

## Designing a Results-Based Financing Model: Recommendations and Guidelines

Siegrid Holler Lucia Haro Juan Camilo Villalobos Ana María Perez Felipe Sarmiento Caldas Social Sector Education Division

> TECHNICAL NOTE Nº IDB-NT-02363

## Designing a Results-Based Financing Model: Recommendations and Guidelines

Siegrid Holler Lucia Haro Juan Camilo Villalobos Ana María Perez Felipe Sarmiento Caldas



Cataloging-in-Publication data provided by the Inter-American Development Bank Felipe Herrera Library Designing a results-based financing model: recommendations and guidelines / Siegrid Holler, Lucia Haro, Juan Camilo Villalobos, Ana María Pérez, Felipe Sarmiento Caldas.

p. cm. — (IDB Technical Note ; 2363)

Includes bibliographical references.

1. Education-Latin America-Finance. 2. Education-Caribbean Area-Finance. 3. Government aid to education-Latin America. 4. Government aid to education-Caribbean Area. 5. Student financial aid administration-Latin America. 6. Student financial aid administration-Caribbean Area. I. Holler, Siegrid. II. Haro, Lucia. III. Villalobos, Juan. IV. Pérez, Ana María. V. Sarmiento, Felipe. VI. Inter-American Development Bank. Education Division. VII. Series.

IDB-TN-2363

Keywords: Education Systems, results, budget, blended financing, monetary transfer, incentives. JEL CODES: H30, H52

#### http://www.iadb.org

Copyright © 2021 Inter-American Development Bank. This work is licensed under a Creative Commons IGO 3.0 Attribution-NonCommercial-NoDerivatives (CC-IGO BY-NC-ND 3.0 IGO) license (<u>http://creativecommons.org/licenses/by-nc-nd/3.0/igo/</u> <u>legalcode</u>) and may be reproduced with attribution to the IDB and for any non-commercial purpose. No derivative work is allowed.

Any dispute related to the use of the works of the IDB that cannot be settled amicably shall be submitted to arbitration pursuant to the UNCITRAL rules. The use of the IDB's name for any purpose other than for attribution, and the use of IDB's logo shall be subject to a separate written license agreement between the IDB and the user and is not authorized as part of this CC-IGO license.

Note that link provided above includes additional terms and conditions of the license.

The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the Inter-American Development Bank, its Board of Directors, or the countries they represent.



# Designing a Results-Based Financing Model

Recommendations and Guidelines

Siegrid Holler Lucia Haro Juan Camilo Villalobos Ana María Perez Felipe Sarmiento Caldas

Inter-American Development Bank

December 2021





## Glossary of acronyms

- IDB Inter-American Development Bank
- CGD Center for Global Development
- **RBF** Results-Based Financing
- **IHME** Institute for Health Metrics and Evaluation
- SMI Salud Mesoamerica Initiative
- **RMEI** Regional Malaria Elimination Initiative
- **RBA** Results-Based Aid
- **PBG** Performance-Based Grants

## Table of Contents

| 1. | Introc | luction   |    |
|----|--------|---|----|
| 2. | What   | is an RBF   |    |
|    | 2.1.   | RBF's added value   | 8  |
|    | 2.2.   | Definitions of key concepts   | 10 |
| 3. | Paym   | ent metrics and monitoring indicators                                     | 11 |
|    | 3.1.   | Guidelines for the selection of payment metrics                           | 11 |
|    |        | 3.1.1. Payment metrics evaluation criteria                                | 12 |
|    |        | 3.1.2. Payment metrics basket evaluation principles                       | 15 |
|    | 3.2.   | Guidelines for the selection of the monitoring indicators                 | 16 |
|    |        | 3.2.1. Criteria for evaluation of monitoring indicators                   | 16 |
|    |        | 3.2.2. Evaluation of the monitoring indicators basket                     | 17 |
|    |        | 3.2.3. Recommendations on the Performance Management system               | 17 |
| 4. | Perfo  | mance targets   |    |
|    | 4.1.   | Methodologies for the calculation of performance targets                  | 19 |
|    | 4.2.   | Considerations for the calculation of performance targets                 | 22 |
|    | 4.3.   | Alternative methodology for the definition of performance targets         | 24 |
| 5. | Paym   | ent structure and schedule  |    |
|    | 5.1.   | Analysis of the payment structure elements                                | 27 |
|    |        | 5.1.1. Payments per group of metrics vs. payment per metric               | 27 |
|    |        | 5.1.2. Payment function models  | 30 |
|    | 5.2.   | Analysis of the payment schedule elements                                 | 34 |
|    |        | 5.2.1. Frequency of disbursements of the performance tranche              | 34 |
|    |        | 5.2.2. Rules for maximum amounts to be paid through time                  | 35 |
| 6. | Incen  | tives in the framework of decentralized education systems                 |    |
|    | 6.1.   | Why consider incentivizing levels of government beyond the central level? | 37 |
|    | 6.2.   | Theoretical framework on decentralization                                 | 39 |
|    |        | 6.2.1. Levels of government   | 39 |
|    |        | 6.2.2. Analysis categories  | 40 |
|    |        | 6.2.3. Rating system  | 40 |
|    | 6.3.   | High-level recommendations of the agent(s) to be incentivized             | 41 |
|    |        | 6.3.1. Recommendations for countries with centralized education systems   | 41 |
|    |        | 6.3.2. Recommendations for countries with decentralized education systems | 41 |
|    | 6.4.   | Steps to complete analysis for decentralized incentive schemes            | 43 |
| 7. | Conc   | usions  |    |
| 8. | Refer  | ences   |    |

## 1. Introduction

There have been great efforts in the Latin-America and the Caribbean (LAC) region to close education gaps. These have resulted in positive developments – the graduation rate for primary education, for example, has reached close to 100% (in 2018, this rate was equivalent to 95% for the region)<sup>1</sup>. However, in secondary education, progress has been less promising. Even though graduation rates have increased 12 p.p between 2006 and 2018 (51% to 63%), these figures denote a reality where only 4 out of 10 people finish secondary education and as a result enter the labor market without the necessary skills to be competitive. Moreover, gaps are greater in those most vulnerable. While there is a graduation gap of 44 p.p. between those in the first and fifth quintile (32% VS. 76%); learning gaps are as high as 37 p.p. between the same groups (45% VS. 82%)<sup>2</sup>.

Moreover, the impact of the COVID-19 crisis on LAC's education systems has worsened this reality. School closures to stop the propagation of the virus have affected approximately 65 million young people in LAC, shedding light on obstacles that already existed before the crisis and creating new challenges in the quest to provide educational continuity. Education systems were forced to act as quickly as possible by using alternative platforms, such as television, radio, and digital platforms, to avoid losing a whole generation of children and young people. However, the gaps in digital access represented a huge challenge in providing educational continuity. Estimations on the impact of COVID-19 on education outcomes have shown that even with all these efforts from governments in LAC, there will be an increase of 15% in the number of students who will not be returning to school (Acevedo et al., 2020). In terms of learning losses, it is estimated that the region will lose 1.3 years of learning earned in the past year (Banco Mundial, 2021).

Mitigating the effects of the sanitary crisis on the education systems in LAC has spurred recent interest on the design and implementation of innovations that can produce real impact in the short term while promoting transformations at the systems level. In this regard, Results-Based Financing Models have gained importance as innovations that can incentivize changes in the supply and demand of education services and successfully promote effective and sustainable systemic changes.

The goal of this document is, therefore, to provide guidelines on what are the main elements for designing a Results-Based Financing Model and the different scenarios depending on the need or objective of the implementer.

CIMA. IDB.

<sup>2</sup> CIMA. IDB.

Specifically, this document is organized as follows:

- Section 2 contains a brief explanation on what RBF is, it's added value and the definition of key concepts.
- Section 3 presents the guidelines for the selection of payment metrics and monitoring indicators.
- Section 4 includes guidance on methodologies for calculating performance targets.
- Section 5 contains the different payment structures.
- Section 6 contains guidance on analysis to decentralize incentive schemes.
- Section 7 provides the conclusions.

## 2. What is an RBF

Results-Based Financing Models (RBF) are financing agreements in which payments are contingent upon the achievement of predefined results, verified by an independent evaluator<sup>3</sup>. This scheme seeks to generate greater impact of the resources invested in social programs by tying funding to results instead of activities and inputs. In RBF projects in education, this makes it possible to shift from financing, for example, educational materials and teacher training (activities), to financing learning improvements in the student population or increases in student retention, in school attendance, or in enrollment rates<sup>4</sup> (outcomes).

Defining and directly incentivizing the results you want to achieve allows you to focus attention and gives clear guidelines on what matters. For this reason, it is crucial to have a good design that ensures that the focus and incentives defined do not neglect results that are important to the success of the program. In other words, the potential and effectiveness of RBF depends on how it is designed and implemented. Like any other tool, it can only deliver the expected benefits in cases where it is applied to the right problems, with the necessary conditions and when it is adjusted to the context.

Although RBF mechanisms have been mostly used in service implementation contexts, RBF has also been used to support government reforms. In fact, international cooperation donors have used incentives to improve government performance for about two decades.

There are a variety of ways to structure RBF programs, and over time, a terminology has emerged to categorize various types of instruments (e.g., Results-Based Aid, Performance-Based Contract, Impact Bonds, Results-Based Loan, among others). Despite this common terminology, RBF is less a set of rigid instruments and more a practice of thinking strategically about the power of financial incentives in such a way that it can motivate better program performance. The selection of an instrument depends on the context and the maturity of the program in what respects to its focus on results<sup>5</sup>.

<sup>&</sup>lt;sup>3</sup> Instiglio & the Global Partnership on Output-Based Aid (2018). A guide for Effective Results-Based Financing Strategies

<sup>&</sup>lt;sup>4</sup> Bloomgarden, D., Eddy, M. & Levey Z. (2016). Social Impact Bonds and Education in Latin America. GEMS Education Solutions

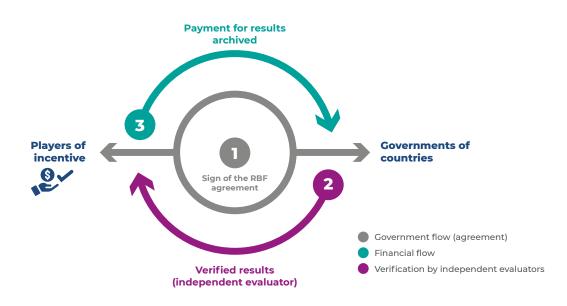
<sup>&</sup>lt;sup>5</sup> Instiglio (2017). A practitioner's guide to Results-Based Financing

8

#### **Example: Results-Based Aid**

**Results-Based Aid is an RBF instrument** where (a) payer(s) (e.g., donor, foreign government, foundation, or multilateral agency) award(s) resources to a national or subnational government if it accomplishes the pre-determined results, as shown in Figure 1. This type of RBF instrument may be appropriate for generating a systemic change or policy and institutional reforms in a specific timeframe if it focuses on key results and on resolving the bottlenecks of the government service delivery system.

Figure 1. Results-Based Aid model



### 2.1. RBF's added value

RBF schemes are being used worldwide as a tool to strengthen educations systems. These schemes help overcome technical, financial and, in some cases, political challenges that hinder better delivery of educational services, especially for the most vulnerable. This is done by seeking to resolve bottlenecks and close existing gaps through the following impact drivers:

 Focuses the government's attention on what really matters to generate the expected programmatic results and long-term systemic changes. Financing is tied to results that resolve system bottlenecks, strengthening the coherence of the systems that lead to better results<sup>6</sup>.

<sup>&</sup>lt;sup>6</sup> Holland, P. & Lee, J. (2017). Results-Based Financing in Education: financing results to strengthen systems. World Bank Group.

