



## Background Paper The Learning Generation

# Ensuring Effective Outcome-Based Financing in Early Childhood Development

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This paper was prepared for the International Commission on Financing Global Education Opportunity as a background paper for the report, *The Learning Generation: Investing in education for a changing world*. The views and opinions in this background paper are those of the author(s) and are not endorsed by the Education Commission or its members. For more information about the Commission's report, please visit: [report.educationcommission.org](http://report.educationcommission.org).

## **Ensuring Effective Outcome-based Financing in Early Childhood Development**

### Recommendations to the International Commission on Financing Global Education Opportunity

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## Summary of Recommendations

### **1. Financing Early Childhood Development (ECD) interventions should be a top priority for the International Commission on Financing Global Education Opportunity.**

- *The new Sustainable Development Goals (SDGs) demonstrate the global acknowledgement of the importance of a child's development in the first five years of life to individuals themselves, societies, and economies.*
- *ECD interventions have been shown to have statistically significant effects on years of school attained and student learning; however, effects are often heterogeneous.*
- *Despite these heterogeneous effects, ECD interventions may be a relatively promising method to increase school outcomes in comparison with other types of interventions.*
- *The information connecting ECD interventions with adult earnings indicates very high potential returns.*
- *If quality can be ensured, the case for investing in ECD is strong. Ongoing performance management, outcome evaluation, service provider incentives and coordination across programs will be critical to ensuring all ECD interventions have maximum impacts on children's development.*
- *While domestic resources and international aid have grown significantly over the past decade, they will be insufficient to meet the estimated cost of achieving the SDGs.*
- *Private and nontraditional finance for development has risen significantly, and there is increasing recognition of the associated investment opportunities for the private sector in support of the longer-term agenda of the SDGs.*

### **2. Outcome-based financing mechanisms could benefit ECD interventions that require behavior change, such as breastfeeding, hygiene, and parent education.**

- *Payment by Results mechanisms, where some portion of payment for social services is tied to service outputs or outcomes, have become increasingly popular in domestic financing and international development finance.*
- *In impact bonds, a form of Payment by Results that often have a stronger focus on outcomes, non-state investors provide upfront capital to service providers and are repaid by an outcome funder contingent on achievement of results.*
- *Services that would benefit from the incentives, adaptability, or added accountability may warrant the use of PbR mechanisms rather than input-based financing. In cases where upfront risk capital is needed, involvement of the private sector investor could add value or a particularly intensive concentration on outcomes is needed, then impact bonds may be the most appropriate mechanism.*
- *In ECD, outcome-based financing may be best suited to interventions that require behavior change, such as breastfeeding, hygiene, and parent education. (Output-based financing may be best suited to antenatal care, immunizations, feeding and supplementation, and deworming.)*
- *Outcome-based financing could help reduce the heterogeneity in efficacy of process-dependent ECD interventions, which could lead to increased financing.*
- *Outcome-based financing may be particularly well-suited to ECD because there is greater flexibility in provision and because governments are more risk-averse in funding ECD relative to primary and secondary education.*
- *Despite its benefits, outcome-based financing is not without costs, so careful consideration should be taken to ensure that the benefits are worthwhile.*

### **Summary of Recommendations (Continued)**

- 3. Five factors are critical for the feasibility of outcome-based financing for ECD: legal feasibility, political feasibility, outcome funder administrative capacity, service provider capacity, and the existence of committed champions.**
  - *It is important to note that in identifying promising contexts, it is not necessary to consider entire countries; in fact, the chances of success are likely to be improved when working with state or local government.*
  - *Determining legal feasibility of paying for results is an essential preliminary step in establishing outcome-based financing schemes.*
  - *The outcome funder's administrative capacity to design contracts, procure providers, regulate implementation, and disburse outcome funding are critical to the viability of the program.*
  - *Adequate service providers with sufficient capacity to deliver high-quality services must exist for the program to be feasible. Outcome funders may look to non-state providers to reach the most marginalized, where government capacity is often insufficient.*
  - *Finding a champion to shepherd the effort in any context is highly important to the successful initiation and implementation of any payment by results financing mechanism and perhaps even more for social impact bond transactions.*
- 4. Five components will be essential to carry out effective outcome-based financing: comprehensive outcome measurement, outcome benefit and cost data, effective contract management, real-time performance management, and rigorous evaluation.**
  - *Outcomes metrics must be measurable, meaningful, and malleable. Without involvement of ECD experts in outcome metric design, metrics could be too narrow and not cover the full spectrum of child development.*
  - *Setting the appropriate price for a given outcome is a critical design point in an outcomes-based financing contract and is a combination of the value of the outcome to the individual, society, economy, and government and the price to deliver services to the target population.*
  - *There is a critical need for more consistent cost data to both budget ECD programs and to ensure that outcome prices in outcome-based financing arrangements cover the cost of service provision.*
  - *A new ECD costing template developed jointly by the Center for Universal Education and the World Bank's Strategic Impact Evaluation Fund could be disseminated and used globally across program implementers, public administrators, and program evaluators to create consistent data on ECD costs.*
  - *Providers must be procured through a competitive, transparent, and accessible process that includes clearly defined, realistic, and objective selection criteria.*
  - *In determining how much of payment should be tied to outcomes, contract designers should equally account for independence and accountability.*
  - *Government must have sufficient capacity to effectively implement, manage, regulate, and monitor outcome-based contracts.*
  - *Live performance management is critical to the success of an outcome-based contract, and of all quality ECD programs more broadly.*
  - *Experimental or quasi-experimental evaluations should be used where there is a lack of evidence of intervention efficacy.*

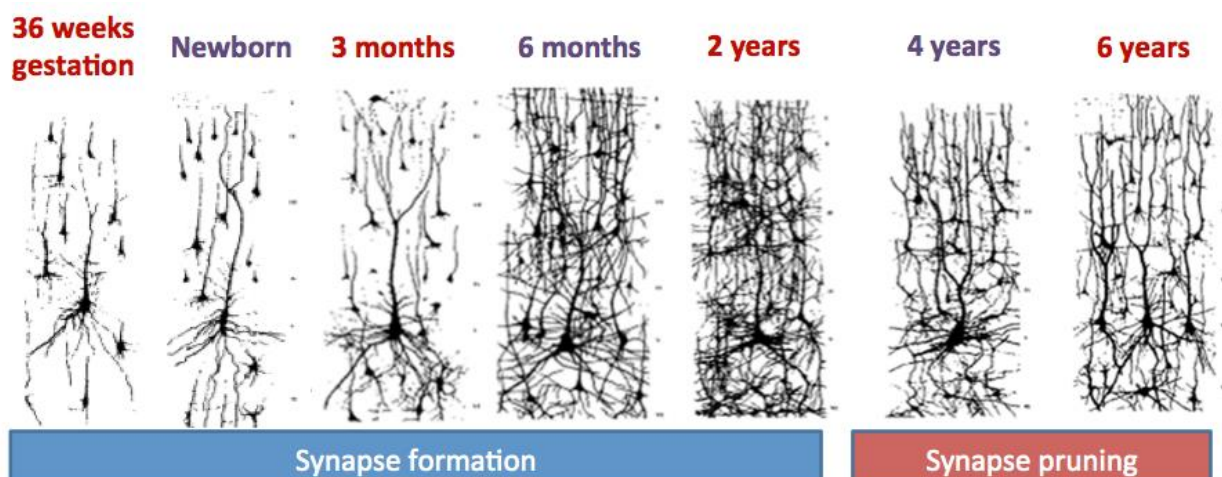
*The purpose of this report is to provide concrete recommendations and points of action to the International Commission on Financing Global Education Opportunity on early childhood development financing and in particular outcome-based financing. The recommendations are based on an accumulation of research by the Center for Universal Education at the Brookings Institution over the past three years and draw upon the report “Using Impact Bonds to Achieve Early Childhood Development Outcomes in Low- and Middle-Income Countries” by the authors*  
*[\[http://www.brookings.edu/research/reports/2016/02/impact-bonds-early-childhood-development-wright\]](http://www.brookings.edu/research/reports/2016/02/impact-bonds-early-childhood-development-wright). Further background and detail are available in that report. For more background on impact bonds, please see “The Potential and Limitations of Impact Bonds,” also by the authors*  
*[\[http://www.brookings.edu/research/reports/2015/07/social-impact-bonds-potential-limitations\]](http://www.brookings.edu/research/reports/2015/07/social-impact-bonds-potential-limitations).*

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## Recommendation 1: Financing Early Childhood Development (ECD) interventions should be a top priority for the Education Commission.

Early Childhood Development, which includes over two dozen types of interventions across the nutrition, health, water and sanitation, education, and social protection sectors ranging from conception until a child enters primary school,<sup>1</sup> has been shown to improve the physical, cognitive, language, and socioemotional development of a child. These, in turn, affect school performance and may increase lifelong earnings.<sup>2</sup> The development effects are driven by the impact of ECD interventions on a child's brain development—a child's brain is almost fully developed by age three<sup>3</sup>—and evidence suggests that it is very difficult to compensate for undeveloped neural connections later in life.<sup>4</sup> Figure 1 shows the rapid synapse formation through age four. From this age forward, those synapses are progressively eliminated and refined to maximize the individual's performance. If fundamental neural connection is not created during the early years of life, they are much more challenging to develop later on. Cognitive and socio-emotional development compound on one another as an individual ages, thus early inequity in development can set a child further and further behind his or her peers. Conversely, ECD interventions are some of the most effective in improving equity.

