Global Economy and Development at BROOKINGS

JANUARY 2016

Policy Recommendations on Impact Bonds for Early Childhood Development in Low- and Middle-Income Countries

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I. Early Childhood at the Forefront of Development

The confluence of the agreement on 17 Sustainable Development Goals (SDGs, or Global Goals) in 2015, and the increased attention being paid to the role of non-traditional actors in contributing to shared prosperity, provide a unique opportunity to focus attention on attempts to identify promising new solutions to the barriers that impede the full development of the world's youngest citizens. Current estimates indicate that 200 million children globally under the age of 5 are at risk of not reaching their development potential.[1] With these goals, the global community has a tremendous opportunity to change the course of history. There is evidence that certain early childhood development (ECD) interventions—spanning the nutrition, health, water and sanitation, education, social protection, and governance sectors from conception to age 5—have high potential to help to achieve the SDGs related to child development (see Box 1). Furthermore, early childhood interventions have been found to improve adult health and education levels, reduce crime, and raise employment rates, which will be

Box 1. Targets related to early childhood development in the SDGs

2.2	By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age
3.1	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
3.2	By 2030, end preventable deaths of newborns and children under 5 years of age
4.2	By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all
6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
10.1	By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average
16.2	End abuse, exploitation, trafficking, and all forms of violence against and torture of children
16.6	Develop effective, accountable, and transparent institutions at all levels
16.7	Ensure responsive, inclusive, participatory, and representative decision-making at all levels
16.9	By 2030, provide legal identity for all, including birth registration
17.3	Mobilize additional financial resources for developing countries from multiple sources
17.17	Encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships

[1] Grantham-McGregor et al. (2007).

paramount to achieving global economic, climate, and physical security.

Given that domestic resources and international aid will be insufficient to meet the estimated costs of these goals, the sector must leverage private and non-traditional finance for development and the associated investment opportunities for the private sector.

II. Impact Bonds: A New Financing Tool Yet to be Tested for ECD in LMICs

In the last 15 years, a number of innovative financing tools for international development, which address the volume of finance for development, the effectiveness, or both, have been designed and implemented. In particular, there has been an increasing number of innovative financing mechanisms launched that make payments contingent on outputs or outcomes, referred to broadly as Payment by Results (PbR) mechanisms. Tying payments to outcomes or outputs is intended to create beneficial incentives, encourage performance management, and provide transparency and accountability. PbR mechanisms include mechanisms with contingency for national governments (e.g., Cash on Delivery Aid), service providers or local governments (results-based financing, broadly), technology developers (e.g., advance market commitments), individuals in the target population (e.g., conditional cash transfers), and non-state investors (e.g., impact bonds).[2]

Impact bonds are a form of PbR where non-state investors provide upfront capital to service providers and are repaid by an outcome funder contingent on outcome achievement. In a **social impact bond (SIB),** a government actor is the outcome funder while in a **development impact bond (DIB)** a third party partially or fully supplements government payments for outcomes.[3] Despite the terminology, both SIBs and DIBs may be implemented in high-income countries (HICs) and low- and middle-income countries (LMICs). SIBs are also referred to as pay-for-success (PFS) contracts in the United States and social benefit bonds (SBBs) in Australia.[4] Impact bonds were developed because service providers in results-based financing contracts often require upfront working capital to provide services or are unable to bear the risk of service efficacy.

As of November 2015, there were 49 SIBs contracted in HICs and two DIBs contracted in LMICs. The DIB contracts finance programs to improve girls' education in India[5] and coffee production in Peru.[6] Impact bonds may be contracted in an impact bond fund, where the outcome funder (government in the case of a SIB) issues a rate card of outcomes and the maximum prices they are willing to pay for those outcomes, and contracts multiple providers. Each of these providers may

[2] Guarnaschelli et al. (2014), Center for Global Development and Social Finance (2013), and Fritsche et al. (2014).
[3] Center for Global Development and Social Finance (2013).
[4] For clarity, impact bonds, despite the name, are not bonds in the traditional definition of a bond. The term "social impact bond" has also been used for issuance of traditional, fixed-yield bonds to raise capital for social programs. This differs from the definition of "social impact bond" used in this study, in that this study defines "social impact bonds" to be arrangements where payments to investors are dependent on, and positively correlated with, positive outcomes. For a number of uses of the term that do not fit the commonly used definition, see Tomkinson (2015).
[5] Instiglio (2015).
[6] Finance Alliance for Sustainable Trade (2015).

have their own investors and intermediaries. As of November 2015, there were four impact bond funds in the world, all in the U.K., which have contracted between two and ten providers each.[7] Impact bond funds can help to increase access to services by providing outcome funding for multiple providers at once, though multiple providers may also be contracted under a central service manager in an individual impact bond.

