed limited readiness for engagement in impact bonds. The service provider landscaping for the QEI DIB found organizations that met other selection criteria, but were not open to adapting existing program models—one of the key hypothesized advantages of outcome-based contracting. Similar conclusions were reached in the scoping for the India Education Outcomes Fund, which found a wide variation in service provider capacity and readiness across different education subtopics.

Data availability may also be in an issue: In the London Homelessness SIB, new requirements for data access meant that no health outcomes were available at the time of the evaluation, so results could not be verified (Mason, Lloyd & Nash, 2017). A further consideration relates to the evaluation methodology selected for results verification. Among most impact bonds, results have been verified using validated administrative data, although experimental and quasi-experimental methodologies have also been used. One concern with using administrative data to verify outcomes is that without a counterfactual, it is impossible to know if the same outcomes would have been achieved without the intervention. As Sturla, Shah & McManus (2018) argue: "The core value proposition of DIBs—payment for results—depends on our ability to accurately measure a program's success. Any evaluation for an impact bond must convincingly measure the impact of the program over and above any changes that would have happened anyway." Consequently, when designing impact bonds, stakeholders need to consider not only the capacity of service providers, but also the availability of data, and the type of evaluation methodology which will best suit the goals of the project.

Facilitating factors for impact bonds in the education sector

Beyond the existing evidence on the potential and challenges for the tool, our research suggests that there are three key factors needed for impact bonds to flourish in the education sector. These include: 1) ready and able education service providers; 2) technology for data collection, analysis, and action; and 3) willingness of government to engage.

Ready and able education service providers

One factor critical to contracting education outcomes at scale is a sufficiently large pool of education service providers ready and able to engage in outcome-based financing. This lesson has been learned in many countries across the globe in procuring service providers for impact bonds. In some countries, systemic policy efforts have been dedicated to getting service providers ready to participate in impact bonds. For example, in the United States, the Social Innovation Fund provided grants to support capacity building and technical assistance for structuring Pay for Success projects (Corporation for National & Community Service, n.d). In developing country contexts, identifying ready service providers has been a challenge and has in some cases led to active efforts to build capacity among service providers before services begin. In the Western Cape Province of South Africa, for example, mothers2mothers, which served as the operational intermediary in a SIB for early childhood development (ECD), described the

[19] Peter Nicholas, Director, Social Finance UK

critical role the organization has played in building capacity of the service provider delivering home visiting services in the SIB (D. Torres, phone interview, August 15, 2018).[20][21] In the SIB for youth employment in South Africa, the executive for knowledge and research at Harambee Youth Employment Accelerator, the service provider, noted the "natural attraction between a SIB and Harambee's culture," since Harambee was already focused on performance monitoring for the six years before the SIB (Boggild-Jones & Gustafsson-Wright, 2019). Harambee's expertise in the sector and existing network of government and employer partners were also key drivers in the SIB, and sector expertise among all the partners meant that they were able to design and launch quickly. However, not all service providers are ready for impact bond contracting: The SIB team in South Africa had to invest in preparing other service providers.

As outlined above, there is currently a limited pool of outcome-ready education service providers in India, indicating that additional support to service providers will likely be needed, such as to improve systems of data collection and performance management. Intermediaries and performance managers can help build capacity within service provider organizations, which may sustain improved performance beyond the lifespan of the impact bond. Stakeholders in India can harness the experience of service providers who have already engaged in the model to coach organizations interested in building towards outcomes-based contracting. There is already some evidence that this is happening—Educate Girls, the provider in the first DIB, served as a technical advisor on the QEI DIB. However, it is likely that, if impact bonds or outcome funds are to reach greater scale, dedicated funding focused on service provider readiness, like in the Social Innovation Fund in the United States example, will be necessary.

Technology for data collection, analysis, and action

The global education community has recognized that the collection, analysis, and utilization of data is central to education outcomes: Education decisionmakers need access to data to understand where support is needed, and to recognize and replicate success. The 2018 World Development Report (World Bank, 2018) states that "lack of measurement makes it hard to know where things are, where they are going, and what actions are making any difference. Knowing these things can provide focus and stimulate action." (p.16). The potential for technology to improve data use in educational management and administration is increasingly highlighted in education policy analysis. For example, the Learning Generation report (The Education Commission, 2016) discusses how technology can be used for real-time data collection to reduce corruption and improve performance. India's draft National Education Policy also recognizes the potential for technology for data collection and analysis in education, and proposes the development and use of tools for adaptive assessment for both students and teachers, as well as a National Repository of Educational Data (Committee for Draft National Education Policy, 2019).