Figure 1. Early synapse formation and pruning



Source: American Pink (2016).

A child's brain requires nutrition, stimulation, and protection to develop properly.<sup>5</sup> The effects of nutrition and stimulation have been the subject of a number of studies in recent years, and increasingly scientists are analyzing the effects of child abuse and neglect on a child's brain development. Figure 2 shows brain scans of a child in the U.S. that suffered from extreme neglect in comparison with a child who has not—the loss in development potential is painfully evident.

<sup>1</sup> Denboba et al. (2014).

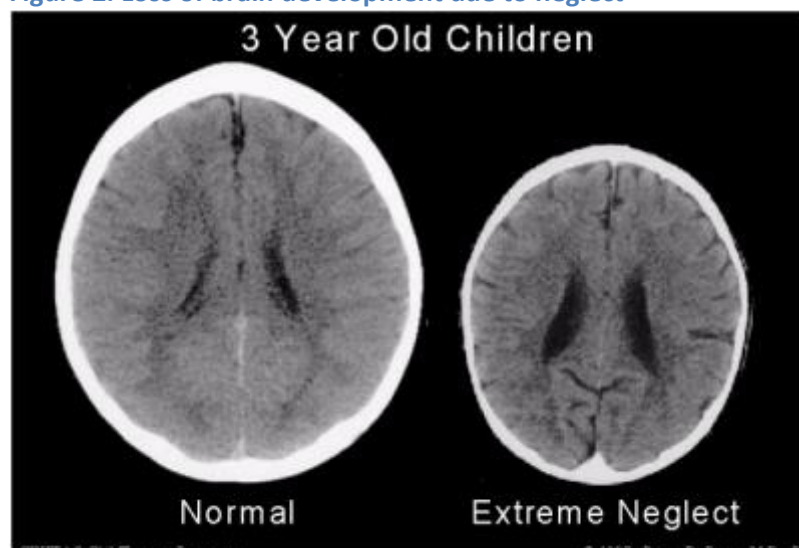
<sup>2</sup> Tanner et al. (2015).

<sup>3</sup> Atinc et al. (2014).

<sup>4</sup> UNICEF (2001).

<sup>5</sup> Lye (2016).

Figure 2. Loss of brain development due to neglect



Source: Perry and Pollard (1997).

The new Sustainable Development Goals (SDGs) demonstrate the global acknowledgement of the importance of a child's development in the first five years of life to individuals, societies, and economies. The brain science makes a clear argument for urgent action on ECD, which the global community has recognized in the SDGs.

#### Box 1. SDGs directly related to ECD

- |             |   |
|-------------|---|
| <b>2.2</b>  | 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       |
| <b>3.2</b>  | By 2030, end preventable deaths of newborns and children under 5 years of age   |
| <b>4.2</b>  | 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 |
| <b>16.2</b> | End abuse, exploitation, trafficking and all forms of violence against and torture of children  |
| <b>16.9</b> | By 2030, provide legal identity for all, including birth registration   |

Significant challenges remain in improving the lives of young children globally despite immense progress in child survival and nutrition since 2000. Table 1 shows the countries with the highest figures among some critical outcomes, which ECD interventions can help to ameliorate. Notably, out of approximately 159 million children under five who are stunted worldwide,<sup>6</sup> 69 million (43 percent) live in India, Pakistan, or Nigeria.<sup>7</sup> Results for children are equally troubling once they reach primary school: primary school drop-out is above 60 percent in Mozambique, Rwanda, Ethiopia, and Madagascar.<sup>8</sup>

<sup>6</sup> IFPRI (2016).

<sup>7</sup> Most recent year 2010-2014 (UNICEF, WHO, and World Bank 2016).

<sup>8</sup> Average 2012-2014 (World Bank 2016b).



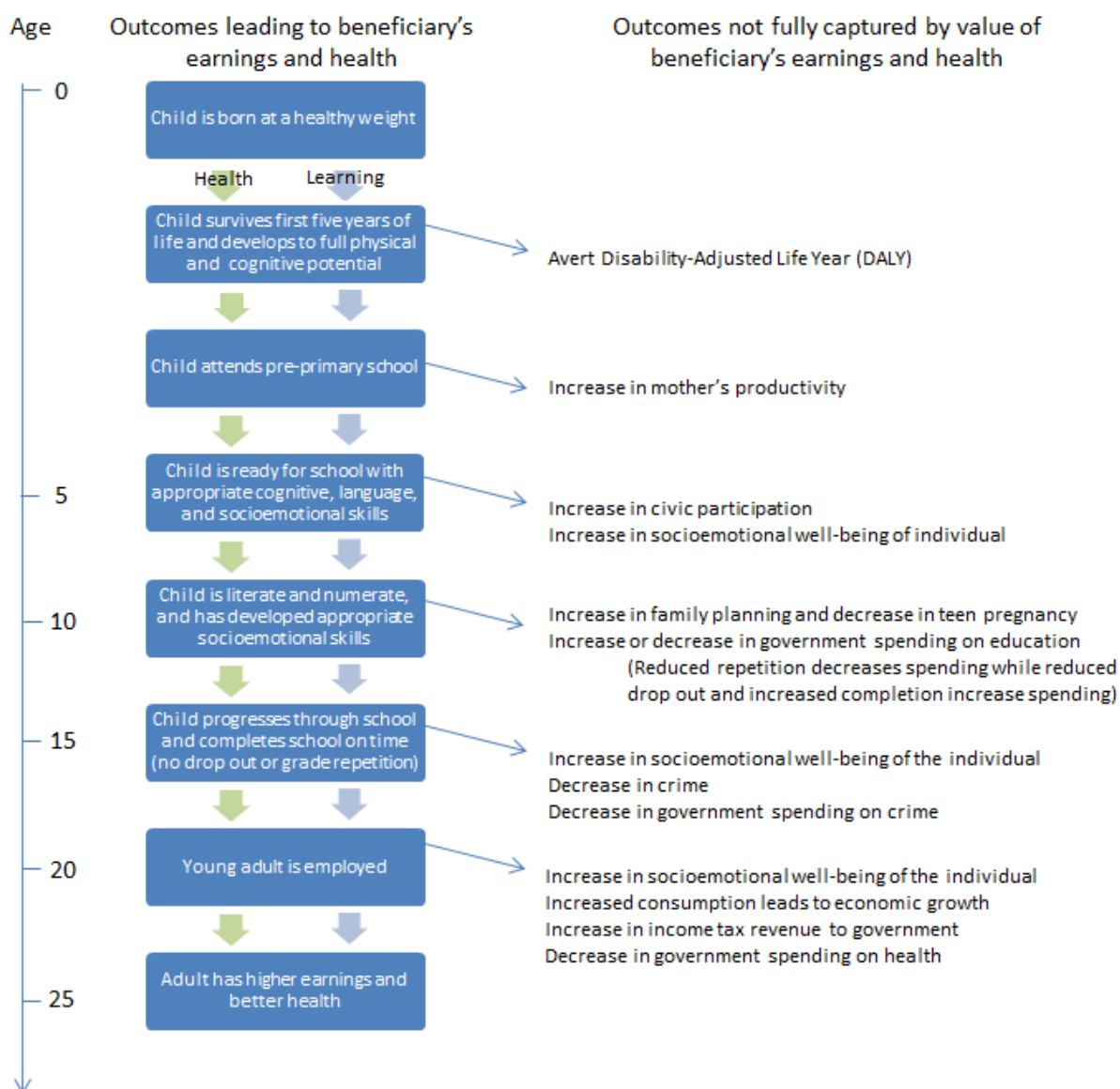
**Table 1. Statistics on key ECD indicators for top 10 countries in each category**

	Under-five deaths				Under-five stunting				Primary school drop-out			
	Rate (per 1,000 live births), 2015		Number of under-five deaths, 2015		Rate (%), most recent year 2009-14		Number of stunted, most recent year 2010-14		Rate (%), avg. 2012-14		Number of out-of-school primary-age children, most recent year 2009-14	
	Country		Country		Country		Country		Country		Country	
1	Angola	156.9	India	1,201,000	Timor-Leste	57.7	India	48,158,719	Mozambique	69.0	India	2,754,525
2	Chad	138.7	Nigeria	750,000	Burundi	57.5	Pakistan	10,683,321	Rwanda	64.8	Pakistan	2,712,568
3	Somalia	136.8	Pakistan	432,000	Eritrea	50.3	Nigeria	10,028,847	Ethiopia	63.4	Sudan	2,712,568
4	Central African Republic	130.1	Congo, Dem. Rep.	305,000	Papua New Guinea	49.5	Indonesia	8,772,061	Madagascar	60.4	Ethiopia	2,123,670
5	Sierra Leone	120.4	Ethiopia	184,000	Madagascar	49.2	China	7,411,605	Chad	55.5	Indonesia	1,900,096
6	Mali	114.7	China	182,000	Guatemala	48	Ethiopia	5,833,972	Central African Republic	53.4	Tanzania	1,715,379
7	Nigeria	108.8	Angola	169,000	Yemen	46.5	Congo, Dem. Rep.	5,632,958	Sierra Leone	52.2	Niger	1,233,332
8	Benin	99.5	Indonesia	147,000	Pakistan	45	Bangladesh	5,549,928	Burundi	51.5	Mali	1,029,672
9	Congo, Dem. Rep.	98.3	Bangladesh	119,000	Laos	43.8	Philippines	3,342,674	Malawi	50.9	South Sudan	1,022,073
10	Niger	95.5	Tanzania	98,000	Mozambique	43.1	Tanzania	3,176,922	Syria	45.4	Burkina Faso	956,718

Sources: UNICEF, WHO and World Bank JME dataset; WHO database; World Bank WDI database; UIS database.