Of the 49 SIB contracts, there are seven SIBs across four countries (U.S., Canada, U.K., and Australia) that provide services to children in their early years. Two of these SIBs support preschool services and the five remaining SIBs finance child welfare services related to foster care avoidance and adoption. In addition, there are dozens of additional SIBs for ECD in the early stages of consideration in HICs and some close to completing contracts.

Though there have not been any impact bonds contracted to finance ECD interventions in LMICs, there are three such impact bonds in early design stages. In the Western Cape Province of South Africa, the Bertha Centre for Social Innovation and Social Finance are structuring an impact bond focusing on a broad range of early childhood outcomes, in partnership with the Department of Social Development of the Western Cape. This impact bond will be an impact bond fund, contracting with multiple providers at once. Outcomes will include a range of indicators for 2- and 4-year-olds. A second impact bond is being considered in the state of Rajasthan in India that would provide payments to private health clinics for reproductive, maternal, and child health outcomes across the entire population of Rajasthan, targeting individuals in the second and third income quintiles. The Palladium Group is working to design the contract for this impact bond, which will likely have various outcome funders and investors. Finally, Grand Challenges Canada, Social Finance, and the MaRS Centre for Impact Investing are working to develop an impact bond to finance Kangaroo Mother Care (KMC)—an intervention known to save and improve the lives of low-birth-weight infants—in Cameroon. The DIB exploration is at an early design stage, but potential outcome metrics for the low-birth-weight infants include: increase in access to quality KMC, weight gain, and reduction in mortality.

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[7] For more on these impact bond funds, please refer to Gustafsson-Wright et al. (2015).

III. The Potential and Limitations of Impact Bonds for ECD in LMICs

Impact bonds have the potential to address some of the main financing and delivery constraints faced in ECD. By providing upfront private capital, impact bonds could help to address service provider liquidity constraints and leverage public capital by allowing the government to connect preventive programs with future benefits to individuals, society, and the economy. Impact bonds also have the potential to drive performance management, support monitoring and evaluation, and create accountability, which all help to address quality and capacity constraints. By fostering innovation, experimentation and adaptive learning in service delivery, cost-effective solutions could be identified through impact bonds. By producing evidence of outcome achievement, impact bonds could shift the focus toward effective ECD programs. Finally, collaboration across stakeholders—a necessary component of impact bonds—has the potential to allow for alignment of interests and a win-win situation for investors, outcome funders, and program beneficiaries alike.

The high participation of non-state actors and potentially significant returns in ECD make it a promising sector for impact bonds. Unlike other services that may have entrenched interests, the multitude of agencies and non-state entities financing and providing ECD services potentially allows for more experimentation. The preventive nature of ECD programs also fits well with the core feature of SIBs, which is that preventive investments will result in valuable short- and potentially long-term outcomes. There is evidence that ECD interventions can have immense effects on later-life outcomes. For example, a longitudinal study of a program in Jamaica, in which participants received weekly visits from community health workers over a 2-year period, was found to increase the earnings of participants by 25 percent, 20 years later.[8]

There may, however, be some particular challenges associated with applying impact bonds in the ECD sector. Impact bonds (and other PbR mechanisms tied to outcomes) require meaningful outcomes that are measureable within a timeframe that is reasonable to the outcome funder (and investors in the case of an impact bond). Meaningful outcomes are outcomes that are intrinsically or extrinsically valuable. Intrinsically valuable outcomes that are measureable within a reasonable timeframe could be extrinsically valuable if they are proxies for long-term benefits to individuals, society, or the economy. The delay between ECD interventions and later-life results may prove an impediment in some cases. By identifying appropriate interim measures such as language development, socioemotional development, and schooling outcomes that may proxy for desirable longer-term outcomes, the issue of delay could be mitigated. For example, there is evidence that early stimulation and social protection programs can

[8] Versus peers who did not participate in the program. The program consisted of teaching parents of 3-year-olds parenting skills, and encouraging mothers and children to interact in ways that develop cognitive and socioemotional skills (Gertler et al. 2014).

have statistically significant effects on socioemotional development outcomes in the short-run. Cognitive development is a statistically significant short-term outcome of health and social protection interventions. Finally, schooling outcomes are a significant short-term outcome of health and early stimulation programs (see Table 1).[9] An increase in focus on the intrinsic value of short-term outcomes that result from ECD interventions, such as child survival, is also important.