Within impact bonds, efficient real-time data collection is particularly important. Service providers use data to track progress toward outcomes and to inform adaptations and iterations of their delivery model. The Educate Girls DIB used a digital data dashboard, which provided enormous benefit to the service provider, as it offered key insights into performance, allowing for course adjustment during the implementation phase (UBS Optimus Foundation, Dalberg Advisers & Children's Investment Fund Foundation, 2018).

Currently, both paper-based and technological-based data collection are being utilized in impact bonds. Some challenges may exist with paper-based data collection and analysis, however. First, it can be difficult to ensure that the data efficiently reaches the individuals or decisionmakers that need it. Second, it can be even more difficult to identify either errors or trends in the data (J. Di Silvio, phone interview, March 12, 2019).[22] As a result of these issues, this makes verification for determining

[20] David Torres, former Senior Advisor to the President and CEO, mothers2mothers
[21] The SIB includes two intermediary organizations, mothers2mothers, the operational intermediary, and Volta Capital, the financial intermediary.
[22] Joseph Di Silvio, Impact and Performance Manager, Volta Capital

payments in an impact bond more challenging and potentially more costly. We have noted, however, that when technology is harnessed in impact bonds, often the tools are bespoke platforms developed just for the impact bond, raising questions around efficiency and cost.

Globally, actors have responded to the increased policy focus on data and technology, which could be helpful to outcome-based financing. For example, the World Bank, supported by the Bill and Melinda Gates Foundation and DFID, recently announced the Global Education Policy Dashboard, which aims to provide policymakers with key information on indicators associated with learning outcomes in basic education (World Bank, 2019b). Country-level efforts, as well as initiatives among non-state providers, are also increasing. The Government of Ghana developed a technology platform for reporting and real-time monitoring of school improvement programs in secondary schools, which provided information for resource allocation at the Ministry level (Relhan, 2016). In India, the Unified District Information System for Education (U-DISE) collects data annually across the school system, and presents a selection of this data in a Data Visualization App (DVA), which includes an online dashboard and a mobile app (U-DISE, n.d.). For teachers, technology can provide insights into student performance, offering real-time data on their classes. For example, Mindspark—the adaptive learning platform which will be employed from year two onwards in the QEI DIB—guides students through content at their own pace, providing data to teachers in real-time, which they can use to adapt their lesson plans (Educational Initiatives, n.d.). These examples highlight opportunities for the different roles of technology in collecting and analyzing data; employing digital tools for data has the potential to reduce costs and increase accuracy of measurement in impact bonds.

Willingness of government to engage

To make changes at the system level, the government is essential. While in a SIB, the government has a clearly defined role as an outcome funder, in a DIB the involvement of government actors has the potential to increase ownership and sustainability. Regardless of whether the impact bond has a government outcome funder, it is critical to ensure that outcomes targeted by impact bonds align with the priorities outlined by government stakeholders, particularly in sectors with high government involvement, such as education. In the Education Outcomes Fund for Middle East and Africa, for example, the first step was engaging with governments to identify their priorities. Examples of SIBs in developing countries include the two aforementioned programs in South Africa: one for ECD and one for employment. In both cases, the provincial government engaged directly as the outcome funder. Two impact bonds for employment in Colombia also include government as an outcome funder. In these impact bonds, the presence of additional outcome funders (either philanthropists or foreign governments) greatly facilitated the participation of government (Gustafsson-Wright & Boggild-Jones, 2017). In India, the final version of the National Education Policy (currently in draft format) will be a useful source for these priorities; for example, the draft policy highlights the importance of early childhood education, as well as achieving foundational numeracy and literacy (Pratim Gohain, 2019).

It is also important to consider the different government actors that could be involved in an impact bond. In some cases, there may be interest from central government departments in exploring outcome-based financing in the sector they oversee. For example, in the first Colombia Workforce SIB, the government outcome funder was the Department of Social Prosperity. The central government can also play a role in coordinating outcome funds, from which multiple impact bonds are contracted; such funds can also work across multiple departments, like the Youth Engagement Fund in the UK, which received funding from the Cabinet Office, the Department of Work and Pensions, and the Ministry of Justice (UK Government, 2014). Regional and local governments may also engage as outcome funders; in the Netherlands, for example, municipalities have often played the role of outcome funder.