In addition to the intrinsically valuable reduction in child death and child stunting, ECD interventions can have extrinsically valuable positive effects on later-life outcomes, primarily through the participant's improved school performance and later earnings. Figure 3 demonstrates the chain of impact on the individual via the school and earnings pathway, as well as potential positive externalities to the individual, mother, society, economy, and government.

**Figure 3. The potential impacts of ECD interventions over a child's lifespan'**

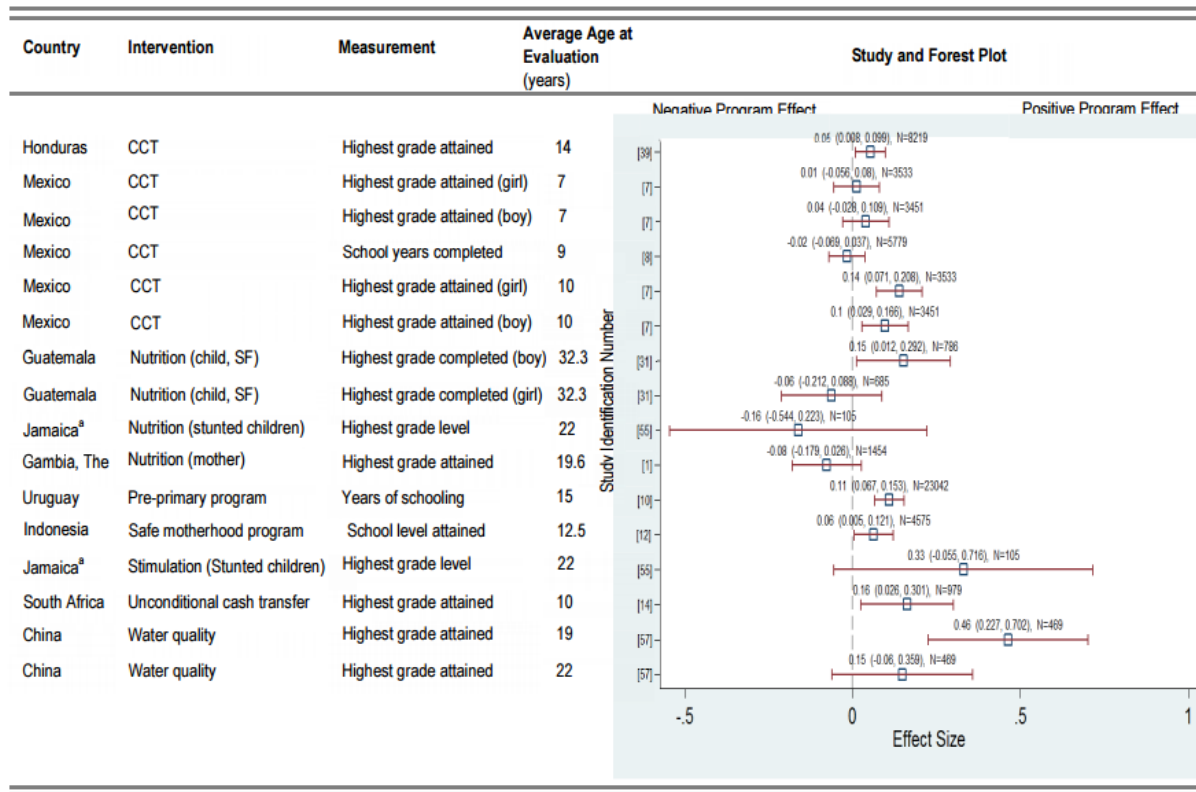


Source: Authors' elaborations.

**ECD interventions (other than nutrition interventions alone) have been shown to have statistically significant effects on years of school attained and student learning; however, findings are heterogeneous.** Examining the evidence of ECD interventions on schooling outcomes, a recent World Bank review found 55 rigorous impact evaluations (based on 25 interventions) that measure the effects

of early childhood interventions in low- and middle-income countries on later-life outcomes.<sup>9</sup> Sixteen evaluations examined the effects of ECD interventions—including cash transfer, nutrition, pre-primary, parent education, and water quality interventions—on school years attained. Eight of the 16 interventions had significant effects, with an average effect size of 0.15 (Figure 4). To put this into context, a pre-primary intervention in Uruguay had an effect size of 0.11 on years of schooling, which meant that children who participated in the program attended 0.79 more years of school by the time they were 15 than peers who had not participated.<sup>10</sup>

**Figure 4. Effects of ECD interventions in low- and middle-income countries on school years completed**



Note: The forest plot describes standardized mean difference, 95 percent lower and upper bound confidence interval in parentheses, and sample size (N = number). The standard mean difference and confidence interval were calculated by Comprehensive Meta-Analysis software. Bracketed numbers correspond to numbered studies in References. SF = Supplementary feeding.

a. For Jamaica study [55], the stimulation compares "stimulation only + stimulation and supplementation" and "no intervention + supplementation only."

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Source: Tanner et al. (2015).

Fewer evaluations examine the effects of ECD programs on learning and school performance, though the few evaluations that exist indicate positive results. An early stimulation program in Jamaica, an early stimulation and nutrition program in Chile, and a preschool program in Argentina all demonstrated impacts on academic achievement in reading and math.<sup>11</sup> Three other evaluations analyzed impacts of nutrition programs alone on academic achievement, and found no significant effects.<sup>12</sup>

<sup>9</sup> Tanner et al. (2015).

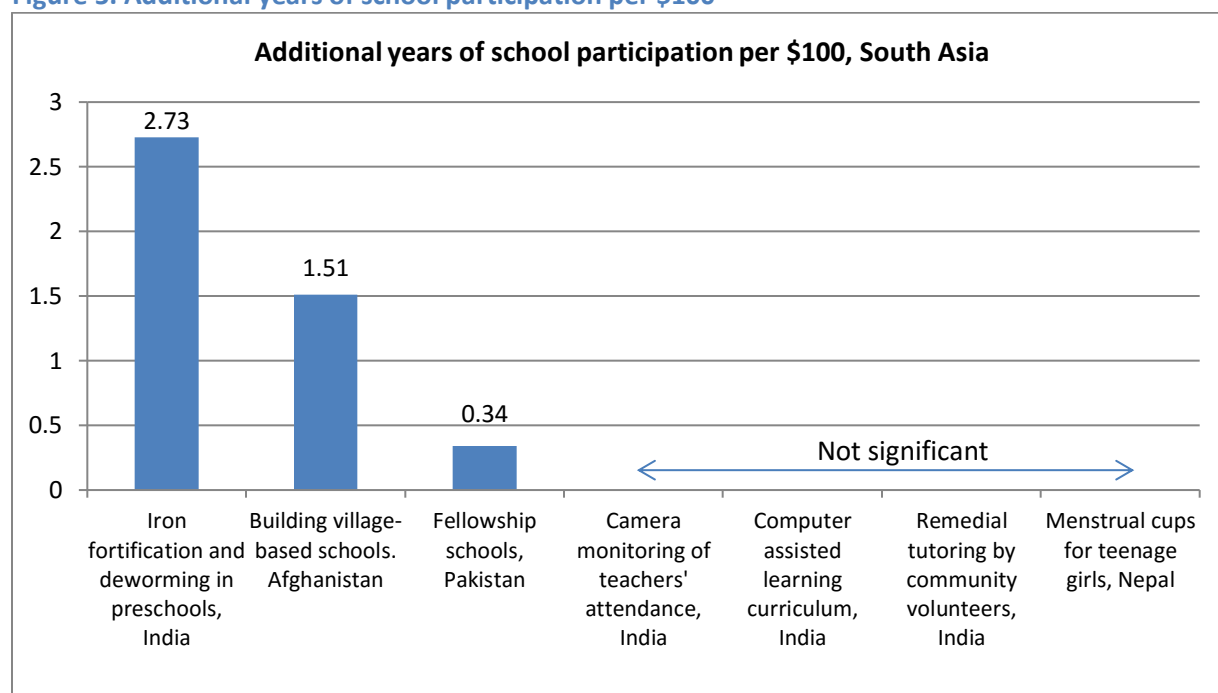
<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

Despite these heterogeneous effects, ECD interventions may be a relatively promising method to increase school outcomes in comparison with other types of interventions. Figure 5 demonstrates the results of a review by the Abdul Latif Jameel Poverty Action Lab (J-PAL) of the most cost-effective methods to increase years of school participation. Of the seven interventions analyzed in the South Asia region, the intervention carried out during preschool was the most cost-effective. For every \$100 spent on a preschool deworming plus iron fortification program in India, years of schooling increased by 2.73 years.