Another potential challenge may be the inability to quantify outcomes or to assign attribution of impacts to specific interventions. This may be the case in circumstances where robust evaluation is not possible or when there is potential for a multitude of confounding factors that may influence outcomes. Particularly challenging interventions for impact quantification may be birth registration or child protection interventions. In these cases, simple outputs with intrinsic value or an association with longer-term outcomes may be more appropriate.

In addition, the lack of open-source tools that are appropriate to use in LMIC settings for some ECD outcomes may also be a hindrance to applying impact bonds to some outcomes. As evidence increases and more measurement tools become available, these two issues will become less of an obstacle.[10] An alternative solution, at least in an intermediate phase, would be to focus on inputs that are known to strongly correlate with development outcomes. In center-based care (daycare and preschool) interventions, these could include measures of process quality, such as the interaction between teachers and students.[11] Furthermore, monitoring and evaluation can be costly, though less expensive methods such as data collection through cellphones could reduce the costs and improve the efficacy of data collection and service adaptation.

Another challenge in ECD could be its multi-sectoral nature, if outcomes are chosen that are linked to multiple ministries. However, this could provide an opportunity to improve coordination between those agencies with a common focus on outcome

Table 1. Impact of early childhood interventions on later-life outcomes

	Outcome Domains					
Intervention Domains	**Physical development**	**Cognitive development**	**Language development**	**Socio-emotional development**	**Schooling**	**Employment and labor market**
Nutrition	◆ (NS) ■ (NS) ● (NS)	◆ (NS) ■ (NS) ● (S)	◆ (S) ■ (NS) ● (S)	◆ (NS)	◆ (NS) ■ (NS) ● (S)	
Early Stimulation	◆ (NS)	◆ (NS) ■ (S) ● (S)	◆ (S) ■ (S) ● (S)	◆ (S) ■ (S) ● (S)	◆ (S) ■ (S) ● (S)	● (S)
Health	◆ (S) ■ (NS)	◆ (S) ■ (NS)	◆ (S)		◆ (S) ■ (NS) ● (S)	
Social protection	◆ (NS)	◆ (S)	◆ (S) ■ (NS)	◆ (S)	◆ (NS) ■ (S)	

◆ Age 6-12 ■ Age 13-17 ● Age 18+ ■ Significant ■ Not significant

Adapted from: Tanner et al. (2015).
Note: No symbol where evidence is insufficient or nonexistent.

[9] Tanner et al. (2015).
[10] Current efforts include, for example, the Measuring Early Learning and Quality Outcomes (MELQO) project, a multi-agency project aiming to develop tools to measure school readiness across a variety of domains as well as quality of center-based pre-primary programs. The effort aims to develop a tool with consistent core measures and locally adaptable additional measures.
[11] Structural quality is of course important as it can relate to the physical and mental health of children, but in general is shown to have less correlation with schooling outcomes and socioemotional development.

achievement. Experience from developed country impact bonds shows that the coordination of joint data systems resulting from impact bonds has been well-worth the effort.

Societal resistance to government interference in parenting in the early years of a child's life may also prove challenging; however, impact bonds may be a relatively helpful tool to address this challenge if they can clearly demonstrate these programs' positive impact on society. Finally, adequate service provider capacity could be a particular challenge for ECD impact bonds in LMICs.

Impact bonds (and other PbR financing mechanisms tied to outcomes) are best suited to contexts where the relationship between inputs and outcomes is unclear and the guarantee of value for money is necessary for policymakers to fund the program. Impact bonds may make sense in circumstances where there are gaps in knowledge about what works and a desire to learn more, but an unwillingness to take a risk to gain that information. If a government agency is willing to fund a proven intervention without external support and continuously monitor outcomes, the transaction costs associated with impact bonds may not be worthwhile. Despite the high potential impacts of ECD interventions, the evidence base from developing countries is still relatively thin. A recent systematic review of the impacts of early childhood interventions on later-life outcomes by the World Bank's Independent Evaluation Group found only 55 applicable rigorous evaluations, based on only 25 projects. The results of the effects are presented in Table 1.

The regions with the least robust evidence base include the Middle East and North Africa (with no robust evaluations identified) and East Asia and the Pacific (three evaluations). Sub-Saharan Africa, South Asia, and East Africa also had fewer combined evaluations than Europe and Central Asia, as well as Latin America. The outcome domain with the fewest number of unique projects evaluated was socioemotional development. Given the increased importance placed on this aspect of development and its link to labor market outcomes, this would be an area where more evaluation and experimentation could be highly beneficial to government and society more broadly. Interventions where more robust evidence could be developed related to ECD include micronutrient supplementation, water and sanitation interventions, delivery and ante- and post-natal-related interventions, and disease treatment. An impact bond that builds on a strong system of performance management and adaptive learning could provide an opportunity to test an intervention or service provider in their ability to deliver outcomes.