Given the importance of the state governments in education financing in India, this may be the most appropriate level to engage as an outcome funder. Currently, while government actors in India have not played the role of outcome funder, they have been engaged at different points of the impact bond process—for example the Educate Girls DIB used two Memoranda of Understanding (MOUs) signed with

the government of Rajasthan to provide access to the government schools so that IDinsight could conduct the evaluation and Educate Girls could deliver the program. In the QEI DIB, three of the four service providers are working in government schools. This meant that for the SARD interventions, government permission had to be sought in selecting the schools, and the program was also launched on government premises, while the schools in KEF's intervention were recommended by district officials. Palladium, the implementation manager of the Utkrisht DIB, signed an MOU with the Government of Rajasthan in 2016; while there were discussions regarding the potential future role of the government as an outcome funder, this was not explicitly outlined in the MOU. Since the beginning of the DIB, a new government was elected, and the MOU expired and has not been renewed. The Utkrisht team is in ongoing discussions with the current government on how the DIB's quality of care verification could be used for government reimbursement to facilities.

While government involvement as an outcome funder will depend on the priorities and interests of policymakers, government stakeholders will be essential partners for all actors interested in financing education outcomes at scale in India. It is also worth emphasizing that contracting on outcomes is often a new way of doing business for government actors and donors, who will likely need time to adapt (Gustafsson-Wright et al. 2017). Another key consideration is the legal feasibility of government actors contracting on outcomes. A 2014 review of the legal feasibility of SIBs outlined that in India, performance-based contracting is permitted, and annual budgeting or changes in administration are unlikely to be obstacles to the government making payments (Instiglio, 2014).

CONCLUSION: OPPORTUNITIES AND CHALLENGES IN PAYING FOR EDUCATION OUTCOMES AT SCALE IN INDIA

Evidence thus far, as summarized in the report, demonstrates that impact bonds have the potential to incentivize stakeholders to work together to focus on outcomes and can build performance management and monitoring and evaluation capacity in service delivery organizations. These elements could translate into much-needed systems change, with positive long-term impact for education outcomes in India. For stakeholders interested in using impact bonds to solve education challenges in India, the evidence suggests that the motivation for using the tool should be carefully considered. For instance, impact bonds seem to be most suitable to services that are preventative in nature, have a strong need for adaptation to individual needs, and result in easily measured but meaningful outcomes.

Thus far globally, impact bonds have focused on building quality in existing education systems and targeting services to specific groups, rather than being used broadly for the provision of basic education. This is partly a reflection of the early stage of the impact bond market: Many existing deals have focused on testing the model and building knowledge. However, it also suggests that the most appropriate programs for impact bond financing are not experimental programs without an evidence base (since these will likely be unappealing to investors) nor well-established programs with demonstrated outcomes (since outcome funders may just want to pay for these outright). Rather, they are something in between, where there is enough risk or capacity-building needed to justify the engagement and repayment of investors. Ensuring that interventions effectively target the population in need will be crucial in the design phase, and further research will be needed to understand the costs and benefits of the tool.

The three previously mentioned factors needed for an impact bond market to flourish will play an important role in the growth of outcome-based financing for education in India: With over 370 million young people between the ages of 0-14 (World Bank, n.d.), the issue of scale is a crucial consideration. Already these factors have been important in the two contracted impact bonds for education: the Educate Girls DIB and the QEI DIB. In terms of the first factor—ready and able education providers—landscape analysis of the service provider market in India for the QEI DIB found that some organizations were not open to adapting existing program models—one of the key hypothesized advantages of outcome-based contracting. As a result of the scoping of service providers, one of the most interesting features about the QEI DIB is the selection of four service providers offering different interventions. With respect to the second factor—the potential for technology to facilitate data collection—the Educate Girls DIB used a digital data dashboard to provide performance insights; the QEI DIB will include the delivery of Mindspark, a computer-based adaptive learning software, which offers real-time performance data to teachers. Finally, considering the third factor—government engagement—while the government has not yet played the role of outcome funder, the government was engaged with both the Educate Girls and QEI DIBs, with MOUs signed to provide access to government schools.