**Figure 5. Additional years of school participation per \$100**



Source: J-PAL (2016).

Finally, the existing information linking ECD interventions with adult earnings indicates very high potential returns.<sup>13</sup> One evaluation has measured the direct effect of ECD interventions on later-life wages: an early stimulation program in Jamaica for stunted children increased adult earnings by 25%.<sup>14</sup> Every dollar invested in reduction of stunting can yield between a \$15 and nearly \$140 return in adult earnings alone,<sup>15</sup> while a dollar invested in quality preschool can yield to a return of between \$6 and nearly \$18 in increased adult earnings.<sup>16</sup>

**If quality can be ensured, the case for investing in ECD is strong. Ongoing performance management, outcome evaluation, service provider incentives and coordination across programs will be critical to ensuring all ECD interventions have maximum impacts on children's development.** The heterogeneity in outcomes of ECD interventions described previously is in large part due to the fact that quality of

<sup>13</sup> Since these are largely based on evaluations from high-income countries, further benefit-cost analysis from low and middle-income context would be beneficial.

<sup>14</sup> P. Gertler et al. (2014).

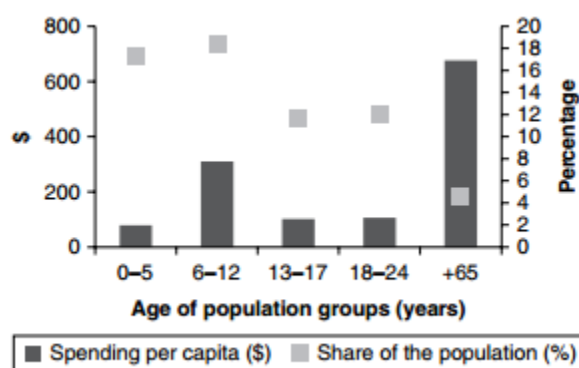
<sup>15</sup> Hoddinott, Rosegrant, and Torero (2012).

<sup>16</sup> Engle et al. (2011).

service delivery is fundamental in ECD interventions; enrolling children in poor-quality environments can have significant negative impacts on their development. ECD interventions are also often based on behavior change, for example parents' interactions with their children, and interventions for behavior change are highly context dependent.

**Achieving the ambitious early childhood-related SDGs will require substantial increases in the volume and effectiveness of resources.** Thus far, despite the fairly compelling evidence on the benefits of ECD interventions and the strong economic and equity arguments for investing in the early years, few large-scale programs in the developing world are supporting the early development of all children. Many of the ECD services in developing countries fall terribly short of providing the quality necessary to ensure that children develop to their full potential.<sup>17</sup> Data on financing for early childhood are quite sparse, and for the few developing countries for which data are available, the amount of resources directed toward ECD programs is often insufficient. In particular, children ages 0 to 5 often receive less spending relative to other age groups. For example, Figure 6 shows Guatemala's spending per capita by age group; children ages 0 to 5 receive the smallest share of funding.

**Figure 6. Guatemalan government spending by age group**



Source: Berlinski and Schady (2015).

**Programs catering to the very young are typically operated at small scale and often financed by external donors or nongovernmental organizations (NGOs). But these investments, too, remain limited.** Although the \$3.4 billion the World Bank has invested in ECD between 2001 and 2013 is commendable, it is equivalent to just 4.4 percent of the overall portfolio of the human development network over that period. However, prioritization appears to be increasing: the World Bank investments in ECD rose to 11 percent of the human development portfolio in 2013.<sup>18</sup> A recent partnership between the World Bank and UNICEF, the ECD Action Network (ECDAN), promotes an increased focus on the early years within the broader global development agenda.

**While domestic resources and international aid have grown significantly over the past decade, they will be insufficient to meet the estimated cost of achieving the SDGs.** No complete estimation of the financing gap to achieve the ECD SDGs exists, largely because it is challenging to combine required spending across all sectors of ECD. Efforts are underway, however, to improve the availability of

<sup>17</sup> Araujo et al. (2013); see also the “report card” on ECD in Berlinski, and Schady (2015).

<sup>18</sup> Sayre et al. (2015).

information on ECD costs.<sup>19</sup> One estimate suggests that countries should be spending 0.5 to 1 percent of their GDP on early childhood education and 0.3 to 0.5 percent on maternal and child health, though spending recommendations are highly context- and quality-specific.<sup>20</sup> The current scale of inadequate outcomes is, however, sufficient justification for creative solutions to increase and improve the efficacy of investment in ECD.

**The development landscape has begun to shift dramatically with new actors and financing mechanisms playing an increasing role in financing for development. Private and nontraditional finance for development has risen significantly, and there is increasing recognition of the associated investment opportunities for the private sector in support of the longer-term agenda of the SDGs.** Donors, private actors, and domestic stakeholders are increasingly exploring innovative mechanisms<sup>21</sup> to leverage new sources of finance and to link financing and results. In the last 15 years, a number of innovative financing mechanisms for international development, which address the volume of finance for development, the effectiveness, or both, have been designed and implemented. The mechanisms include innovative sources and innovative delivery mechanisms; the latter category comprising of non-contingent and contingent disbursement mechanisms. Innovative financing is estimated to have mobilized nearly \$100 billion and grown by approximately 11 percent per year between 2001 and 2013.<sup>22</sup> While there is no explicit breakdown on the use of innovative financing for early childhood, the education and health sectors have thus far received a smaller share of such financing—four and 24 initiatives, respectively, out of 348 (for which sector data were available), according to one study.<sup>23</sup> The average size of the innovative instruments used for health, however, was relatively high compared with other sectors<sup>24</sup> and may actually increase substantially in coming years due to some large global initiatives in health.<sup>25</sup>

## **Recommendation 2: Outcome-based financing mechanisms would benefit ECD interventions that require behavior change, such as breastfeeding, hygiene, and parent education.**

The barriers to delivering quality, equitable ECD services vary across interventions. In some cases, there is strong evidence of what is working and simply need greater funding. In other cases, programs are not delivering the outcomes because of a failure to adapt the program to the local context, misaligned

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<sup>19</sup> Putcha and van der Gaag (2015) and forthcoming work on costing by the Brookings Institution and the World Bank Strategic Impact Evaluation Fund described further on in this report.

<sup>20</sup> Vargas-Baron (2008).

<sup>21</sup> Defined as “new products, the extension of existing products to new markets, and presence of new types of investors” (Guarnaschelli et al. 2014).

<sup>22</sup> Guarnaschelli et al. (2014).

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

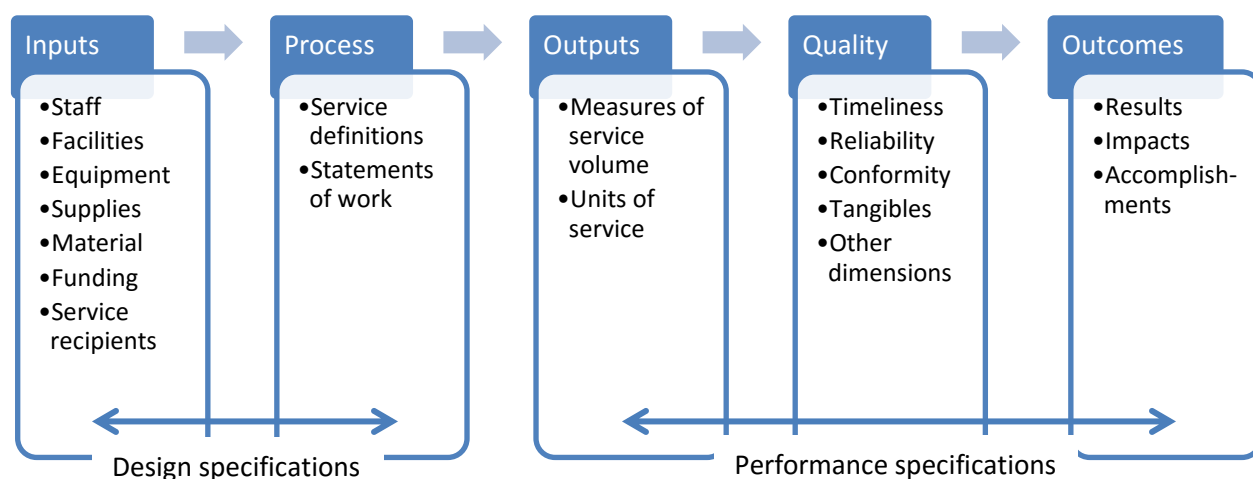
<sup>25</sup> The Global Financing Facility (GFF), launched in July 2015, includes \$12 billion in domestic and international, private and public funding that has been aligned to country-led, five-year investment plans for women’s, children’s, and adolescents’ health in the four GFF front-runner countries of the Democratic Republic of the Congo, Ethiopia, Kenya and Tanzania. “This partnership between the United Nations, the World Bank Group, and the Governments of Canada, Norway and the United States expects to mobilize between \$3 to \$5 from the private capital markets for every \$1 invested into the GFF.” (World Bank 2015b).

incentives for service providers, or a myriad of other reasons.<sup>26</sup> A number of new models of financing services have been developed in an attempt to ameliorate these barriers. In determining the best financing mechanism for a given intervention, the first questions should always be “What are the barriers to achieving outcomes?”