- 2. Aligns the interests and objectives of donors, governments, and beneficiaries by tying a portion of the funding to the achievement of the desired results. In this manner, efforts are aligned, and resources are focused on the most relevant issues to achieve medium and long-term results, seeking sustainability even with government changes<sup>7</sup>.
- 3. Increases the flexibility of governments to adapt iteratively to generate results by shifting the focus from activities to a focus on results. In this case, it is important that governments have flexibility so that they can adapt and iterate their interventions to adjust to the local context and needs and thus achieve results in the framework of the RBF program.
- 4. Increases accountability by measuring results and making them visible, generating incentives for the government to provide better services that meet the needs of young people.

It should be clarified that the education sector has specific characteristics that differentiate it from other sectors and should be considered for the design of RBF schemes. A first relevant point is that educational quality results may be more difficult to measure than those for other sectors such as health. For example, efforts have been made to homogenize the measurement of improvements in the learning of children and young people, but these measurements vary internationally. This is relevant specially if your goal is improving the quality of education rather than access, which is a simpler indicator to quantify. Another relevant point is that, compared to other sectors such as health, although there is broader evidence on the impact of different interventions, there is no single way to achieve results, and the effect of the same program can vary widely depending on the context<sup>8</sup>.

### Results of RBF programs in education in developing countries

RBF programs have shown important results in developing countries such as increased enrollment, school year completion and learning achievements. For example, in Bangladesh, the World Bank has promoted an RBF program to strengthen education reforms. Results show higher enrollments, a reduction in social disparities in school, more children completing primary school, and improvements in learning environments. By 2015, the program had achieved a net enrollment rate of 77%, a primary school completion rate of 79%, and had decreased the disparity in access to education to 0.77. In Jamaica, the use of RBF has focused on improvements in learning through the Education Transformation Capacity Building Program. Under this program, the mathematics performance of fourth graders has increased from 45% in 2009 to 58% in 2014, and the fourth-grade literacy rate increased from 70% to 78% in the same period<sup>9</sup>.

7 Ibid.

<sup>&</sup>lt;sup>8</sup> Global Partnership on Output-Based Aid - GPOBA (2016). Paying for Performance: An analysis of Output-Based Aid in Education.

<sup>9</sup> World Bank Group (2015). The Rise of Results - Based Financing in Education.

## 2.2. Definitions of key concepts

The following are definitions of key concepts used throughout the document that are common in the RBF models<sup>10, 11</sup>.

- **Output**: refers to a tangible product directly produced by the implementer's activity. For example, teachers who have received training in school environments.
- **Outcome**: refers to a change in the beneficiaries' knowledge, skills or behavior of RBF program beneficiaries caused by outputs. For example, better learning for students<sup>12</sup>.
- Results: refer to outputs and outcomes.
- **Impact**: the desired long-term and sustained effect that the RBF program has on its beneficiaries. For example, that more young people graduate from secondary school with adequate skills for life and work.
- Incentivized agents(s): the actor(s) that receive payments conditioned to the achievement of results.
- **Theory of change**: casual pathway to change that is expected from an action (i.e., social intervention). It defines the causal links between inputs, activities, outputs, outcomes and expected impact of the program, including the assumptions behind the causal links and the potential influence of external factors.
- Payment metrics: are the results that are paid for.
- Monitoring indicators: indicators that measure the activities, outputs and outcomes that are relevant to achieve the desired impact and show the extent of changes in the performance of the incentivized agents.
- **Performance Management**: the act of proactively managing results based on relevant and timely data.
- **Performance targets**: the level of performance that is desired for each of the payment metrics.

<sup>&</sup>lt;sup>10</sup> Instiglio & the Global Partnership on Output-Based Aid (2018). A guide for Effective Results-Based Financing Strategies.

<sup>&</sup>lt;sup>11</sup> Instiglio (2017). A practitioner's guide to Results-Based Financing.

<sup>&</sup>lt;sup>12</sup> It should be clarified that there may be intermediate outcomes and final outcomes, the latter being closer to impact within the program's Theory of Change. The definition of outcomes depends on the specific context of the program and is part of the design of the RBF model.

- **Payment structure**: how the financial incentives will be paid according to the achievement of results. The payment structure contains the following elements 1) total amount of funding tied to results, 2) the minimum threshold to trigger results payments, 3) the maximum threshold which defines the level of results beyond with no further resources are disbursed, and 4) the payment function which defines the payment according to the results achieved between the minimum and maximum thresholds, which can be continuous between or discontinuous.
- **Payment schedule**: frequency with which resources are disbursed to pay for the results achieved.
- **Distribution of financing**: defines how the total amount of financing of an RBF program is distributed between the amount tied to activities (i.e. investment incentive) and the amount tied to results (i.e. performance incentive).

## 3. Payment metrics and monitoring indicators

The selection of adequate payment metrics is a critical step in the design of an RBF program. By tying part or all the available funding to the achievement of results, payment metrics determine both the amount to be paid and the success of the program. In this sense, payment metrics reflect and communicate to the incentivized agent where to focus its efforts. Thus, the effectiveness of the incentives will depend to a large extent on the selected payment metrics. In addition to defining payment metrics, it is advisable to have monitoring indicators that are not tied to payments but facilitate the tracking of intervention delivery and results. These indicators are used in Performance Management systems that allow measuring and taking corrective measures during RBF program implementation to achieve results.

This section presents: 1) criteria for evaluating and selecting payment metrics and monitoring indicators, and 2) principles for evaluating the basket of payment metrics and monitoring indicators.

### 3.1. Guidelines for the selection of payment metrics

Selecting appropriate payment metrics is crucial in RBF as the payment metrics determine the payments that will be made and the incentives that are transferred to the incentivized agent. Poor selection of payment metrics can generate perverse incentives (e.g. teaching for the test) and jeopardize the success of the program. To avoid this, the following are the criteria for selecting payment metrics and the principles for calibrating the group of metrics.

12

### 3.1.1. Payment metrics evaluation criteria

Evaluating and selecting payment metrics is an iterative process that requires input from different stakeholders (e.g. country experts, education experts). While donor and government preferences as well as expert recommendations should be considered, it is key to ensure that potential payment metrics are evaluated against at least four selection criteria. Table 1 presents the evaluation criteria and their corresponding definition used to evaluate each of the metrics. It should be clarified that these criteria are not requirements that the metrics must meet, but rather guidelines for selecting the metrics that are best suited for an RBF program. In some cases, the criteria can contradict itself (e.g., proximity to impact and manageable control). However, what matters is to select metrics that allow a balance between these criteria (see example 1 for further explanation).

| Proximity to  | • Results that are closer to the desired impact of the RBF program should be preferred.   |
|---|---|
| impact  | <ul> <li>Results must be aligned with pre-existing government priorities.</li> </ul>  |
|   | • The result must be clear and easy to understand and calculate, so that there is no ambiguity about what is to be paid for.  |
| Clear and   | • Results must be measurable, and their evolution must be observed within the time horizon of the program.  |
| reliable<br>measurement   | • The data used, as well as the method of measurement, should be accessible, objective, with a reasonable cost and reliable.  |
|   | <ul> <li>If possible, historical data should be used to provide a benchmark to define targets, compare<br/>the achievements of the RBF program and facilitate the understanding of the different<br/>stakeholders of the metric and how it will be measured.</li> </ul> |
| Manageable<br>control of the  | • Payment metrics should be under the manageable control of the incentivized agent. Potential payment metrics should be aligned with the political, technical and administrative conditions of each government.   |
| incentivized<br>agent   | <ul> <li>Outcomes generate a higher risk of non-payment then they are the more distant from the<br/>impact in the theory of change and the more sensitive they are to external factors.</li> </ul>  |
| Minimization<br>of perverse<br>incentives         • Results selected as payment metrics should minimize the risk of generating und<br>perverse incentives such as outcome skimming, parking, gaming and signaling |   |

#### Table 1. The payment metrics evaluation criteria

To better understand how these evaluation criteria are applied in practice, example 1 presents the process of evaluation and selection of payment metrics in an RBF education program of the Ministry of Education of Peru.

## **Example 1:** Selection of the payment metrics for the Performance Commitments of the Ministry of Education of Peru<sup>13</sup>

Public education in Peru faces considerable challenges in terms of quality. According to proficiency tests developed by the Government of Peru in 2016, only 46.4% of second grade students achieve an adequate level of reading comprehension and only 34.1% have adequate skills in mathematics. This is particularly problematic given that the country has embarked on a decentralization process in which the delivery of education services provided will be the responsibility of local governments. Local governments often lack the capacity, expertise, and support necessary to provide high quality education. For this reason, the Ministry of Education (MINEDU) decided to develop a systemic change program to promote performance at the local government. Specifically, the central government designed a national RBF program – Performance Commitments ("Compromisos de Desempeño") between MINEDU and local government education agencies to incentivize better education results. Instiglio advised MINEDU in 2017 on the redesign of its RBF mechanism. This example builds on that redesign.

#### Pre-selection of the payment metrics

To assess which results to pay for, Instiglio identified that the main objective of the RBF program is to increase student learning gains by strengthening the management capacity of local government education agencies. A logic model was developed to identify the activities, outputs, and outcomes, grouped into three pillars (management, accountability and education) that could lead to the main objective and be used to select a preliminary list of outputs and outcomes as performance metrics. The following table presents some of the pre-selected outputs and outcomes).

#### Selection of the payment metrics

The Instiglio team conducted an assessment based on the above criteria. The following table presents examples of the evaluation of the pre-selected payment metrics and the selected metrics. The basket of metrics selected ensures that part of the funding is linked to outcomes and another part to outputs.

<sup>&</sup>lt;sup>13</sup> It should be noted that this is an example of the payment metrics selection process, but not the final metrics for the program.

| Evaluation of the Performance Commitment program payment metrics   |                        |                                     |                                      |                       |   |  |
|--|------------------------|-------------------------------------|--------------------------------------|-----------------------|---|--|
| Payment metrics  | Proximity to<br>impact | Minimizes<br>perverse<br>incentives | Clear and<br>reliable<br>measurement | Manageable<br>control | Was the performance metric selected?  |  |
| Metrics related to the administrative pillar   |                        |                                     |                                      |                       |   |  |
| Timely payment<br>of basic utilities in<br>schools   | Low                    | High                                | High                                 | High                  | Yes, although not directly<br>related to the desired<br>impact, it ensures that local<br>education agencies fulfill their<br>responsibility as they supervise<br>the payment of public utilities.   |  |
| Properly maintained<br>infrastructure in<br>public schools   | Medium                 | High                                | Medium                               | Low                   | No, because the local<br>educational units are not<br>responsible for the execution<br>of school infrastructure<br>maintenance. Therefore, there<br>is a low manageable control of<br>the local educational units.  |  |
| Monthly attendance<br>of teachers and<br>principals  | High                   | Medium                              | Medium                               | Medium                | Yes, mainly because there<br>is empirical evidence that<br>teacher attendance and<br>increased principal attendance<br>are key determinants of student<br>attendance, which significantly<br>determines children's learning<br>achievements   |  |
|  |                        | Metrics relate                      | ed to the account                    | ability pillar        |   |  |
| Anonymous survey<br>of satisfaction with<br>services provided<br>by local educational<br>agencies to public<br>schools | High                   | High                                | Medium                               | High                  | Yes, ensure that local<br>educational units fulfill their role<br>of supporting public schools<br>in different dimensions so that<br>they can offer better quality<br>educational services.   |  |
|  |                        | Metrics rele                        | ated to the educa                    | tion pillar           |   |  |
| Children receive an<br>adequate number<br>of hours of school<br>teaching   | High                   | Medium                              | Low                                  | High                  | Not because of measurement<br>issues. To properly observe the<br>number of teaching hours in<br>schools, a person would have<br>to go to the school and monitor<br>during the school day whether<br>the appropriate hours are<br>being taught.  |  |
| Learning<br>achievements<br>in primary and<br>secondary<br>education   | High                   | Medium                              | High                                 | Medium                | Yes, as it represents the<br>desired impact of the systemic<br>change. In this case, the<br>Instiglio team proposed<br>using the standardized<br>skills test developed by<br>MINEDU to measure learning<br>achievements. However, it is<br>important to consider that<br>these metrics depend on<br>external factors that are not<br>under the control of the local<br>educational units. |  |