Impact bonds may be best suited to areas of ECD and countries where there is a relative proliferation of non-state providers of ECD services. Outcome funders may be particularly concerned about value for money and there may be more gaps in knowledge about outcome achievement with non-state providers. For pre-primary education, in particular, non-state delivery is important. In the 100 countries worldwide with available data, an average of 31 percent of students enrolled in pre-primary education were enrolled in private institutions in 2012, including not-for-profit and for-profit schools not owned by the government.[12] However, there is large variation between countries. In Morocco, 90 percent of pre-primary services are provided by non-state actors, while in Ghana, 22 percent are provided by the non-state sector.[13] Across East Asia and the Pacific region, many countries have specific policies encouraging non-state provision of pre-primary education. If an impact bond is designed to improve outcomes for individuals in the lower-income quintiles through non-state providers, the stakeholders must ensure the impact bond does not exclusively finance for-profit non-state providers catering to the wealthy.

[12] UNESCO (2015).
[13] Data for 2012, UNESCO Institute for Statistics (2015).

Impact bonds may be preferable to other PbR mechanisms if upfront capital is needed to finance service provision or service providers are unwilling to take on the risk of outcome achievement. The involvement of non-state investors in an impact bond may also increase political will, performance management, or help reorganize a government system of data sharing or provision, beyond what other PbR mechanisms may be able to accomplish. Non-state investors may also be able to encourage the establishment of integrated systems of ECD provision across sectors.

Impact bonds are likely to be best suited to mezzanine financing, rather than initial pilot or nationwide programming. In impact bonds, investors must be willing to bear the risk of outcome achievement; therefore, impact bonds are unlikely to be the best tool for completely untested pilot interventions (a grant would be more applicable). As mentioned above, impact bonds are best suited to interventions where there is a gap in knowledge about the efficacy of service provision, an indication that this mechanism is not optimal for funding nationwide provision. In ECD, mezzanine financing for nutrition programs could be appropriate—there is high potential for success but still a great deal of learning needed.

Impact bonds can only be used in countries where legal conditions exist that allow the mechanism to operate, and they will likely be much easier to implement in countries that have demonstrated political commitment to the sector. Impact bonds will only be possible where particular legal conditions are in place, such as legislation that allows government to appropriate funds ex-ante for achieved outcomes. It would also not make sense to set up impact bonds where there are immitigable risks of corruption in procurement, outcome payment design, or evaluation. Nor would it make sense where it is impossible to ensure the outcome funder's ability to repay investors, as with a government with a poor credit rating. Legislation supporting public-private partnerships and improving the tax status of impact investing may also facilitate the development of impact bonds. These conditions are more likely to be met in middle-income countries; however, there may be cases of low-income countries where these conditions are fulfilled. Impact bonds (in particular SIBs) may make sense when there is already some political interest at the country, regional, or municipal level to expand early childhood services, but insufficient political or constituent support for adequate budget allocation. In the regions where a great deal of evidence exists—Europe, Central Asia, and Latin America, for example—impact bonds could be used to highlight the importance of early childhood development.

As the global community moves beyond the Millennium Development Goals to a set of Global Goals and associated targets linked to measurable outcomes, there is an opportunity to demonstrate a commitment to invest in future generations. Leveraging upfront funding, focusing on outcomes through adaptive learning and testing new ways to deliver early childhood interventions more effectively are all means of achieving the ECD-related goals. Despite the hype around all of the new financing mechanisms, the keys to creating high-quality, locally appropriate programs remains simple—real-time collection of outcome data, the freedom to fail, and the flexibility to course-adjust. In some circumstances social service provision based on outcomes and adaptive learning may require mechanisms like impact bonds or other PbR mechanisms. In other circumstances it may not. As this very nascent field continues to grow, more research will be needed to capture lessons learned, contextualize them within the larger landscape of ECD financing and service provision, and apply them to real-world social challenges with the world's youngest and most disadvantaged populations at the forefront of the conversation.

This policy brief summarizes the report "Using Impact Bonds to Achieve Early Childhood Development Outcomes in Low- and Middle-Income Countries: Key Considerations." Please see the main report for further detail, including recommendations for outcome metric selection and comparative analysis of relevant financing mechanisms.

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