### *Inputs versus Results*

**Payment by Results mechanisms, where some portion of payment for social services is tied to service outputs or outcomes, have become increasingly popular in domestic financing and international development finance.** Figure 7 outlines the range of input measures to outcomes measures in social services. At the far left, *input* measures include such things as staff, equipment and materials, towards the right end *quality* measures include behaviors such as timeliness and reliability of service providers, and at the far right *outcome* measures consider results and impact of social service interventions.

**Figure 7. Spectrum of service inputs to outcomes**



Source: Martin (2005).

Tying some portion of payments to outputs or outcomes (rather than entirely to inputs) through Payment by Results (PbR) mechanisms is intended to create beneficial incentives, encourage performance management, and provide transparency and accountability, beyond what simply measuring outputs, quality, and outcomes may be able to accomplish. In traditional input-based financing, the agent’s activities are determined upfront by the funder and often any changes must go through lengthy processes to be approved. In contrast, when services are financed based on outputs or outcomes, the agent has the freedom to rapidly adapt their activities as they see fit. PbR mechanisms are intended to improve the quality of services, but may cause the most significant and lasting impact through data system strengthening. By encouraging the development of performance management systems, PbR can lay the foundation for adaptation and improvement beyond the contract duration.

<sup>26</sup> See analysis of challenges in maternal and child health services and potential tools to solve them in USAID (2015).

**Table 2. Payment by Results mechanisms**

	<b>Contingency for... (primary risk holder)</b>	<b>Examples</b>
<b>Results-based Aid (RbA)</b>	National government (though the national government often arranges contingency for service providers as a result)	Contingent loans, Cash-on-Delivery Aid, World Bank's Program for Results lending tool, and some of the U.K. Department for International Development's Payment by Results programs
<b>Results-based Financing (RbF)</b>	Service providers or local governments	Argentina's Plan Nacer, Global Partnership on Output-based Aid (GPOBA), and some of the U.K. Department for International Development's Payment by Results programs
<b>Prizes and awards</b>	Technology developers	Advance market commitments
<b>Conditional cash transfers (CCTs)</b>	Individuals in target population	PROSPERA program in Mexico
<b>Social and development impact bonds (SIBs and DIBs)</b>	Non-state investors	ONE Service SIB in the U.K., Educate Girls DIB in India

*Adapted from: Guarnaschelli et al. (2014), Center for Global Development and Social Finance (2013), and Fritzsche et al. (2014).*

Over the last two decades a variety of PbR mechanisms have arisen, which can be categorized based on the agent that bears the financial risk if the service does not achieve the expected results (Table 2). PbR mechanisms include Results-based Aid (RbA), Results-based Financing (RbF), prizes and awards, conditional cash transfers (CCTs), and social and development impact bonds (SIBs and DIBs). Of these mechanisms, RbF in particular is increasingly being used for ECD services, primarily driven by the rise of RbF for health services. Box 2 outlines the use of RbF in ECD to date.

#### **Box 2. Existing results-based financing for ECD in low- and middle-income countries**

No comprehensive information exists on the use of results-based financing (RbF) for ECD interventions in low- and middle-income countries. A recent review of RbF in education identified two programs financing early childhood education as part of broader education portfolios: the Cordaid's Contracting Primary schools for Performance program in Malawi and the U.K. Department for International Development International Girls' Education Challenge Fund in various countries.<sup>27</sup> The RbF Health program at the World Bank is financing maternal and child health programs in Zambia, The Gambia, Nigeria, Lao PDR, Bangladesh, Panama, Argentina, and Ghana, among others.<sup>28</sup> The Global Financing Facility in Support of Every Woman Every Child was launched in July of 2015 and will provide grant funding for maternal and child health through primarily RbF approaches.<sup>29</sup> Finally, the World Bank's new initiative to expand RbF in education (Results in Education for All Children, or REACH) has funded one country program to date, which did not include early childhood interventions.<sup>30</sup>

<sup>27</sup> Results for Development Institute (2016).

<sup>28</sup> RBF Health (2016).

<sup>29</sup> World Bank (2015b).

<sup>30</sup> World Bank (2016b).



**In impact bonds, a form of Payment by Results that often have a stronger focus on outcomes, non-state investors provide upfront capital to service providers and are repaid by an outcome funder contingent on achievement of results.** In other words, impact bonds are a RbF contract, where an investor provides equity financing for the provider and absorbs the financial risk of the service performance. In some impact bonds, outputs rather than outcomes are chosen as metrics, though on the mechanism intended to be tied to outcomes.

Two terms have arisen to describe two different outcome funding scenarios in impact bonds. In a social impact bond (SIB), a government actor is the outcome funder.<sup>31</sup> In a development impact bond (DIB),<sup>32</sup> a third party partially or fully supplements government payments for outcomes. If the national government provides or supplements outcome funding rather than external donors alone, outcome-based financing has the potential to greatly increase political will and the government's performance management capabilities. These changes could result in larger systemic change and potentially lead to greater sustainability of the program.

### **Box 3. Existing impact bonds for ECD worldwide**

As of December 2016, there were 67 SIBs contracted in high-income countries, two DIBs<sup>33</sup> contracted in middle-income countries, and none in low-income countries. Of the 67 SIBs in high-income countries, nine provide services to children in their early years, across four countries (U.S., Canada, U.K., and Australia). Two support preschool services, six finance child welfare services related to keeping families together and adoption, and one supports nurse home visiting. While not all contracts are signed, in March of this year, the Departments of Social Development and Health of the Western Cape province of South Africa committed 25 million rand (\$1.62 million) in outcome funding for three SIBs for maternal and early childhood outcomes.<sup>34</sup> Outcomes include “improved antenatal care, prevention of mother to child transmission of HIV, exclusive breastfeeding, a reduction in growth stunting, and improved cognitive, language and motor development.”<sup>35</sup> An impact bond is currently being developed in the state of Rajasthan in India that would pay private health clinics for reproductive, maternal, and child health outcomes, targeting individuals in the second and third income quintiles. Finally, Grand Challenges Canada, Social Finance U.K., and the MaRS Centre for Impact Investing are working in Cameroon 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.

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<sup>31</sup> 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 article, in that this article defines “social impact bonds” to be arrangements where payments to investors are dependent on, and positively correlated with, positive outcomes. For further discussion, see Gustafsson-Wright et al. (2015). For a number of uses of the term that do not fit the commonly used definition, see Tomkinson (2015).

<sup>32</sup> Generally, this term has been used to refer to application in a developing country context (Center for Global Development and Social Finance 2013).

<sup>33</sup> The DIB contracts finance programs to improve girls' education in India and coffee production in Peru (Instiglio 2015, Financial Alliance for Sustainable Trade 2015).




<sup>34</sup> Silicon Cape Initiative (2015).

<sup>35</sup> Bertha Centre for Social Innovation (2016).

Careful consideration should be paid in selecting the appropriate PbR financing tool; social impact bonds, development impact bonds, results-based financing (RbF), or results-based aid (RbA), for a given intervention. **Services that would benefit from the incentives, adaptability, or added accountability may warrant the use of PbR mechanisms rather than input-based financing. In cases where upfront risk capital is needed, involvement of the private sector investor could add value or a particularly intensive concentration on outcomes is needed, then impact bonds may be the most appropriate mechanism.** Table 3 describes the relative merits of these instruments in greater detail. The principal differences between impact bonds and RbF/RbA are that impact bonds provide upfront capital to service providers, may increase performance management with the involvement of the external investor, may be more suited to outcome-based rather than output-based payments, and have higher transaction costs. DIBs are also the least likely to improve government accountability and monitoring and evaluation systems, because the government is not involved in the core contracts. However, the government may be involved through Memorandums of Understanding, by overseeing contracting, or by providing data. In contrast to the other mechanisms, SIBs have a higher appropriation risk, or risk that government will not follow through on their commitment to pay for outcomes. This risk is often mitigated by the government agency appropriating funding at the start of the program and placing it in an external account.

Table 3. A Comparison of Potential Benefits, Challenges and Costs for Payment by Results Mechanisms

		Social Impact Bonds	Development Impact Bonds	Results-based Financing	Results-based Aid
Potential Benefits	Provides upfront capital for service providers	●	●	○ / ●*	○ / ●*
	Drives performance management	●	●	○	○
	Improves quality of programs	●	●	○ / ●†	○ / ●†
	Incentivizes collaboration between public and private sector	●	○	○	○
	Creates government accountability	●	○	○ / ●‡	●
	Shifts government focus to outcomes	●	○	○ / ●‡†	○ / ●†
	Reduces risk for government	●	○	○ / ●‡	○
	Reduces risk for non-state service provider	●	●	○ / ●‡	●
	Builds a culture of monitoring and evaluation	●	○	●	○
	Improves local/global knowledge of what works	●	●	●	●
Potential Challenges and Costs	Intermediary/transaction costs	●	●	○	○
	Evaluation costs	●	●	●	○
	Legal fees	●	●	○	○
	Risk of corruption in provider procurement, investor selection or terms	○	○	○	○
	Risk that underestimation of outcomes discourages investment in the sector	●	○	○	●
	Appropriation risk	●	○	○	○
	Perverse incentives	○	○	○	○
	Sustainability risk	○	●	○	●

 highly likely  
  somewhat or potentially  
  unlikely

\* Dependent on case or instrument

† Dependent on if contingency is related to outputs or outcomes

‡ Dependent on whether contingency is for providers or local government

Source: Gustafsson-Wright and Gardiner (2016).