#### 3.1.2. Payment metrics basket evaluation principles

Once the payment metrics have been evaluated, it should be verified that the metrics complement each other, so that the **selected set or basket of metrics achieves:** 

- 1. A balance between outputs and outcomes: Generally, it is preferable to pay for outcomes as they are closer to the impact of the RBF program. However, when governments are the incentivized agents and a systemic change is sought, selecting outputs as payment metrics allows governments to have a clear roadmap, which ensures the necessary conditions are in place for sustainable change. In addition, measuring outputs is easier, it allows for incentivize actions in the short term and generates feedback loops to iterate and adapt interventions to increase the achievement of outcomes and increase the motivation of the incentivized agent.
- Align with pre-existing government priorities: In initiatives that seek systemic change it is important to ensure that the elements to be incentivized are aligned with the priorities of each government. Otherwise, there is a risk that the outcomes will not be achieved in the expected timeframe and if they are not achieved, they will not be sustained once the initiative ends.
- 3. Avoid duplication of metrics within the selected group and ensure their complementarity: A balance should be sought between more metrics -that capture more elements of the theory of change- and fewer metrics -that provide greater clarity/focus and reduce verification costs-. Considering some regional examples from Salud Mesoamérica Initiative and the Erradicación de Malaria Initiative, it is not advisable to have more than 12-14 payment metrics<sup>14</sup>. Having too many payment metrics can divert governments' attention from achieving the results that really matters. In this sense, having metrics that are too similar to each other should be avoided in order to prevent paying for the same results. Metrics should complement each other, measuring different aspects of the RBF program and painting a clear roadmap in time (metrics and targets of one phase should be aligned with those of the previous phase; see section 5.2).

<sup>14</sup> Although this number may change, it is important to keep in mind that sometimes it takes time for the stakeholders of a RBF initiative to understand the indicators and incentives defined. For this reason, it is advisable not to have too many payment metrics, as there is a risk of generating confusion, limiting the focus on the expected outcomes, not generating recall and therefore not achieving the expected outcomes.

## 3.2. Guidelines for the selection of the monitoring indicators

To ensure the success of RBF projects, it is very important to have systems providing constant information on the performance of the stakeholders. Using these systems, corrective measures can be taken to achieve the desired outcomes and consequently the disbursement of incentives. For this, it is key to have monitoring indicators that frequently measure the performance of the incentivized agents during the implementation of the RBF program. This implies moving from monitoring inputs and activities to managing results; in other words, moving from a traditional monitoring system to Performance Management systems. To achieve the above, it is necessary that in addition to evaluating and selecting payment metrics, complementary monitoring indicators are selected. The monitoring indicators are not tied to monetary incentives, and should be relatively simple to measure (e.g., those that are already being used in the countries' information systems). These indicators will allow for private and public donors to see how governments are evolving towards the achievement of results. It should be clarified that Performance Management systems are a desirable element in RBF programs, but their design and implementation will depend on the capacity and willingness of countries to provide information. The SMI experience, for example, shows how dashboards of Performance Management systems were created in several countries as a very useful tool for countries to easily visualize the achieved results<sup>15</sup>.

This subsection presents the criteria for evaluating monitoring indicators, the principles for evaluating the basket of monitoring indicators, and the general guidelines for setting up a Performance Management system.

### 3.2.1. Criteria for evaluation of monitoring indicators

Similar to the evaluation process of payment metrics, the selection of monitoring indicators should be based on the program's theory of change. To have a system that allows for managing performance and taking corrective measures, it is key to select indicators that can inform the achievement of the theory of change in practice. In order to identify those key indicators to measure in the theory of change, it is recommended to evaluate them according to the following criteria.

16

<sup>&</sup>lt;sup>15</sup> Iriarte et al (2017). El premio inicial en la iniciativa de cooperación basada en resultados de Salud Mesoamérica.

#### Table 2. Criteria for evaluation of monitoring indicators

| Relevance                         | Indicators that have the strongest causal link to the desired impact.  |
|-----------------------------------|--|
| Certainty                         | Indicators for which there is <b>less information or certainty</b> regarding their achievement or execution. |
| Control                           | Indicators that are <b>under control</b> of the incentivized agent.  |
| Relation with the payment metrics | Indicators that have a strong relationship with the selected payment metrics.                                |

#### 3.2.2. Evaluation of the monitoring indicators basket

The group of indicators to be measured should be an adequate reflection of the Theory of Change. To this end, it is suggested to verify that the group of indicators identified meets the following criteria:

- 1. All the components of interest: The indicators, as a whole, should provide information on each of the pillars of the theory of change (learning, retention and learning environments).
- 2. Short and long term: The indicators, as a whole, should provide information on the short and long term. In other words, moments from all stages of the theory of change (activities, outputs, outcomes and impacts) should be selected.
- 3. All relevant stakeholders: At least one outcome associated with each relevant stakeholder identified for the success of the program should be selected.

#### 3.2.3. Recommendations on the Performance Management system

To maximize the success of RBF schemes, it is essential that the incentivized agents have the capacity to know how they are achieving results during the program's implementation and not only once its execution is completed. Thus, it is important to have robust monitoring systems to inform policy and decision makers to make corrections during the course of the program. To go beyond a monitoring system, it is recommended to design a system with the following characteristics:

18

- 1. With frequently updated and relevant data for decision making.
- 2. With an easy and dynamic data visualization platform (ideally on a dashboard).
- 3. With access for governments, as the main executors of the activities and responsible for generating the outcomes, and for public and private donors as well as other relevant actors showing the most relevant information for each.
- 4. That promotes a culture focused on results, change and continuous learning.

It is important that the Performance Management system to be defined takes into account the information systems (e.g., Education Management Information Systems – EMIS) already in place in the countries participating in the incentives scheme, in order to build on the platforms and databases that governments collect and propose improvements on the same<sup>16</sup>. This is to ensure the feasibility of implementing a Performance Management system that will help governments and donors make better decisions<sup>17</sup>. For example, donors can support the improvement or creation of these systems in countries through technical assistance. In countries where there is no digital platform on which to build a performance management system, technical assistance can include advice on how to set up a system that fits local conditions. Likewise, beyond the technical creation, it is key to work on the process of appropriation and adequate use of these systems. Ensuring that officials understand the information in their Performance Management system and make evidence-based decisions is fundamental to achieving the desired results<sup>18</sup>.

Furthermore, it is advisable to link this Performance Management system to the tools used by donors to supervise and monitor operations. In other words, the information in the system should be regularly reviewed during operations supervision missions. This information could be analyzed and used to make joint decisions between donors and governments.

RBF seeks to strengthen existing systems to promote a performance culture and the capacity of countries' measurement and monitoring systems.
 We show the part of the period strengthene and the period strengend strengthene and the period strengthene and the period st

<sup>&</sup>lt;sup>17</sup> Holland, P. & Lee, J. (2017). Results-Based Financing in Education: financing results to strengthen systems. World Bank Group.

<sup>&</sup>lt;sup>18</sup> Eicheler et al (2017). External measurement as a catalyst for change.

## 4. Performance targets

Targets are a relevant design element which define the success of the RBF program since achieving them implies that the expected level of performance for each metric was achieved. Targets are used to guide the incentivized agent about the level of effort expected. The establishment of targets can be done considering different methodologies which may vary in their effectiveness to set ambitious but achievable targets<sup>19</sup>. The use of one methodology or another depends on the nature of each payment metric and the availability of information available for each one. An alternative to setting targets is the definition of prices per unit of outcomes; a practice used in RBF programs that consists of assigning a value that reflects the price to be paid to the incentivized agent for achieving each unit of the expected outcome.

Specifically, this section presents orientations and guidelines for the any RBF team to calculate performance targets in an analytical way. The estimated targets can be used as input to negotiate and define the final targets with governments according to their needs and local contexts. In particular, the section presents: 1) the commonly used methodologies for the calculation of targets in RBF programs, 2) considerations to consider defining targets adequately, and 3) an alternative methodology to target setting.

### 4.1. Methodologies for the calculation of performance targets

The following is a summary of the methodologies for calculating targets that are frequently used in the design of RBF programs, as well as their main advantages and disadvantages. It should be clarified that different methodologies can be selected, one for each payment metric, or even a combination of methodologies for each metric. This depends on the payment metric selected and the availability of information at the time of calculating the targets.

1. Absolute level for all incentivized agents: With this methodology all incentivized agents to be incentivized receive a fixed target in terms of the expected level (e.g., 90% teacher attendance). The advantage of this methodology is that it is easy to understand and communicate. Among the disadvantages is that it is not a methodology that creates fair or necessarily realistic and ambitious targets, since it is incentivizing all agents equally regardless of their initial performance or their capacity to reach the target (i.e., without taking into account the heterogeneity among them).

<sup>19</sup> A balance between ambitious targets that reflect the effect of the RBF program and realistic targets that are feasible to achieve in the time frame and under the conditions determined.

- 2. Absolute or fixed percentage change: Through this methodology, all agents to be incentivized are given a fixed target in terms of expected change (e.g. 5 percentage point increase or 5% increase). While starting from a different baseline for each agent, they are all asked to reach the same target. The advantage of this methodology is that it is easy to understand and communicate. The disadvantages are that it does not necessarily result in ambitious and realistic targets for all incentivized agents, since it does not adapt to the needs and capabilities of each agent. In other words, this methodology may result in very ambitious targets for some agents and very simple ones for others. Therefore, the methodology may be perceived as unfair.
- 3. **Performance above the baseline:** In this methodology, no specific target is set, but any performance above the baseline is considered successful. In other words, a value is not established as a target, but any improvement over the baseline is considered sufficient. Among its advantages are its simplicity and the fact that the baseline takes each country's individual performance as a reference. The main disadvantage of the methodology is that it does not establish a specific value for the increase in performance, so it can result in relatively easy targets to meet.
- 4. Benchmarking methodology using international standards or theoretical performance: This methodology proposes using two options as reference points for the determination of targets: international standards or the theoretical performances expected for each metric. In the first case, indexes of international standards can be taken into account (e.g., education quality standards targets). In the second case, what according to theory should be the expected performance is considered and established as the value to be achieved. Among its advantages are that it helps to define targets in a clear and objective manner, and that it encourages the incentivized agents to compare themselves with an ideal scenario. Furthermore, it is feasible to use this methodology in the absence of historical data for the incentivized countries since other countries can be used as benchmarks. On the downside, the targets may not be realistic or ambitious if the benchmarks used are too high or too low, depending on the capacity and performance of the countries to be incentivized. An alternative to using international standards is to use as benchmarks desirable outcomes observed in municipalities or regions with good performance in each country.
- 5. Specific targets according to absolute variations: This methodology establishes specific targets for each agent to be incentivized, using as input the absolute variations in their performance in recent years and the additional change expected from the implementation of the program. By using variations in past performance as a basis, the methodology allows us to evaluate the countries' potential for improvement in order to establish ambitious and realistic targets that take into account the potential of each country individually. In this way, the methodology is effective in addressing the challenge of heterogeneity of performance

21

and capacity. As possible disadvantages, the methodology involves a certain degree of complexity. However, it is relatively simpler than other methodologies that entail more sophisticated data analysis.