India faces considerable challenges in education: Learning levels are low, and disparities persist between states and between the poorest and wealthiest children. With the drafting of the new education policy, the government of India has highlighted key areas of focus for the coming years. Another key opportunity lies in different sources of funding, for example, taking advantage of CSR resources for financing education outcomes or attracting impact investment to education service providers. While there is unlikely to be one solution to India's education challenges, impact bonds and outcome-based financing offer the opportunity to focus financing on impact, to promote the most effective education interventions and service providers, and to reinforce decisionmaking around data and evidence.

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ANNEX A

Table A1: Additional public expenditures: Recurring

Allocation Items	Annual* expenditure % to total expenditure by the governments #
A. Early childhood education-expansion/improvements	1.4
B. Foundational literacy and numeracy-NTP/RIAP/Libraries	0.2
C. Schools—additional teacher costs/complex resources	2.0
D. Food/nutrition (Midday Meal+)- Breakfast/enhanced nutrition component	1.3
E. Teacher education and continuing professional development of teachers	0.6
F. Universities and colleges-Quality/faculty/operations	5.0
G. Research and colleges—Quality/faculty/operations	0.4
Total additional expenditure as % of overall public expenditure (per annum) **Current proportion of public expenditure on education (per annum)**	10.9 10.0
Overall proportion of public expenditure on education (per annum)	20.9

Source: Committee for Draft National Education Policy, 2019
*recurring/will grow with public finance growth

Table A2: Additional public expenditure: One-time expenditures

Allocation Items	% to total government expenditure*
	One time
A. Expansion and improvement of ECCE centers	0.6
B. Strengthening school infrastructure	0.3
C. Digital resources	0.1
D. Higher Education Institutions teaching infrastructure and residences	1.4
E. Scholarship endowments	0.6
Total additional expenditure required ***all % are rounded to the closest first decimal**	3.0

Source: Committee for Draft National Education Policy, 2019

Table A3: Trends in social services expenditure by general government (combined centre and states)

Item	2013-14	2014-15	2015-16	2016-17	2017-18 RE*	2018-19 BE**
(Rupees in crore)[23]						
Total Budgetary Expenditure	30,00,299	32,85,210	37,60,611	42,65,969	48,57,990	53,61,181
Expenditure on Social Services of which:	7,46,391	7,67,622	9,15,500	10,40,620	12,52,943	13,93,643
i. Education	3,48,267	3,53,589	3,91,881	4,34,974	4,92,544	5,66,770
ii. Health	1,39,280	1,48,791	1,75,272	2,13,119	2,54,365	2,76,083
iii. Others	2,58,844	2,65,243	3,48,348	3,92,527	5,06,034	5,50,790
As percentage to GDP						
Expenditure on Social Services of which:	6.6	6.2	6.6	6.8	7.3	7.3
i. Education	3.1	2.8	2.8	2.8	2.9	3.0
ii. Health	1.2	1.2	1.3	1.4	1.5	1.5
iii. Others	2.3	2.1	2.5	2.6	3.0	2.9

Source: Government of India, 2019
*Revised Estimates; **Budget Estimates

[23] One crore is equal to 10 million

ANNEX B

Utkrisht Maternal and Newborn Health DIB[24]	
Status	Implementation
Timeline	Contracted 2017 *36-month implementation period (commenced May 2018)* *4 months close out period (project ends August 2021)*
Sector focus	Health
Outcome metrics	Quality of private health clinics: readiness for accreditation under the certification standards for maternal care.
Beneficiaries targeted	~600,000
Intervention(s)	Supporting private healthcare facilities to work towards accreditation for quality maternal care.
Investor capital committed	$6.211 million in total over 6 installments. Largest disbursement at one time is $2.9 million.
Max outcome funds	Up to $8 million Verification funds: $1 million
Key milestones	Outcome payments scheduled every six months.
Key Actors	
Service provider(s)	Hindustan Latex Family Planning Promotion Trust (HLFPPT) and Population Services International (PSI)
Outcome funder(s)	USAID, Merck for Mothers
Investor(s)	UBS Optimus Foundation (Implementation partnership will also invest 20%)
Intermediary	Palladium

[24] USAID, 2017

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