Though financing mechanisms can be matched to interventions based on theory, limited rigorous evidence exists isolating the effect of an RbF mechanism or an impact bond from the intervention itself. Two evaluations exist to date that have isolated the effect of RbF. The Rwandan government implemented a RbF initiative in health, providing performance payments to health clinics based on 22 key indicators, including maternal and early childhood health indicators.<sup>36</sup> In contrast to districts without RbF, districts that used RbF demonstrated an increase in the number of institutional deliveries by 23 percent and an increase in the probability of health center visits for preventive care for children aged 0 to 23 months by 56 percent and for those aged 24 to 59 months by 132 percent.<sup>37</sup> Using the RbF mechanism was also found to be protective of wasting with an adjusted odds ratio of 0.43 percent,<sup>38</sup> compared with districts that had traditional input-based financing. However, “no improvements were seen in the number of women completing four antenatal care visits or of children receiving full immunization schedules.”<sup>39</sup> Similar mixed results were found for a health and education intervention using RbF in Indonesia. The evaluation in Indonesia compared incentivized villages (20 percent of funding for health and education programs was based on performance across 12 targets) and non-incentivized villages and found an improvement in eight health indicators in incentivized villages, particularly reductions in malnutrition after 18 months; however, the difference disappeared after 30 months. Furthermore, there were no differences between the incentivized and non-incentivized villages in terms of education outcomes. Despite mixed evidence of the effects of RbF, both incentivized and non-incentivized villages had positive effects on health and education versus the control.<sup>40</sup> Qualitative reviews have also been inconclusive on RbF’s effects. A recent review of the U.K.’s domestic and international RbF portfolio across sectors concludes that there is still too little evidence to determine if RbF is effective.<sup>41</sup> These mixed findings indicate a need for process evaluations that examine why RbF is effective in some instances and not in others. New evaluations from the World Bank’s RBF Health initiative (see Box 2) are testing the isolated impact of the RbF mechanism, as was done in Rwanda and Indonesia, and will help expand the knowledge base about its appropriate application.<sup>42</sup>

### *Results: Outputs versus Outcomes*

All PbR mechanisms make payments at least partly tied to outputs, delivery quality indicators, or outcomes. The goal of designing these metrics should be to choose the earliest possible indicator of outcomes. RbF or impact bond contracts where payments are tied to outcomes rather than outputs are often referred to as outcome-based financing. Evidence to date shows that outcome-based financing is best suited to services where efficacy depends on human interaction or process quality, often resulting in complex inputs and simple outcomes, and where sufficient proxies do not exist.

**In ECD, outcome-based financing is likely best suited to interventions that require behavior change, such as breastfeeding, hygiene, and parent education** (Figure 8). These interventions require rapid

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<sup>36</sup> Sekabaraga et al. (2011).

<sup>37</sup> Basinga et al. (2011).

<sup>38</sup> Binagwaho et al. (2014).

<sup>39</sup> Basinga et al. (2011).

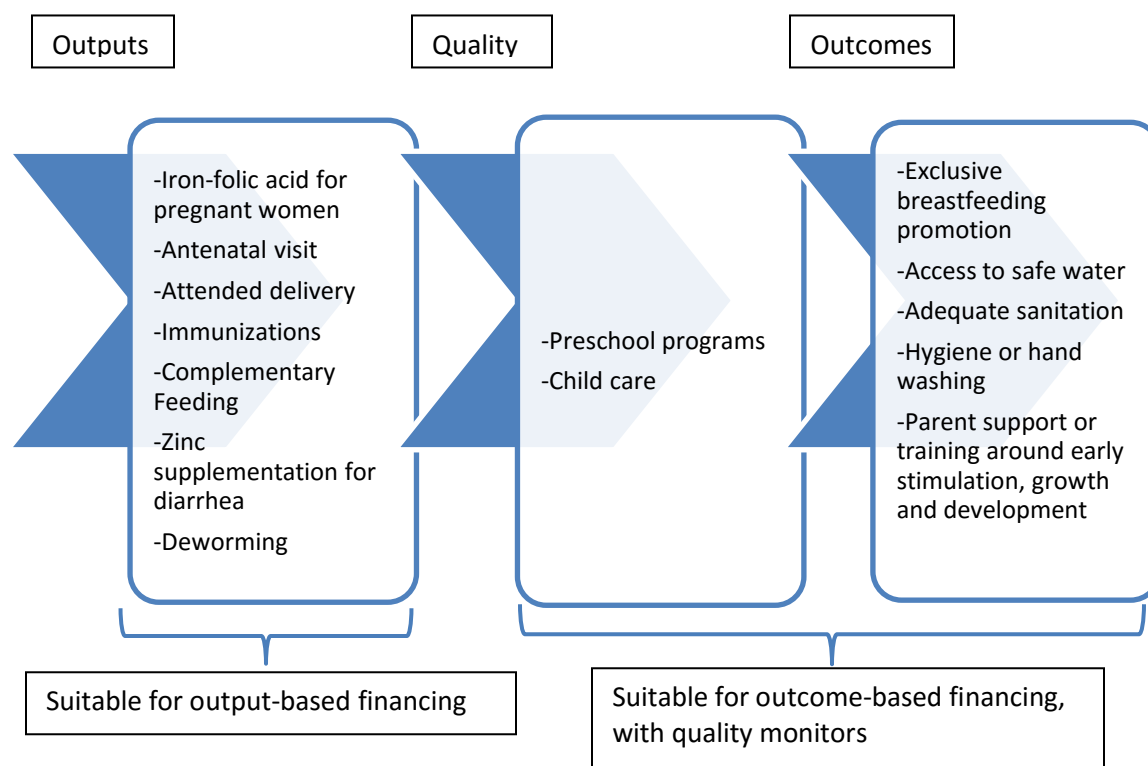
<sup>40</sup> Olken et al. (2012).

<sup>41</sup> DfID (2014).

<sup>42</sup> RBF Health (2016).

adaptation depending on context and do not have good output proxy measures. Measures of process quality have been shown to be strong predictors of outcomes for preschool programs and child care, however outcome-based financing would be the ideal financing method to ensure outcomes are achieved. In these cases, measures of process quality could be used as interim monitoring mechanisms. Other ECD interventions could be better suited to financing based on outputs, where there is a strong indication that outputs predict outcomes. The majority of RbF in ECD thus far (Box 2) has been based on outputs and has been used to finance the interventions at the left of the spectrum in Figure 8, as it is well-suited to do. Outcome-based financing could add value for interventions with unresolved delivery barriers, interventions that require a great deal of flexibility, or interventions that are relatively untested.

**Figure 8. ECD interventions by earliest predictor of outcomes**



Source: Authors' elaborations.

As noted in the first section of this paper, some ECD interventions have not consistently produced long-term effects in all contexts. **Outcome-based financing could help reduce the heterogeneity in efficacy of process-dependent ECD interventions, which could lead to increased financing.** Specifically, the following barriers could be overcome through outcome-based financing:

1. *Gaps in knowledge on effective intervention design*, because providers are allowed the flexibility to innovate to achieve a given outcome and are required to evaluate outcomes.
2. *Low quality of provision*, because outcome monitoring and service flexibility could improve the quality of services.
3. *Inadequate and unreliable financing* (lack of political will), because the guarantee of value for money could encourage further government investment. Estimating the potential for new funding is an area for further research.

The design of contracts will depend greatly on the various barriers that need to be resolved. Existing RbF financing mechanisms may be unable to finance based on outcomes and outcome-based financing often creates greater capital gaps than traditional RbF. In these instances, impact bonds may be an applicable tool.

**Outcome-based financing may be particularly well-suited to ECD because there is greater flexibility in provision and because governments are more risk-averse in funding ECD relative to primary and secondary education.** ECD services are often not part of the typical government mandate, and therefore governments are less willing to pay for services when there are heterogeneous impacts.

**Despite its benefits, outcome-based financing is not without costs, so careful consideration should be taken to ensure that the benefits are worthwhile.** Outcome-based contracts can be more difficult for governments to arrange, in particular if they are being implemented for the first time, which can result in high transaction costs to the government. Outcome-based contracts also create additional risk for the service provider; even in an impact bond where investors bear the financial risk of poor performance, service providers bear an immense reputational risk. Nevertheless, the costs associated with outcome-based financing may be well worthwhile if such contracting leads to systemic changes such as a broader shift in focus towards outcomes, improved systems of monitoring and evaluation and better collaboration across public and private sectors as well as across government.