- 6. Cost-benefit model:<sup>20</sup> This methodology establishes the minimum target level for each payment metric as a function of (i) the baseline, (ii) the minimum expected change per metric, and (iii) the counterfactual or the change in the payment metric that would be expected in the absence of the RBF program. The second component of the function, the minimum expected change per metric, is set as the minimum value for the benefits generated by the RBF program to be greater than the costs of the same. To calculate the benefits of the program, the value of a unit of improvement in the payment metric must first be established, which is recommended to be estimated using proxies for improvement in outcomes<sup>21</sup>. The third component of the function, the counterfactual, is calculated as an approximation using historical trends to estimate the change in the metric over a predefined period prior to program implementation, and it is assumed that in the absence of the program the metric would continue on the same trajectory. The advantage of this methodology is the technical rigor of calculating the benefits of participating in the RBF program versus the cost of the program. The disadvantage is that the parameters of the function are not easy to calculate, and proxies must be used. For example, the third component depends on a counterfactual that is not normally known at the time of setting the targets.
- 7. Econometric analysis of time series: This methodology uses a multivariate regression model to calculate the projected performance of countries based on their past performance and other control variables. The main advantage of this methodology is its technical rigor. However, the methodology requires the use of several econometric concepts and assumptions that can make it difficult to explain the methodology to the different stakeholders involved. In addition, in order to use the methodology correctly, it is necessary to have robust time series and extensive information on past performance, as well as a theoretical-empirical analysis of the determinants of country performance in each payment metric.

<sup>20</sup> Cruz Aguayo, Y. & Martínez, S. (2016). Setting Targets for Results-Based Financing Programs: a simple cost benefit framework. IDB technical document

<sup>&</sup>lt;sup>21</sup> For example, for the case of El Salvador, the DALY (Disability-adjusted life year) parameter was used as a proxy with data from the World Health Organization to determine the price of the modern contraceptive prevalence rate (one of the SMI payment metrics).

### 4.2. Considerations for the calculation of performance targets

As mentioned above, setting an appropriate target is a complex task. Therefore, the purpose of this subsection is to explain different consideration to choose the most appropriate methodology according to the particular context, payment metrics and available information. Additionally, given that there might exist multi-year programs that incentivize several stakeholders, this subsection includes considerations on target setting over time and in multi-stakeholder scenarios.

Considerations for the selection of the methodology for the calculation of targets

- 1. Determining the most adequate target methodology should ideally be evaluated for each payment metric separately.
- 2. The suggested criteria for assessing the suitability of the methodologies for the calculation of targets are:
  - Effectiveness: The methodology must produce targets that create effective incentives to improve performance. To motivate the stakeholder to maximize its effort, the targets must be ambitious, realistic, and perceived as fair. The targets should cater as much as possible to the heterogeneity among the incentivized stakeholders and should not be too low or too high. The importance of ambitious but realistic targets is described below:
    - a. Targets that are not ambitious, or are too low, would not incentivize significant changes in government performance, or at the extreme might not incentivize stakeholders to increase their efforts. This implies that the program would not incentivize the highest possible performance, and that additional costs would be generated by monitoring performance without achieving an additional benefit.
    - b. Targets that are unrealistic or too high, could (i) demotivate the stakeholder and negatively affect its efforts, (ii) encourage the stakeholder to engage in creamskimming (i.e. concentrating efforts on individuals who have, ex ante, a higher probability of achieving the expected outcomes, even in the absence of the intervention) or other undesired behaviors that improve payment metrics but have little, if any, impact on the final goal, or (iii) force the payer of outcomes to reduce targets ex post, undermining the credibility of the mechanism. In addition, very high targets could increase the risk of non-disbursement of resources tied to outcomes.
  - Simplicity: The methodology must be easy to apply and understand.
  - **Replicability:** The methodology must be replicable, including the availability of data and the independence of the methodology from the current distribution of performance/ capacity levels.

3. The availability of information for each metric and its nature should be considered while determining the target methodology. Depending on the information available for each metric, some methodologies would be feasible, and others would not (e.g. methodologies requiring historical data would not be applicable without information). On the other hand, depending on whether the metric is dichotomic or continuous, the methodology that best fits its nature should be evaluated. It is also advisable to select methodologies that allow the calculation of targets that fit with the selected payment function model (see subsection 5.1).

#### Considerations for the determination of targets within a timeframe

- 1. When we face a multi-year program, this generally requires thinking about targets for different time periods.
- 2. For metrics where the level of performance is expected to improve over time, it is ideal for the targets to increase over time. For example, in a civil service reform program in Sierra Leone<sup>22, 23</sup>, the metric of percentage of key public positions filled had a target of 60% in the first phase and 80% and 90% respectively in subsequent phases of the program. Considering these progressive targets helped the government to improve its recruitment and staffing processes appropriately.
- 3. Thinking about targets for different time periods can be complex. Therefore, it may be useful to allow some flexibility in setting targets over time. For example, as in the Salud Mesoamérica Initiative, at the end of the first phase, targets for subsequent phases of the program can be revised considering additional information that was not available during program design (e.g., more performance data for certain metrics). Specifically, it is key that during the first phase of program implementation, information on government performance on the selected metrics can be collected.

<sup>&</sup>lt;sup>22</sup> Winning K & Panzardi, R. (2014). Leading, Learning and Adapting Toward Development Results: An Example from Civil Service Reform in Sierra Leone. World Bank, https://bsc.cid.harvard.edu/files/bsc/files/leading\_learning\_and\_adapting\_toward\_development\_results.pdf

<sup>&</sup>lt;sup>23</sup> Instiglio (2020). Utilizing Results-Based Financing to Accelerate Success in Policy and Institutional Reform. Draft report.

## Considerations for target approach on programs with multiple incentivized stakeholders

In the case of RBF mechanisms with multiple incentivized stakeholders, payments for results can be linked to: 1) the achievement of goals set for each incentivized agent (*target-based*) or 2) the performance of each stakeholder relative to other incentivized stakeholders (*ranking-based or relative performance*). The selection of one or the other approach usually depends on the availability of historical performance data and the priorities and goals established for the RBF mechanism, as well as the technical feasibility of establishing elements of competition for the transfer of resources. For example, incentivizing stakeholders according to their relative performance generates greater competition among incentivized agents and has the advantage of ensuring that the total resources allocated to the program are disbursed.

### 4.3. Alternative methodology for the definition of performance targets

An alternative to defining targets is to define a **price per unit of result**<sup>24</sup>, **sometimes referred to as an outcomes pricing rate card** (see Case Study 1). This methodology consists of defining a monetary value associated with each unit of achievement of outcomes for each one of the metrics. In other words, a price balotary is defined for each metric. The application of this methodology requires the use of a continuous payment function (see section 5.1). It is important to note that this methodology does not necessarily determine the price per unit of result considering how much it would cost the incentivized agent to achieve it. This methodology, on the other hand, seeks to grant a value to each outcome unit which can be attractive to motivate the incentivized agent and that rewards its effort to achieve each unit of success.

To define the prices per unit of result, the following process should be considered:

- 1. Establish a weight for each metric.
- 2. Divide the total amount of resources tied to outcomes according to the weight established for each metric.
- 3. Define the unit of interest for each metric. For example, for the learning achievement metric, one can consider each child passing standardized tests as the unit of success.
- 4. Divide the total amount of resources for each metric by the number of expected units of success. This makes sense when the units of the different payment metrics are comparable.

<sup>24</sup> Refers to assigning a determined value that reflects the price to be paid to the incentivized agent for achieving a unit of the expected outcome.

The output of this process is the preliminary price per result that can then be validated by benchmarking prices in similar RBF programs or through conversations with the incentivized agents to negotiate whether that price is attractive and/or sufficient to reward their effort. It is important to validate that the price per unit of success reflects the difficulty of obtaining the outcome. In other words, that the price of the most difficult results is higher than that of the simplest ones. Likewise, when working on the final definition of the price per result, it is important to take into account two considerations in conjunction: 1) that the price is reasonable, and 2) that the price is a sufficient incentive.

#### Case study 1. Pilot of a Results-Based Aid (RBA) program in the education sector in Ethiopia.<sup>25</sup>

**Description:** 4 year RBF program (2012–2016) funded by DFID and awarded to the Ethiopian Ministry of Education for £31.5 million, including independent verification and evaluation costs.

**Program Goal:** Improve participation and performance in secondary education especially for students from the most vulnerable regions of the country (Developing Regional States - DRS), measured as gross enrollment rate and percentage of students passing grade 10 exams.

#### **Payment metrics**

Increase in the number of students who took the General Secondary Education Certification exam.
 Increase in the number of students passing the General Secondary Education Certification exam.

#### Payment structure

DFID paid annually to the Government of Ethiopia according to **the unit of outcomes achieved.** There was a **differential price per student based on gender and geographic location**. Thus, the total amount payable each year was calculated based on the number of students taking the exam and the number passing the exam. The following table presents the prices per student.

|       |                   | eral Secondary<br>tification exam | Pass the General Secondary<br>Education Certification exam |                       |  |
|-------|-------------------|-----------------------------------|--|-----------------------|--|
|       | Vulnerable States | NON-vulnerable States             | Vulnerable States  | NON-vulnerable States |  |
| Boys  | £ 75              | £ 50                              | £ 75   | £ 50                  |  |
| Girls | £ 100             | £ 85                              | £ 100  | £ 85                  |  |

#### Outcomes achieved

During the four years of the program, 183,746 additional students took the exams (with 58% being girls) and 182,418 additional students passed the exams (56% girls). For these achievements, DFID disbursed £26.6 million.

<sup>25</sup> DFID (2016). Project competition review Pilot Project of Results Based Aid in Education Sector in Ethiopia. Retrieved from: https://devtracker. fcdo.gov.uk/projects/GB-1-202989/documents

## 5. Payment structure and schedule

RBF bases part of its success on the introduction of financial incentives that align interests, reward good results, increase accountability and allow greater flexibility by not being tied to predefined activities. While metrics and targets define what will be paid for, it is the payment structure and schedule that define how the desired results will be paid for<sup>26</sup>. Literature shows that financial incentives can increase the intrinsic motivation of stakeholders, but at the same time can undermine it<sup>27</sup>. Therefore, it is key to define a payment structure and schedule that actually generates the desired incentives.

Selecting a simple payment structure is an important consideration to take into account as it will facilitate communication and understanding by governments of the incentives proposed. However, it is important to find the right balance between simplicity and adequate incentives so as not to define models that are too demanding or too lax on governments. For this, it is essential to understand when to pay for the achievement of results, as well as when to pay for each achievement, and to determine a payment function that rewards the government's constant effort<sup>28</sup>.

Defining a payment schedule that is too frequent may generate excessive pressure and limit the type of outcomes that can be paid for. Likewise, a schedule in which payments are not made in the medium term may generate a loss of interest on the part of governments and the potential to reinvest resources in measures that increase the chances of achieving program outcomes may be lost (in general, the use of incentive resources is not conditioned to program-related activities, but in practice this often ends up happening). Furthermore, it is critical to understand and plan for the time it takes for the administrative processes to make payments. For example, the time it takes to measure outcomes, prepare reports, approval by stakeholders, the disbursement process and budget availability by the agents to be incentivized. The SMI and the RMEI designs serve as key references given that they work with the same countries and the expected change is similar.

<sup>&</sup>lt;sup>26</sup> Instiglio (2017). A practitioner's guide to Results-Based Financing.

<sup>27</sup> Many argue that financial incentives can displace prosocial behavior, such as intrinsic motivation, altruism or social norms toward unethical behavior. This may be true, but the converse may also be true. Bowles & Poland (2012) find that, depending on the context, economic incentives can either strengthen or constrain prosocial behavior. This finding emphasizes the importance of taking into account the broader incentive environment during RBF design. It is important to note that most of the literature on incentives focuses on incentives for individuals. The literature on incentives for groups or organizations is much scarcer. It is unclear how much of the literature on individual incentives also applies to the organizational incentives common in results-based financing.

<sup>28</sup> According to Instiglio's experience and the interview with William Savedoff, finding the right balance between being realistic and ambitious is difficult since it depends on predictions with multiple assumptions and that do not have a clear counterfactual (they depend on what has been achieved before and what is believed to be achievable in this case).

### 5.1. Analysis of the payment structure elements

Below, different options are analyzed to define two key aspects of the payment structure: 1) whether to pay for each metric or to pay for a group of metrics, and 2) the type of payment function, i.e. whether to pay continuously or discontinuously.

#### 5.1.1. Payments per group of metrics vs. payment per metric

**Payment per group of metrics** refers to the fact that the payment per outcome is made by grouping the results of the several payment metrics. This type of payments structure is characterized by 1) facilitating the calculation of payments, 2) incentivizing the joint achievement of the metrics to generate a holistic change and 3) allowing to provide a clear roadmap to the government on how to achieve the success of the program. However, the main disadvantage of grouping the metrics together is that certain metrics may not be taken into account or ignored since it is not necessary to achieve the target on all of them in order to receive payment. This could generate perverse incentives for countries to focus only on some of the metrics that they consider more important or easier to achieve<sup>29</sup>. For these reasons, it is not common in RBA programs to define payments per group metrics<sup>30</sup>.

**Payment per metric** refers to the fact that a payment is defined for the achievement of results for each payment metric, independent of the achievement of other results. This type of payment is commonly used in the design of RBF models<sup>31, 32</sup>, since tying payment to performance on each metric focuses the government on each one. A payment per metric gives greater clarity on key milestones in the roadmap to impact and rewards them<sup>33</sup> (see Case Study 2 for examples of an RBF design with the government on education issues). However, paying for each metric can have the disadvantage of increasing the complexity of the design and implementation, as it implies defining a specific price for each metric and performing additional calculations to determine the payment. While this is a disadvantage, designs paying for multiple metrics have been successfully used by governments<sup>34</sup>.

<sup>29</sup> It is worth mentioning that the SMI evaluations did not find this to be a disadvantage that materialized in practice. Notwithstanding, this may be due to the interrelationship in the metrics of that initiative.

For example, of the 4 RBA programs analyzed in Perakis, R. & Savedoff, W. (2015) only SMI had a payment where payment metrics were grouped.

<sup>31</sup> Global Partnership on Output-Based Aid -GPOBA (2016). Paying for Performance: An analysis of Output-Based Aid in Education. Retrieved from: http://www.gprba.org/sites/gpoba/files/Docs/Paying\_for\_Performance\_-\_An\_Analysis\_of\_Output-Based\_Aid\_in\_Education\_ R4D\_Final.pdf.

<sup>32</sup> For example, it has been used in the performance-based transfers delivered by the Ministry of Peru to subnational entities, the pilot of a Results-Based Aid (RBA) program in the education sector in Ethiopia, in various World Bank P4R cases such as the Support to the National Pact for Education Reform in the Dominican Republic. Likewise, this is common practice in Impact Bonds; for example, in the Educate Girls or the Quality in Education in India, the Innovation in Preschool Education in South Africa.

<sup>&</sup>lt;sup>33</sup>, P. & Lee, J. (2017). Results - Based Financing in Education: financing results to strengthen systems. World Bank Group.

<sup>34 ,</sup> See for example the RBF program of MCCU Sierra Leone in water and electricity or the conditional transfer program of the Ministry of Education of Peru

#### Case study 2 Support for the National Pact for Education Reform in the Dominican Republic $^{35}$

**Description:** To support the National Pact for Education Reform, the World Bank provided a \$50 million loan to the government of the Dominican Republic where 20% of the financing was conditioned to the achievement of outcomes (through Disbursements Linked Indicators - DLI). The project had a duration of five years (2015-2019).

**Program Goal:** Improve the government's capacity to 1) train and hire primary and secondary school teachers, 2) assess student learning in primary and secondary school, 3) evaluate the quality of service provided by the Public Early Childhood Development Centers, and 4) improve the process of decentralizing the management of educational centers.

#### **Payment metrics**

In this case, the following payment metrics are associated with the impact of the program:

- 1. DLI 1: The revised standardized entrance examination (ISFODOSU) is applied to all applicants.
- 2. DLI 2: The Ministry of Education administers competitive entrance exams to hire teachers (Concurso de Oposición).
- 3. DLI 3: The PISA 2015 exam is applied by the Ministry of Education.
- 4. DLI 4: 250 additional Center Boards receive transfers for their School Management Committee (SMC).
- 5. DLI 5: Dissemination of professional standards to teachers begins.
- 6. DLI 6: The Ministry of Education aligns the competitive examination with the professional standards for teachers.
- 7. DLI 7: Implementation of student evaluation strategy begins.
- 8. DLI 8: ISFODOSU offers two new degrees for secondary level teacher training.
- 9. DLI 9: Professional teaching career and evaluation system (standards-based) is adopted by the Ministry of Education.
- 10. DLI 10: The Ministry of Education pilots, and based on the outcomes of the pilot, revises the dissemination of the student assessment strategy component.
- 11. DLI 11: The Ministry of Education adopts the new guidelines for the functional expenditure of the Center Boards.
- 12. DLI 12: INAFOCAM and ISFODOSU annual financial reports are prepared using SIGEF.
- 13. DLI 13: 20% of public school teachers are evaluated using the teacher career evaluation system.
- 14. DLI 14: The Ministry of Education administers a student evaluation for the first cycle of primary education.
- 15. DLI 15: Public Early Childhood Development Centers are piloted for evaluation.
- 16. DLI 16: 1,750 Center Boards are fully functional.
- 17. DLI 17: ISFODOSU begins implementation of its own professional development plan for its educators.
- 18. DLI 18: INAFOCAM adjusts outcomes-based training programs to evaluation and/or impact evaluation programs.
- 19. DLI 19: The Ministry of Education's Student Evaluation management staff receives training on sampling, element design, database management, and statistical software.
- 20. DLI 20: 50% of functional Public Early Childhood Development Centers are evaluated for quality standards.

#### Payment schedule

For each payment metric, the World Bank, using its internal policies, determines the amount to be granted to the government of the Dominican Republic for compliance with the indicator. The following table summarizes the amounts and how disbursements are distributed throughout the program implementation period.

<sup>&</sup>lt;sup>35</sup> World Bank. (2015). Project Appraisal Document: Dominican Republic Support to the National Education Pact. Washington DC: World Bank. Retrieved from http://documents.worldbank.org/curated/en/858741468189574332/pdf/PAD850-PAD-P146831- R2015-0187-1-Box393201B-OUO-9.pdf

|  | 2015                      | 2016                      | 2017                       | 2018                       | 2019                         |
|--|---------------------------|---------------------------|----------------------------|----------------------------|------------------------------|
| <b>Component 1:</b> Improve the capacity to recruit and train primary school teachers.   | DLI 1<br>Value<br>\$2.5 M | DLI 5<br>Value<br>\$2.5 M | DLI 8<br>Value<br>\$2.5 M  | DLI 12<br>Value<br>\$3 M   | DLI 17<br>Value<br>\$2.375 M |
|  | DLI 2<br>Value<br>\$2.5 M | DLI 6<br>Value<br>\$2.5 M | DLI 9<br>Value<br>\$2.5 M  | DLI 13<br>Value<br>\$2.5 M | DLI 18<br>Value<br>\$2.5 M   |
| <b>Component 2:</b> Improve capacity to<br>evaluate student learning in primary and<br>secondary education.                                | DLI 4<br>Value<br>\$3 M   | DLI 7<br>Value<br>\$2.5 M | DLI 10<br>Value<br>\$2.5 M | DLI 14<br>Value<br>\$2.5 M | DLI 19<br>Value<br>\$2.5 M   |
| <b>Component 3</b> : Improve capacity to<br>evaluate the quality of service provision<br>by Public Early Childhood Development<br>Centers. |                           |                           |                            | DLI 15<br>Value<br>\$2.5 M | DLI 20<br>Value<br>\$2.5 M   |
| <b>Component 4:</b> Improve capacity to scale<br>up processes for decentralization of public<br>school management.                         | DLI 4<br>Value<br>\$2 M   |                           | DLI 11<br>Value<br>\$2 M   | DLI 16<br>Value<br>\$2.5 M |                              |
| Estimated total annual disbursement  | 10 M                      | 7.5 M                     | 9.5 M                      | 13 M                       | 9.875 M                      |

#### Payment structure

The payment structure depends on the nature of the payment metrics. For most of them, payment is based on compliance or non-compliance with the DLI in the corresponding year (dichotomic model). However, the World Bank also includes DLIs with other payment structures that allow partial payments for the amounts tied to the DLIs (staggered and continuous models). For example, DLIs 8, 16 and 20 have the following payment structures:

- DLI 8 has a staggered payment structure where US \$1.25 M is paid for each of the two new teacher education degrees.
- DLI 16 has a continuous payment structure where US \$1,428 is paid for each SMC, starting at 250 SMCs, up to 1,750 SMCs.
- DLI 20 has a continuous payment structure that pays US \$50,000 for each percentage point increase up to the 50% referred to in the metric.

#### Systemic outcomes obtained

The Government's approach to identifying outcomes and bottlenecks, thanks to this program, allowed: 1) the alignment of stakeholders and actions around outcomes through the DLIs and 2) a shift in policy dialogue that allowed various sectors of the system to "talk" to each other, rather than reconstructing ad-hoc interventions that only addressed parts of the system<sup>36</sup>.

<sup>&</sup>lt;sup>36</sup> Holland, P. & Lee, J. (2017). Results-Based Financing in Education: financing results to strengthen systems. World Bank Group.

### 5.1.2. Payment function models

Three payment function models are explained below. These models can be applied in the same way for all the metrics of the RBF program or distinctively for each metric according to the characteristics of each one. On this last point, it is key to clarify that there are metrics that due to their characteristics will be dichotomic in nature (e.g., yes/no) or scaled (e.g., low, medium, high). The following analysis of the models assumes that the metric will have a continuous nature, so that any model can be applied<sup>37</sup>.

#### Model 1: Dichotomic function

This model consists of defining a single level of achievement for each payment metric, so that the payment is activated only if the established target is achieved. Under this model, if the incentivized agent does not achieve the target, the entire amount of funding tied to the metric is forfeited.

The main advantages of this model are that it is simple to understand and strongly incentivizes the government to reach the expected target level. This model can be interesting for the Ministries of Finance and Education, as it facilitates financial planning since the amount to be received if the outcomes are achieved is clear. Furthermore, it can minimize administrative costs to the extent that the payment is only triggered under a fulfilled condition.

Notwithstanding, this model could have the following disadvantages: 1) it is based exclusively on a target that is intended to be realistic and ambitious but can be complex to calculate. The target depends on the negotiation with the countries and is susceptible to the bias or tendency of development programs to overestimate feasible gains<sup>38</sup>. 2) It does not recognize the nuances of the effort of the incentive agent. If the target is not achieved, there is no payment due to the discontinuity introduced and it ignores how close or far away the cut-off point was<sup>39,40</sup>. 3) In cases where the results achieved are close to the target and the outcome payers expect to disburse the performance tranche, it may generate pressure to make the payment even if the target is not met<sup>41, 42</sup>. 4) It can reduce the incentivized agent's interest in trying, knowing that it will not

<sup>37</sup> For example, the 8th grade achievement rate can be viewed as continuous if one plans to incentivize each percentage point achieved, stepwise if one plans to incentivize certain levels of the rate (e.g., first step 70%, second step 80%, and third step 90%), or dichotomic if one plans to go all or nothing (e.g., to reach 85%).

<sup>38</sup> While different target calculation methodologies help to make the estimate as rigorous as possible, finding the adequate balance between being realistic and ambitious is difficult. Perakis, R. & Savedoff, W. (2015). Does Results-Based Aid Change Anything? Pecuniary Interests, Attention, Accountability and Discretion in Four Case Studies.