### **Recommendation 3: Five factors are critical for the feasibility of outcome-based financing for ECD: legal feasibility, political feasibility, outcome funder administrative capacity, service provider capacity, and the existence of committed champions.**

After identifying that an outcome-based financing mechanism is appropriate, a number of feasibility criteria must be in place for the arrangement to be viable. If these factors are not present, an alternate financing method should be explored. **It is important to note that in identifying feasible contexts, it is not necessary to consider entire countries; in fact, the chances of success are likely to be improved when working with state or local government.**

**Determining legal feasibility of paying for results is an essential preliminary step in establishing outcome-based financing schemes.** Governments should be asked a range of questions regarding funding and procurement, government structure, legal frameworks, and the engagement of service providers to determine feasibility. The existence of RbF or impact bond contracts in a country is an indication that this form of financing is legal and paves the way for similar contracts. Box 2 and 3 describe existing RbF and impact bond contracts for ECD. Laws on public-private partnership (PPP) regulation may also include provisions for outcome-based financing. A recent study examined the government and legal framework for impact bonds in seven countries, and provides some lessons for assessing the political and legal framework for outcome-based financing (Table 4).

**Table 4. A Legal Roadmap for outcome-based financing (selected questions)**

Would the independent evaluator's report be binding to the government (i.e., assuming that the government is committed to accepting the outcome of this report, could the government challenge such a report)?
What is the general structure of the state at all jurisdiction levels (i.e. federal, provincial, local)? What degree of autonomy do government entities have for contracting?
Do applicable public procurement rules authorize the implementation of outcome-based financing schemes ( i.e., in which payment from the government would be entirely contingent on the organization achieving measurable social outcomes)?
How does the government of the jurisdiction contract social services? Is public procurement subject to special rules, or would it be subject to general and commercial law rules? Is there flexibility in the performance and supervision of contracts by government?
May an intermediary tender or private entity be responsible for both design and implementation stages, or would there be impediments because of conflict of interests? Would it be possible to combine direct contracting or PPPs with public procurement and, thus, avoid the conflict of interest issue?
Does annual budgeting apply? If so, are there legal mechanisms to ensure future payments? Can these mechanisms commit future administrations? Where the law does not readily allow for future payments, could trust structures or special vehicles be set up to make up for any shortfalls in the law?
Assuming that the private or external entity signs a contract with the government, would the law allow for the flexibility and autonomy to implement and deliver services? Would the contract with the government restrict the choice of service provider made by the intermediary?

*Source: Instiglio and Thomson Reuters Foundation (2014).*

Political feasibility is the second critical criteria for outcome-based financing. Countries with recently established mandates for ECD provision are particularly well suited for efforts to expand ECD. For example, in Kenya, the conversation around an instrument similar to a DIB would not have started if access to preschool had not been added as a right in the constitution.<sup>43</sup> The added complications of outcome-based financing arrangements will require additional political commitment, but may provide greater rewards if verified outcomes are achieved.

**The outcome funder's administrative capacity to design contracts, procure providers, regulate implementation, and disburse outcome funding are critical to the viability of the program.** The context will vary greatly based on whether the outcome funder is a donor, high-income country government, or low- or middle-income country government. Experience with other RbF and PPP contracts may provide a foundation for successful implementation. Capacity-building is possible; however, if administrative capacity is unlikely to reach sufficient levels, a less complicated financing mechanism is recommended.

**Adequate service providers with sufficient capacity to deliver high-quality services must exist for the program to be feasible. Outcome funders may look to non-state providers to reach the most marginalized, where government capacity is often insufficient.** Non-state providers may improve equity, expand access, enhance learning outcomes, improve efficiency, increase choice, expand available financing, and reach marginalized populations.<sup>44</sup> Outcome-based financing is also likely to be

<sup>43</sup> Wattanga (2015).

<sup>44</sup> Barrera-Osorio et al. (2012); LaRocque (2011); World Bank et al. (2014).

best-suited to contexts where there is a relative proliferation of non-state providers because there will be more flexibility within the system to use an innovative financing mechanism and because there is often limited information on the quality of non-state providers.

**Finally, finding a champion to shepherd the effort in any context is highly important to the successful initiation and implementation of any payment by results financing mechanism and perhaps even more for social impact bond transactions.**

Appendix 1 provides an initial scan of relevant feasibility criteria in 11 countries with high need for improvement in ECD outcomes. Where financing based on outputs or outcomes is not feasible and input-based financing is used, outputs, quality, or outcomes should still be measured and used for performance management.

**Recommendation 4: Five components will be essential to carry out effective outcome-based financing: comprehensive outcome measurement, outcome benefit and cost data, effective contract management, real-time performance management, and rigorous evaluation.**

Determining what gaps and challenges need to be addressed (i.e. insufficient capacity or low quality) is allows for proper selection of financing mechanisms, and should also be the starting point for the design and implementation of the program.

**Although outcome-based financing contracts may have many of the benefits described above, these benefits will not accrue without appropriate contract design.** Further, there are some potential risks for perverse incentives for all of the parties. The following section outlines the design considerations to ensure effective outcome-based financing for ECD. These considerations are primarily the responsibility of sector experts (including the research community), and the process for the contracting government may be very simple. In fact, there can be a range of commitment requirements for government agencies interested in outcome-based financing. On the lowest end of the spectrum, as mentioned previously, the government may simply oversee the process of contracting the intermediary or service provider, or provide data. With appropriate external support, outcome-based financing could help establish systems for high-quality service provision in low capacity governments. Though the challenges are greater, the costs of poor quality services must be avoided.

#### *Outcome Measurement*

**Outcomes metrics must be measurable, meaningful, and malleable. Without involvement of ECD experts in outcome metric design, metrics could be too narrow and not cover the full spectrum of child development.** Measuring outcomes of ECD interventions has always been a challenge because of the importance of measuring outcomes across a range of development areas (physical, cognitive, language, socioemotional) and the relatively limited development of tools to measure socioemotional development in particular. Generally, health outcomes are easier to measure, while comprehensive child development is far more complex. Further, it is critical to measure outcomes across the lifespan of a child to ensure that a child reaches age-appropriate development milestones. A number of individual tools have been developed over the last several decades to measure each of the components of the



complex development of a child; however, many of these are costly and require a substantial expertise to administer. A shortlist of validated tools for measuring each of the components of the broad range of child development outcomes can be found in the annex of Gustafsson-Wright and Gardiner (2016). There have been a few efforts to develop tools that are comprehensive, lower cost, and applicable in developing country contexts. For instance, Save the Children drew upon several existing assessments to develop the International Development and Early Learning Assessment (IDELA) tool to directly measure a child's development, which completed an initial validation process in 2015.<sup>45</sup> The Measuring Early Learning and Quality Outcomes project (MELQO) has brought together a consortium of individuals and institutions working on measuring outcomes for young children to synthesize existing measurement tools into a consistent set of core measurement items, applicable in high-, middle-, and low-income countries.<sup>46</sup> The MELQO consortium has developed both a direct child assessment of development and learning and an assessment of the quality of learning environments (largely structural and process aspects of quality). The MELQO child assessment is a promising tool for population-level measures of child outcomes, though it needs further testing for external validity in each context. The process quality of preschools and child care centers could also be measured using the learning environments component of the MELQO tool as a proxy for outcomes, given the strong link between the quality of the child-caregiver interaction and child outcomes. In addition to international measures of child development, there are multiple national measurement tools that could be used, which are available in the annex of Gustafsson-Wright and Gardiner (2016).

**Table 5. Six recommended metrics over the lifespan of a child**

Metric	Age
Prevalence of low birthweight infants	Birth
Child survival	5
Stunting	5
Primary school readiness (language, cognitive, socio-emotional and physical development)	5 or 6
Literacy (reading and numeracy)	9 or 10 (4 <sup>th</sup> grade)
Socio-emotional development	9 or 10 (4 <sup>th</sup> grade)

Selection of outcome measurement tools will depend on the intervention and goals of the policymakers. To simplify the outcome-based contracting process and ensure quality, multiple outcomes could be monitored and payments tied to a subset.

#### *Outcome Pricing: A Balance of Economic Value and Provision Costs*

**Setting the appropriate price for a given outcome is a critical design point in an outcomes-based financing contract and is a combination of the value of the outcome to the individual, society, economy, and government and the price to deliver services to the target population.** In order to estimate the economic values of outcomes, some economists have calculated the beneficiary's increase in earnings as a result of the program while others have focused on savings for government as a result of the intervention. Impact bonds in high income countries have focused primarily on direct savings to the

<sup>45</sup> Pisani et al. (2015).

<sup>46</sup> Center for Universal Education (2016).

government associated with outcomes, for example reduced spending on jail bed days. Low- and middle-income countries spend much less on remediation, but the potential value to their economy of these outcomes is high. Researchers conducting benefit-cost analyses have well-developed methodologies for calculating the value of the benefits of ECD and education outcomes. It would be beneficial to policymakers if the research community were to carry out these analyses in target countries and use them to make the case for investment where appropriate.