<sup>39</sup> Perakis, R. & Savedoff, W. (2015). Does Results-Based Aid Change Anything? Pecuniary Interests, Attention, Accountability and Discretion in Four Case Studies.

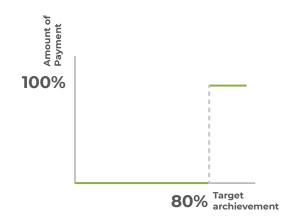
<sup>&</sup>lt;sup>40</sup> Hallet and Over (2010). How to Pay "Cash on Delivery" for HIV infections averted: two measurement approaches and ten payout functions.

<sup>41</sup> Perakis, R. & Savedoff, W. (2015). Does Results-Based Aid Change Anything? Pecuniary Interests, Attention, Accountability and Discretion in Four Case Studies.

<sup>42</sup> The SMI model was dichotomic. According to different sources, during the implementation of the first operation, some countries such as Guatemala, Belize and Mexico (Chiapas) did not achieve the targets and donors had to reevaluate the criteria for deciding whether or not to the target was met. IHME (s.f.). Salud Mesoamérica Initiative Process Evaluation.

achieve the target and therefore will not receive any payment<sup>43</sup>. 5) It can increase the probability of perverse incentives in comparison with other payment structure models because, by generating greater pressure to achieve the defined target, the incentivized agent may be more susceptible to undesired behaviors such as teaching for the exam or excluding a certain population from participating in the program (see Annex 1 for a more extensive explanation on perverse incentives). Figure 1 presents a dichotomic or "all or nothing" payment model.

Graph 1. Example of a dichotomic model



#### Model 2: Function with steps

In this model, payment levels are defined according to the range achievement of the target. This allows a partial payment to be made for partial achievements of the target (e.g., 50% of the total payment amount is awarded if 50% of the target for the payment metric is met).

While this model may be more complex than the dichotomic model, it is also interesting for the Ministries of Finance and Education as it allows for simple financial planning. Although in this case there is no certainty about the final amount to be received as there are a small number of payment scenarios to consider in financial planning. On the other hand, from an implementation point of view, this model makes it easier to understand performance levels and to propose actions to reach the next payment step. In addition, it recognizes the incentivized agent's effort to achieve results to a greater extent than the previous methodology<sup>44</sup>. The main disadvantage of this model is its complexity in defining and communicating the thresholds for each metric, as there are

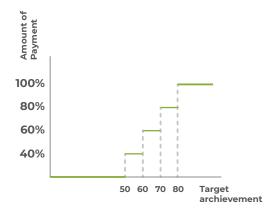
<sup>43</sup> Perakis, R. & Savedoff, W. (2015). Does Results-Based Aid Change Anything? Pecuniary Interests, Attention, Accountability and Discretion in Four Case Studies.

<sup>44</sup> According to interviews with the SMI and RMEI team, as well as other literature, RMEI changed to a step model precisely to give greater relevance to this point of recognizing governments' efforts towards achieving outcomes. In particular, 2 steps were established: governments that reach 50% of the target for the group of metrics receive 30% of the performance payment, while those that reach a minimum of 80% receive 100% of the payment. IDB (2018). Monitoring, Learning and Evaluation Strategy Regional Malaria Elimination Initiative for Mesoamerica.

32

more elements to explain, and the thresholds may be perceived as arbitrary. Furthermore, it can generate pressures to adjust the measurement or targets in case of being close to the thresholds, as explained for the dichotomic function. Figure 2 illustrates how the payment per metric could be, considering achievement steps.

Graph 2. Example of a staggered payment function



To select the number of steps for this model it is important to consider the advantages and disadvantages of increasing them. The analysis is explained in Table 3. To facilitate the communication of the incentive scheme it is recommended to have the same number of steps for all metrics.

Table 3. Advantages and disadvantages of having more steps in the step payment model

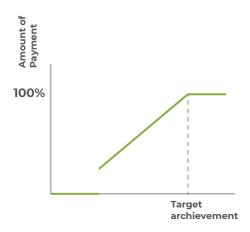
| Advantages of more steps   | Disadvantages of more steps   |
|--|---|
| <ul> <li>Increased recognition of government efforts, making it<br/>more similar to a continuous payments function.</li> <li>Increased likelihood that governments will be able to<br/>receive more payments.</li> </ul> | <ul> <li>There is less interest attached to the marginal effort of<br/>the incentivized agent.</li> </ul> |

#### Model 3: Continuous function

This model consists of defining a continuous payment, i.e., a payment for each unit achieved (e.g., \$100 payment for each additional point in the 8th grade achievement rate). It is common in RBA projects to have a continuous payment rather than a stepped or dichotomic payment<sup>45</sup>. To this end, a lower limit can be set to avoid paying for non-significant improvements (in some cases the limit may be zero or the baseline) and an upper limit to avoid concentrating payments on a specific metric to the detriment of others.

The model generates incentives for governments to constantly make an effort because it compensates each unit of results achieved regardless of how far they are from the desired target or outcomes<sup>46</sup>. In fact, in cases where payment is made per individual, it creates incentives to impact the greatest possible number of people<sup>47</sup>. On the other hand, the disadvantages of this model are: 1) its greater difficulty in financially planning as the potential amount is unknown by governments<sup>48</sup> and 2) the complexity of establishing an appropriate price per metric (see subsection 4.3). Nevertheless, multiple RBA programs have defined a price per unit of result achieved and have even maintained the same price across countries to simplify the design and to point out that the social value of childhood immunization should not depend on its geographic location<sup>49</sup>. Figure 3 shows an example of this model.

Graph 3. Continuous payoff model



<sup>&</sup>lt;sup>45</sup> For example, of the 4 RBA programs analyzed in Perakis, R. & Savedoff, W. (2015) only SMI had a dichotomic payment.

<sup>46</sup> Perakis, R. & Savedoff, W. (2015). Does Results-Based Aid Change Anything? Pecuniary Interests, Attention, Accountability and Discretion in Four Case Studies.

<sup>47</sup> Ibid.

<sup>&</sup>lt;sup>48</sup> Compared to previous models, governments know the amount they receive for achieving the target. In this model, that amount can vary according to the number of units of the metric that are achieved.

<sup>49</sup> According to Perakis, R. & Savedoff, W. (2015), in the GAVI Alliance, a price of \$20 per vaccinated child was defined. This price was the same across countries even if vaccination costs change. This simplified the design and gave a clear signal that the value of a vaccinated child is the same regardless of location.

## 5.2. Analysis of the payment schedule elements

The payment schedule defines the periodicity with which the resources conditional on results (the incentive tranche) are disbursed. For example, payments may be made semi-annually, annually, in phases, or one-time payment at the end of the program. Commonly, payments in RBF programs are made with the same frequency as the payment metrics outcomes are verified, or at the end of the RBF program<sup>50</sup>.

An adequate payment schedule should<sup>51</sup>: 1) generate incentives and provide resources in the short term that can be reinvested in the achievement of future results, 2) allow governments to have clarity on the resources available in time to properly plan the use of those resources and create a virtuous circle of planning, investment, performance, incentives, 3) be aligned with each country's budget schedule and consider the budgetary constraints that are applicable to each country (e.g., annualized budget), and 4) take into account the time it takes to achieve the desired outcomes.

Likewise, the payment schedule should avoid<sup>52</sup>: 1) governments having to rush or wait too long to receive resources for results achieved, 2) increasing too much the administrative costs of verifying results and disbursing resources, and 3) exceeding governments' capacities to absorb and manage the funding they receive in a given period.

This subsection analyzes two key aspects related to the payment schedule: 1) the frequency of disbursements of the incentive amount and 2) the rules for the maximum amounts to be paid overtime.

### 5.2.1. Frequency of disbursements of the performance tranche

Although the frequency of disbursements can only be determined in detail once the payment metrics and the approximate time to achieve and observe their respective outcomes are clear, Table 4 presents the main advantages and disadvantages of an annual frequency and phased payments. The SMI experience with phased payments has been perceived as successful<sup>53, 54</sup>. It is worth mentioning that having phases and payments of more than 3 years is not recommended as it may imply that there are countries where a government will not receive payments (assuming government periods of 4 four years).

<sup>&</sup>lt;sup>50</sup> Instiglio (2017). A practitioner's guide to Results-Based Financing

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>&</sup>lt;sup>53</sup> According to interviews conducted during the first quarter of 2021 with the SMI team the phases have been key, but ensuring that it is managed as a single operation.

<sup>&</sup>lt;sup>54</sup> In SMI's experience, the number of phases was tied to the time for implementation. In SMI, 3 phases of 18 months were originally designed, which proved to be a difficult time period to operate due to government budget cycles (which are usually annual). A shorter period was a high transaction cost and short time to achieve outcomes. Therefore, for the RMEI, 24-month phases were considered as the mid-point or ideal trade-off between time to achieve outcomes, lower transaction costs and alignment with government budget cycles.

#### Table 4. Analysis of incentive payment frequency

| Frequency | Advantages   | Disadvantages  |
|-----------|--|--|
| Annual    | <ul> <li>Frequently available resources that governments could reinvest in the programs and interventions to generate more results and thus increase the likelihood of receiving more payments tied to results in the future (virtuous circle)<sup>55</sup>.</li> <li>They fit more easily into government budget cycles, which tend to be annual.</li> </ul>  | <ul> <li>Increases administrative costs both for<br/>the part of the donors in making more<br/>disbursements, as well as for governments to<br/>manage funding.</li> <li>Increases verification costs by requiring<br/>independent verification every year.</li> <li>One year may not be enough time to generate<br/>significant changes in some metrics, but this<br/>should be evaluated for the selected metric.</li> </ul> |
| In phases | <ul> <li>Allows incentivizing more ambitious outcomes by allowing for a longer period<sup>56</sup>.</li> <li>It is more likely to be enough time to see significant changes in metrics that are difficult to achieve. Particularly, during the first phase where governments need to adjust their operations<sup>57</sup>.</li> <li>It is better aligned with the planning and implementation schemes of an operation, to the extent that governments and other stakeholders take some time to adjust and initiate the implementation of cost-effective interventions and then some time to manage results.</li> </ul> | • Governments may not receive more constant<br>rewards compared to an annual payment.<br>With phases that do not have an annual<br>structure (e.g., 18 or 30 months), difficulties may<br>arise in aligning payments with government<br>budget cycles.   |

#### 5.2.2. Rules for maximum amounts to be paid through time

In addition to the frequency with which payments will be made, it is key to define the rules on the maximum amount to be paid in each of these phases<sup>58</sup>. For example, one could have fixed amounts or flexible amounts. This decision has an effect on the type of incentives being generated and on the resources that would be available if results are not achieved. Table 5 presents three options of rules for defining the transfer of resources between phases, as well as the advantages and disadvantages of each.

<sup>&</sup>lt;sup>55</sup> According to the interview with Bill Savedoff, 6 of the 8 SMI countries decided to reinvest the performance payments received in order to achieve greater outcomes within the timeframe of the Initiative. It should be clarified that the reinvestment of resources was not a requirement, but a decision of the governments and was not a direct reinvestment in SMI interventions. In El Salvador, for example, resources were used to improve infrastructure in the intervention areas. In Mexico, resources were used to expand the quality of care strategy. In other words, in general, resources were used in areas that normally did not have a budget and, although they are not the main focus of SMI, they structurally improve aspects of the health system that lead to greater outcomes.

<sup>&</sup>lt;sup>56</sup> Holland, P. & Lee, J. (2017). Results-Based Financing in Education: financing results to strengthen systems. World Bank Group.

<sup>&</sup>lt;sup>57</sup> According to SMI's evaluations, "interviewees indicated that having to meet deadlines creates a sense of urgency, [however] they felt that 18 months was too short a time frame to assess bottlenecks, develop and implement changes to strengthen the system and achieve outcomes. Thus, they felt that a two-year timeframe would be more realistic." Iriarte et al (2017). El premio inicial en la iniciativa de cooperación basada en outcomes de Salud Mesoamérica. Pp. 11-12.

<sup>58</sup> This document does not analyze the distribution of the investment tranche for cost-effective interventions in partner countries. Such distribution should follow a logic similar to previous IDB programs.

Table 5. Options of rules for maximum amounts to be paid over time

| Option   | Definition  | Advantages   | Disadvantages  |
|--|---|--|--|
| Amount per<br>phase not<br>transferable over<br>time | Establish a fixed payment limit<br>for each phase.  | <ul> <li>Forces the incentivized agent<br/>to achieve the targets within<br/>the predetermined time<br/>horizon.</li> <li>It is easy to understand.</li> </ul>   | <ul> <li>It strengthens the effect of<br/>over-ambitious or poorly<br/>estimated targets, as all<br/>available resources for that<br/>phase would be lost.</li> <li>Increases the probability of<br/>not disbursing all resources.</li> </ul>  |
| Amount<br>per phase<br>transferable over<br>time     | Establish a flexible payment<br>limit per phase, where<br>amounts not disbursed in<br>previous phases are included<br>in the following disbursements. | <ul> <li>Gives indications of the desired achievements and disbursements that can be accessed over time, without forcing the incentivized agent to achieve what may not be feasible in the given period.</li> <li>Allows low performance in certain phases to be compensated by high performance in others.</li> <li>Increases the probability of disbursing all resources.</li> <li>Generates greater flexibility to disburse resources according to the actual timing of achieving results.</li> </ul> | <ul> <li>Makes design and financial planning more complex.</li> <li>May not generate the incentives to achieve the targets in the stipulated time because it is not perceived as a loss/gain of resources since the unearned resources can be earned later.</li> </ul>   |
| No amount per<br>phase, just a<br>total              | No limits defined per phase<br>beyond the overall budget<br>limit for the entire project.   | <ul> <li>Simplifies design.</li> <li>Increases the probability of disbursing all resources.</li> <li>Generates greater flexibility to disburse resources according to the actual timing of achieving results.</li> </ul>   | <ul> <li>Raises the risk that the incentivized agent decides not to make an effort in certain phases and still achieve all payments with a short time effort.</li> <li>It does not generate clarity on the amount of resources that can be accessed over time, so that adequate planning can be done.</li> </ul> |

# 6. Incentives in the framework of decentralized education systems

While the incentives are focused on national governments, it may be desirable to also incentivize also to subnational entities of the education systems under the assumption that they are closer to beneficiaries on the field. In fact, some countries in Latin-America have decentralized education systems, so promoting the use of incentives at the decentralized level may be especially relevant for the region.

With this goal in mind, this section presents high-level recommendations on what to consider if financial incentive schemes for subnational level entities would like to be explored. The section includes 1) a brief explanation of why to consider levels of government beyond the central government, 2) the theoretical framework used, and 3) recommendations on next steps for the decision to work with other levels of government.

## 6.1. Why consider incentivizing levels of government beyond the central level?

In order to answer this question, we would like to refer to the IDB Salud Mesoamérica Initiative and the Erradicación de Malaria Initiative. Both initiatives are public-private RBF programs that provide funding to national governments to improve maternal and child health outcomes or Malaria eradication, respectively. In these cases, non-conditional resources are provided –as working capital to finance cost-effective interventions– and another portion of funding is conditional to achievement of the established targets – to incentivize desired results.

Although agreements are made with central governments, other levels of government (e.g., departmental, or municipal governments) play a fundamental role in achieving the expected results. Therefore, central governments, with IDB support, have defined strategic plans to guide subnational governments towards the achievement of results. In fact, in most cases for the SMI, central governments established disaggregated targets at the subnational level to clearly establish the roadmap to be followed by each level of government involved in the supply chain of the services in question. In addition to setting targets at the subnational level, some countries decided to establish incentives for subnational units. According to SMI's experience, incentivizing subnational governments to achieve the desired outcomes is key, especially in countries with decentralized systems. However, this is not possible in all countries of the region given the capacities and realities of the different levels of government. Therefore, in the SMI and the RMEI it has not been mandatory for national governments to create a scheme that passes on to subnational governments the amounts paid for incentives.

In the case of the education programs, it is suggested to facilitate, but not force, governments to include additional incentive schemes for subnational governments. This is aligned with RBF theory since one of its main impact drivers is to align incentives among stakeholders in a system. Particularly in decentralized systems, the alignment of different stakeholders is key when national governments have a low incidence in the achievement of educational outcomes. Likewise, conditioning payments on the fulfillment of results at subnational levels of government allows greater flexibility to adapt to local conditions and increases accountability. Finally, several international experiences with outcomes-based subnational transfers have shown that using incentives can increase the effectiveness of technical assistance<sup>59</sup>. Technical assistance efforts can be better leveraged when incentives are in place to improve performance, and these can also lead to the contracting of technical assistance that is more relevant to the needs of the incentivized governments.

RBF systems using outcomes-based transfers to subnational governments are commonly called Performance-Based Grants. Figure 6 shows how this scheme works. These have been used in many developing countries on a variety of sectors, including the education sector. Some of the benefits observed in these initiatives include: 1) improving the accountability and transparency of local governments to citizens, 2) identifying what the capacity gaps of local governments are and how technical assistance can strengthen those capacities, 3) improving the management and organizational learning of local governments, and 4) strengthening the relationship of governments with citizens<sup>60</sup>. Specifically in the education sector, countries in Latin America, such as Peru<sup>61</sup> and Brazil<sup>62</sup> have had excellent results with these mechanisms.

Figure 2. Performance-Based Grants Model



<sup>&</sup>lt;sup>59</sup> UCLDF (2010). Performance-Based Grant Systems: Concept and International Experience.

<sup>60</sup> Ibid.

<sup>&</sup>lt;sup>61</sup> World Bank (2021). Results-Based Financing in Education: Peru's Incentive Program and "Performance Commitments". En: https://www. worldbank.org/en/news/feature/2021/02/01/results-based-financing-in-education-peru-incentive-program-and-performancecommitments

<sup>62</sup> Sondergaard, L. (2020). In Ceara, Brazil, mayors have to improve education outcomes to receive more funds. World Bank Blogs En: https:// blogs.worldbank.org/latinamerica/ceara-brazil-mayors-have-improve-education-outcomes-receive-more-funds

Accordingly, it is advisable to analyze the opportunity to incentivize levels of government beyond the central level.

#### 6.2. Theoretical framework on decentralization

The following is a description of the theoretical framework used to standardize the analysis of the level of decentralization of the education systems for countries in the Latin-America region and to facilitate their comparison. This theoretical framework contains: 1) the definition of the levels of government, 2) the categories of analysis to determine the level of de jure decentralization in the education systems, and 3) the rating system used for the level of incidence of each level of decentralization.

#### 6.2.1. Levels of government

For this document, decentralization of the education system is understood as "the transfer of responsibilities in the planning, management, procurement and distribution of resources from the central government to units in the field of government agencies, units or subordinate levels of government"<sup>63</sup>. There are different types of decentralization that are differentiated mainly by the degree of autonomy in decision-making that the central government grants to subnational units, ranging from deconcentration (transfer of responsibilities with limited decision-making power) to devolution (subnational units have independent authority to execute activities). In practice, countries mostly have hybrid types combining different forms of decentralization<sup>64</sup>. As a result, defining and operationalizing levels of decentralization can be complex.

The following is the definition of the government levels of the education system to be considered in this analysis. These levels of government are related to the provision of educational services to the chosen target population. It should be clarified that these levels may vary between countries given the configurations of each country (e.g., in Colombia the levels of government do not necessarily coincide with territorial decentralization).

- Central Level (CL): refers to the national government of the country.
- Intermediate Level (IL): refers to federal, provincial, state, district or departmental governments or entities.
- Local Level (LL): refers to municipal governments or entities.

<sup>&</sup>lt;sup>63</sup> Rondinelly, N. y Cheema (1983). Descentralization in Developing Countries: A Review of Recent Experience.

<sup>&</sup>lt;sup>64</sup> Di Gropello, E. (1999). Los modelos de descentralización educativa en América Latina. ECLAC Journal 68.

#### 6.2.2. Analysis categories

Table 6 contains the analysis categories that, according to the literature<sup>65</sup>, summarize the type of (de)centralized actions or decisions taken within education systems, ordered from the most macro to the most micro.

Table 6: Analysis categories of the (de)centralization of the education system

| Categories           | Type of actions/decisions   |
|----------------------|---|
| Education policy     | Decisions related to the guidelines of the education system, the standard content of school curricula (i.e., minimum areas of study), and the goals of the education system.  |
| Budget allocation    | How the total education budget is allocated and distributed among the different levels of decentralization.   |
| Planning             | Decision-making that allows for the provision of education services (e.g., definition of classroom materials and teaching procedures, evaluations at the end of each educational cycle, and monitoring of schools). |
| Budget execution     | Execution of the operating budget and the investment budget within the different<br>levels of decentralization to provide education services (school development plan, staff<br>budget, staff training, etc.).      |
| Personnel management | Management of teaching staff (e.g., hiring, recruitment, salary setting, assignment of responsibilities, training).   |

#### 6.2.3. Rating system

Finally, to operationalize the level of incidence<sup>66</sup> of each level of government in each category of analysis by country, the following rating system was used:

- High: the government unit or agency has high incidence in this category with respect to the other levels of government.
- **Medium:** the government unit or agency has responsibility in this category compared to the other levels of government but is significantly dependent on those others (i.e., lacks autonomy).
- Low: the government unit or agency has no significant incidence in this category with respect to the other levels of government.

<sup>&</sup>lt;sup>65</sup> Winkler, D. & Gershberg, A. (2000). Education Decentralization in Latin America: the effects on the quality of schooling. World Bank document. McGinn, N. & Welsh, T. (1999). Decentralization of education: why, when, what and how? UNESCO Document.

<sup>&</sup>lt;sup>66</sup> For this document it is understood that having incidence refers to having the responsibilities to perform the functions according to the regulations and having the autonomy to make decisions related to those functions.

#### 6.3. High-level recommendations of the agent(s) to be incentivized

The following are the general recommendations of the agent(s) to be incentivized according to the level of decentralization in each country. These recommendations are based on the findings of the review of the countries' regulations, but also incorporate the considerations of the country experts with whom we were able to have conversations and what was found in the literature review of other documents that analyze the situation of decentralization of the education systems of the countries of the region. Two types of recommendations are established: one for centralized countries and another one for decentralized countries.

#### 6.3.1. Recommendations for countries with centralized education systems

For these countries, **it is recommended to incentivize only the Central Level (CL)**. In these cases, the CL is the decision-maker in the education system unless an institutional reform leading to decentralization will be achieved prior the start implementation of the program. However, according to discussions with other experiences such as the Salud Mesoamérica Initiative, the coordinator unit of the initiative worked hand in hand with governments and subnational health system entities through technical assistance and subnational targets were established as these targets can guide the program towards achieving outcomes.

## 6.3.2. Recommendations for countries with decentralized education systems

In these countries, given that the regulations determine whether the IL or LL have greater autonomy for delivering educational services, in addition to the incentives conditioned to outcomes of the program to the central government, it is recommended to pilot a mechanism for transferring incentives conditioned to the achievement of results to subnational governments. In other words, it is recommended adding an RBF program to the incentive scheme for the central government a scheme where transfers tied to results are given to ILs or LLs to align incentives among all relevant levels of the education system.

The rationale behind this recommendation is that in countries with decentralized education systems, the CL does not necessarily have sufficient incidence or control over the implementation of educational projects related to the achievement of program's results. However, in many of these countries, the decentralization of responsibilities has not been accompanied by the generation of the necessary capacities to execute quality educational programs. For this reason, it is recommended to accompaniment through technical assistance to subnational governments. This can help strengthen the sustainable systemic change that the program seeks to achieve.