**There is a critical need for more consistent cost data to both budget ECD programs and to ensure that outcome prices in outcome-based financing arrangements cover the cost of service provision.** There is a paucity of cost data on early childhood development interventions and the data that exist are often incomparable due to the variation in costing methodology. Van Ravens and Aggio (2008) use broad estimations of variables to approximate the cost of preschool per child per year to be 12.5 percent of per capita GNP.<sup>47</sup> Only three regional reviews of actual cost data exist, the first for 28 child care and four parenting programs in Latin American and the Caribbean,<sup>48</sup> the second for home visiting, daycare, and preschool in three countries in Latin America,<sup>49</sup> and the last for four preschool programs in Africa.<sup>50</sup> The cost of preschool as a percentage of per capita GDP in seven countries in Latin America and Africa analyzed in these reviews range from 8 percent to 61 percent, with an average of 14.7 percent of per capita GDP if Niger is excluded.<sup>51</sup> From these data, parent education home visiting programs show to be approximately half of the cost of preschool, and childcare programs are approximately 150 percent greater. Data from four countries in Africa indicate that primary education is slightly less expensive than preschool per child.<sup>52</sup> These data, however, use differing collection methodologies and run the risk of inconsistency.

**A new ECD costing template developed jointly by the Center for Universal Education and the World Bank's Strategic Impact Evaluation Fund could be disseminated and used globally across program implementers, public administrators, and program evaluators to create consistent data on ECD costs.**

There is a critical need for more consistent cost data to budget ECD programs broadly, and to ensure that outcome prices in outcome-based financing arrangements cover the cost of service provision. Particular attention needs to be paid to ensuring the most vulnerable are reached, which may require higher service costs. The Center for Universal Education at Brookings and the Strategic Impact Evaluation Fund at the World Bank, with the backing of a multi-stakeholder working group, have jointly developed a template to collect accurate and comparable cost data on early childhood interventions. This template or costing tool can be used to cost all interventions in the health, education, and social protection sectors serving children from conception to entry into primary school. Costs are broken down by items that have been shown to be critical to program quality—training of personnel, monitoring and in-service support, evaluation, and learning materials, among others. The marginal costs of increases in

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<sup>47</sup> Assuming teacher salary equivalent to primary teacher salary estimated to be three times the per capita GNP, 800 hours of instruction for a child per year, two classes per day for each teacher, 20 students per teacher, and salary comprising 60% of total costs.

<sup>48</sup> Araujo et al. (2013).

<sup>49</sup> Berlinsky and Schady (2015),

<sup>50</sup> Jaramillo and Mingat (2008).

<sup>51</sup> *Berlinsky and Schady (2015), Jaramillo and Mingat (2008), World Bank (2016b).*

<sup>52</sup> Jaramillo and Mingat (2008).

variables affecting quality can be easily calculated. The template has been designed so that it can be used to collect cost data of an individual program (which could be used for benefit-cost analysis) as well as for large-scale budgeting. Individual activities are separated from management and startup costs, allowing for the costing of integrated ECD programs and calculations of the marginal costs of adding additional interventions. The unit cost analysis for the entire program, as well as for each component, is pre-programmed into the template. Finally, the template has exchange rate and inflation data built into its functionality, and allows users to incorporate imputed costs and amortization rates as applicable. The template will be available for early users in mid-2017.

In sum, both benefit and program cost data will be needed to accurately set the payment for an outcome-based contract. There are existing frameworks for collecting both forms of data, though training and usage will need to be expanded greatly.

### *Contract Management*

**Providers must be procured through a competitive, transparent, and accessible process that includes clearly defined, realistic, and objective selection criteria.** Well-defined criteria for delivery sets quality baselines, provides quality assurance, establishes accountability mechanisms and guards against inadequate services.<sup>53</sup> The private sector should only be contracted where it is adequately developed and has the capacity to deliver quality services. Government guidance and legislation that articulates the roles of private and public actors within the sector in that country may help policymakers manage the process of procuring public or private service providers.

**In determining how much of payment should be tied to outcomes, contract designers should equally account for independence and accountability.**<sup>54</sup> The risk borne by each stakeholder in the contracting arrangement should ideally match the elements of the service within their control. Many lessons can be learned from existing PPP contracting and regulation. While governments set the outcomes and performance indicators, the manner of delivery and process for achieving these aims should be left to the service providers.<sup>55</sup> Service providers need to have sufficient autonomy to ensure flexibility and innovation in the design and delivery of programs.<sup>56</sup> The timing of outcome measurement also affects the independence and accountability of service providers—early measurement might help provide early feedback in some cases, while in others it might prevent long term risk-taking.

**Government must have sufficient capacity to effectively implement, manage, regulate, and monitor outcome-based contracts.** In ECD, there must be assurance that safeguards are in place to ensure that in child care centers, for example, minimum standards are met for safety and hygiene.

### *Performance Management*

**Live performance management is critical to the success of an outcome-based contract, and of all quality ECD programs more broadly.** The service provider should have frequent feedback on outcomes

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<sup>53</sup> Barrera-Osorio et al. (2012).

<sup>54</sup> Barrera-Osorio et al. (2012).

<sup>55</sup> LaRocque (2007).

<sup>56</sup> Sriram et al. (2014).

and proxy outcomes, with or without the support of an intermediary organization or government data. If the outcomes for contract payment are only measured after the intervention, program implementers need to ensure data on proxy outcomes is collected throughout the program. If an RCT evaluation is being used, evaluators should allow program flexibility and implementers should maintain records of changes to the program.

### *Evaluation*

**Experimental or quasi-experimental evaluations should be used where there is a lack of evidence of intervention efficacy.** Overall however, the appropriate evaluation method for an outcomes-based financing contract depends on the problem the stakeholders are trying to solve. If the problem to be solved is a lack of knowledge of what works, there is a risk that a strict evaluation that doesn't allow for adaptive learning may not provide sufficient evidence. Information on low-cost rigorous evaluations should be disseminated and utilized.

## **Conclusion**

Payment by Results mechanisms tied to outcomes could help to alleviate some of the critical barriers faced in the provision of complex, behavior-dependent ECD interventions such as breastfeeding, hygiene, and parent education. Funding outcomes rather than prescribing inputs has the potential to encourage the development of performance management systems in service provision organizations and governments and allow providers to adapt their services if outcomes are not being achieved. This monitoring and flexibility could help significantly in the delivery of the aforementioned interventions because these interventions must be highly customized to the target population in order to be effective. Where upfront risk capital is needed to fund services initially, or where existing RbF mechanisms do not allow for outcome-based financing, impact bonds may be a useful tool. These financing mechanisms will not be appropriate in every setting, and a number of feasibility criteria and design elements must be in place for them to function successfully. More than ever, lessons will need to be shared across contexts to ensure best practices are implemented.

## Annex 1: Scan of Feasibility Information in 11 High-Need Countries

	ECD POLICIES AND COMPULSORY STATUS	ECD AND PPP POLICY ENVIRONMENT (SABER)	PUBLIC PROCUREMENT RULES AUTHORIZE OBF?	IMPACT BONDS	WORLD BANK RBF HEALTH PROJECTS	PPP FOR ECD
BURUNDI		Not available.			RBF for maternal and child health, expanded to a second stage	None identified.
ETHIOPIA		Not available.			RBF for maternal and child health	None identified.
INDIA		Not available.	Yes, execution of contingent contracts is allowed under the Contract Act. Many of the PPP models have adopted the strategy of linking payments to performance.	1) Development Impact Bond in Rajasthan for Girls' Education 2) SIB in the process of development for maternal and child health	RBF for maternal and child health	PPP for Maternal and Child Health Delivery in the State of Rajasthan
MADAGASCAR		Not available.				None identified.
MOZAMBIQUE		Not available.	Yes, PPP Law established in 2011. Question as to have a centralized PPP unit or system, or have each government department operate their own PPP division.			Publicly funded, privately provided preschool run through the Ministry of Education starting in 2014.
NIGERIA	The Child Rights Act (2003), the UBE Act (2004) and the National Policies on Education, Food, Nutrition and Health are laws and policies which have given shape to different sectoral interventions on Early Childhood Care and Development.	ECD: Emerging enabling environment, emerging implementation, latent M&E			RBF for maternal and child health, expanded to a second stage	None identified
PAKISTAN		Not available.			RBF for the health sector broadly	None identified
PHILIPPINES	Compulsory education begins at age 5, with one year of pre-primary required. Law enacted in 2012.	Not available.				None identified.
RWANDA		Not available.			RBF for maternal and child health	Private provision of ECD, with government monitoring, regulation and enforcement of standard (?)
SIERRA LEONE		ECD: Latent enabling environment, latent implementation, latent M&E			RBF for maternal and child health	None identified.
TANZANIA	In 2007, the government established pre-primary schools within each primary institution, enacted grants for pre-primary schools, established government-run pre-primary schools in many villages, and set a goal for 100 percent net enrollment in pre-primary education by 2015	ECD: Emerging enabling environment, emerging implementation, established M&E; PPP: No government funded private school			RBF for the health sector broadly	None identified.
SOURCES:	UNESCO GMR 2015.	World Bank SABER assessments.	Instiglio and Thompson Reuters Foundation (2014).	Gustafsson-Wright and Gardiner (2016)	RBF Health (2016).	UNESCO GMR 2015; Biersteker (2013); Araujo et al. (2013); Roots Ethiopia (2012); Gustafsson-Wright and Gardiner (2016); Biersteker et al. (2008).

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