Some recommendations for the Performance-Based Grants mechanisms are as follows:

- 1. The main incentive scheme would be directed towards the national government. This mechanism would be an additional incentive scheme for each country and would be aligned with the one directed to the central government.
- 2. The incentive scheme for subnational governments should be aligned with the incentive system for the central level. It is necessary to adapt the incentive scheme, but an incentive scheme that pushes both levels of government to different priorities and directions should be avoided.
- 3. This mechanism will be optional for the countries, they need to notify their willingness to adopt the mechanism.
- 4. Since the design of these financial mechanisms is complex, it is advisable for the program's coordination unit to work hand in hand with the central government to develop these mechanisms.
- 5. In most cases the IL or LL have deficient technical, administrative, and political conditions. Therefore, it is recommended that the capacities of subnational governments be strengthened with technical assistance, especially in countries that use this additional incentive scheme.
- 6. The source of the incentives for subnational governments can come from the resources of the program's funding, or the governments' own resources that are regularly transferred from the central government to subnational governments. The second option is more attractive from the point of view of the sustainability of the transfer mechanism and to maintain the attractiveness of the incentive to the national government (which would otherwise be diluted by being shared between the central and subnational governments), but the first option is more viable from an administrative point of view.
- 7. The flow of incentive resources, regardless of their source, from central governments to subnational governments may increase the sustainability of the transfer mechanism since the Ministries of Treasury/Economy/Finance and Education could include them as part of their regulations to allocate the budget to subnational entities according to their performance<sup>67</sup>.

<sup>67</sup> According to ECLAC, this refers to an Outcomes Based Budgeting mechanism so that during the formulation of the public budget, the outcomes achieved by subnational entities executing public programs are systematically considered. This type of mechanism is used by other countries in the region, such as Peru.

#### 6.4. Steps to complete analysis for decentralized incentive schemes

Given the recommendations mentioned in the previous subsection, the following are potential next steps to complete this high-level analysis.

- Analyze how the decentralization regulations work in practice (de jure vs. de facto). In many cases the official regulations differ from what happens in practice. To this end, it is suggested that meetings be held with the country experts to validate the level of decentralization observed in practice in these countries. Likewise, the de jure and de facto responsibilities of the different levels of government could be discussed during conversations with central governments.
- 2. Further research the capacities of the different levels of government. Technical, administrative, and political conditions vary significantly among government levels. To this end, it is suggested that the program's coordination unit analyze the management resources and execution capacity of the different levels of government. This could be done through interviews with members of subnational governments and/or other experts.
- 3. Analyze at which level of government the performance bottlenecks to be addressed by the program happen. To identify how technical assistance to subnational entities (either for centralized or decentralized countries) can be focused on those levels of government that impose barriers to the achievement of outcomes.
- 4. **Understanding the environment of incentives present** is relevant because it affects the success of the program by defining the behavior of the different actors.
- 5. **Explore incentive transfer schemes to subnational governments** and discuss them with the governments of decentralized countries to determine if they are interested in including them as part of the program.
- 6. Consider other characteristics that facilitate or hinder cooperation between national and subnational entities. For example, in countries of larger geographic and population size such as Mexico or Colombia, it may be more practical to work with subnational entities because they are closer to the educational centers and may have more specific knowledge of the region than the central government. In contrast, this is less problematic for smaller countries in Central America.

## 7. Conclusions

The situation of education across Latin America and the Caribbean have negatively been impacted by the pandemic caused by COVID-19. Thus, it is important for governments and all interested stakeholders to think on innovative ways to help provide with mechanisms that are pertinent, timely and effective in mitigating the effects of the sanitary crisis.

Results-Based Financing Models serve as a creative way to join efforts and implement innovative blended financing strategies that uses monetary incentives paid to different levels of government for each result achieved. These types of models have demonstrated great results in the past few years, having helped countries likes Jamaica and Brazil to increase learning outcomes in approximately 10 p.p. and significantly reduce drop-out rates (World Bank Group, 2015; Lautharte, I., de Oliveira, V. H. & Loureiro, A., 2021).

These results can translate to other countries as RBF models have four main advantages. First, by aligning incentives to achieve certain results, the model looks to strengthen capabilities of the agents and thus, generate systemic change that is sustainable through time. Second, it increases impact as the model shifts from traditional models that pay for activities and inputs to one that pays for results. Third, it allows for flexibility and adaptation of interventions, promoting cost-effectiveness and innovation. Fourth, it increases the accountability and transparency of the governments actions as results are verified through independent and external audits.

Nonetheless, their design and implementation are not so straightforward, there are elements that need to be decided and that are crucial to the success of RBF programs, such as i) identification of the incentivized agent, ii) definition of ambitious, realistic, specific, measurable and relevant results, iii) selection of performance indicators linked to what one wants to incentivized, iv) estimation of targets that are realistic for agents to achieve and ambitious enough to make a difference on the natural trend, v) definition of the incentive amount that would motive active action of the agents, vi) establishment of a payment structure and schedule that is related to the results and targets.

Finally, it is important for stakeholders that are interested in developing RBF programs to first analyze the context on which they are willing to implement the model, the different agents involved and their responsibilities, understand the bottlenecks and analyze the incentivized agent capabilities. These are relevant inputs to have on the table before discussing each of the elements mentioned. 45

## 8. References

- Acevedo, I., Castro, E., Fernandez, R., Flores, I., Perez, M., Miguel, S., & Zoido, P. (2020). Los Costos Educativos de la Crisis Sanitaria en América Latina y el Caribe (IDB-TN-02043; Nota Técnica).
- Agencia de Cooperación Internacional del Japón JICA (2012). Informe analítico del sector de educación básica Nicaragua.
- Banco Mundial (2021). Actuemos ya para proteger el capital humano de nuestros niños. Los costos y la respuesta ante el impacto de la pandemia de COVID-19 en el sector educativo de América Latina y el Caribe. Grupo Banco Mundial.
- Beirute, T. (2018). La estructura y gestión curricular de las Direcciones Regionales de Educación. Informa Estado de la Educación 2019.
- Belize Education Act Chapter 36 (2000).
- BID (2018). Monitoring, Learning and Evaluation Strategy Regional Malaria Elimination Initiative for Mesoamerica.
- Birdsall, N. Savedoff, W. and Seymour, F. (2014). The Brazil Norway Agreement with Performance– Based Payments for Forest Conservation: successes, challenges, and lessons. Center for Global Development.
- Bloomgarden, D., Eddy, M. & Levey Z. (2016). Social Impact Bonds and Education in Latin America. GEMS Education Solutions
- Bowles, S. & Polonia-Reyes, S. (2012). Economic Incentives and Social Preferences: Substitutes or Complements? Journal of Economic Literature, Vol. 50. Pp. 386–425.
- Calderón, D. (2017). Gobiernos estatales: cumplan con educación de calidad.
- Cámara de Diputados del Honorable Congreso de la Unión de México (2019). Ley General de Educación.
- Centro de Investigaciones Económicas Nacionales (2011). Descentralización: Lineamientos de Política Económica, Social y de Seguridad 2012-2020.
- Cruz Aguayo, Y. & Martínez, S. (2016). Setting Targets for Results-Based Financing Programs: a simple cost benefit framework. IDB technical document.
- Cura, D. (2020). Exclusión educativa en secundaria en Mesoamérica: factores de riesgo, políticas de prevención, análisis de los sistemas de alerta temprana y modalidades alternativas de secundaria.
   Documento técnico Pilar 2 - Permanencia.
- DFID (2016). Project competition review Pilot Project of Results Based Aid in Education Sector in Ethiopia. Retrieved from: https://devtracker.fcdo.gov.uk/projects/GB-1-202989/documents
- **DIDEDUC (2011)**. Manual de funciones, organización y puestos de las direcciones Departamentales de Educación de Guatemala.
- Di Gropello, E. (1999). Los modelos de descentralización educativa en América Latina. Revista de la CEPAL 68.
- Eicheler et al (2017). External measurement as a catalyst for change.

- El Bcheraoui, et al (2017). Healthy competition drives success in results-based aid: Lessons from the Salud Mesoamerica Initiative.
- Global Partnership on Output-Based Aid GPOBA (2016). Paying for Performance: An analysis of Output-Based Aid in Education. Retrieved from: http://www.gprba.org/sites/gpoba/files/Docs/Paying\_ for\_Performance\_-\_An\_Analysis\_of\_Output-Based\_Aid\_in\_Education\_R4D\_Final.pdf.
- Hallet and Over (2010). How to Pay "Cash on Delivery" for HIV infections averted: two measurement approaches and ten payout functions.
- Holland, P. & Lee, J. (2017). Results-Based Financing in Education: financing results to strengthen systems. World Bank Group.
- Ibarrola (2012). Los grandes problemas del sistema educativo mexicano.
- Iriarte et al (2017). El premio inicial en la iniciativa de cooperación basada en outcomes de Salud Mesoamérica. Págs. 11-12.
- IHME (2011). Guatemala Target Setting Guidelines.
- IHME (s.f.). Salud Mesoamérica Initiative Process Evaluation.
- Instiglio (2015). Educate Girls Development Impact Bond. En: https://www.instiglio.org/wp-content/ uploads/2016/05/EG-DIB-Design-2.pdf
- Instiglio (2017). A practitioner's guide to Results-Based Financing.
- Instiglio (2018). Village Enterprise Development Impact Bond for Poverty Alleviation En: https://www. instiglio.org/wp-content/uploads/2018/02/VE-DIB-Design-Memo-Public\_14FEB2018.pdf
- Instiglio & the Global Partnership on Output-Based Aid (2018). A guide for Effective Results Based Financing Strategies.
- Instiglio (2020). Outcomes de la Agenda de Aprendizajes del Primer Bono de Impacto Social en un país en desarrollo Empleando Futuro. En: https://www.instiglio.org/wp-content/uploads/Outcomes-Agenda-Aprendizajes-Primer-Bono-de-Impacto-Social.pdf
- Instiglio (2020). Utilizing Results-Based Financing to Accelerate Success in Policy and Institutional Reform. Draft report.
- La Gaceta Diario Oficial de la República de Honduras (2014). Acuerdo Ejecutivo No. 1354-SE Reglamento general de la Ley Fundamental de Educación. En https://www.acnur.org/fileadmin/ Documentos/BDL/2016/10625.pdf
- Lautharte, I., de Oliveira, V. H. & Loureiro, A. (2021). Incentives for Mayors to Improve Learning. Evidence from State Reforms in Ceará, Brazil (https://openknowledge.worldbank.org/bitstream/ handle/10986/35024/ Incentives-for-Mayors-to-Improve-Learning-Evidence-from-state-reforms-in-Ceará-Brazil.pdf?sequence=6&isAllowed=y).
- McGinn, N. & Welsh, T. (1999). Decentralization of education: why, when, what and how? Document by UNESCO MEDUCA and UNDP (2017). Compromiso Nacional por la Educación.
- México Evalúa Centro de análisis de políticas públicas (2011). 10 puntos para entender el gasto educativo en México: consideraciones sobre su eficiencia.
- Ministerio de Educación Nacional de la República de Colombia (2009). Organización del Sistema Educativo: conceptos generales de la educación preescolar, básica y media.

- Ministerio de Educación de El Salvador (2016). Manual de Organización y Funciones Específico de las Direcciones Departamentales de Educación 2015-2019.
- Ministerio de Educación de El Salvador (2016). Manual de Organización y Funciones Específico Dirección Nacional de Educación Básica (I y II Ciclo) 2015-2019.
- Ministerio de Educación de Nicaragua (2011). Plan Estratégico de Educación 2011-2015.
- Ministerio de Educación de Nicaragua (2017). Plan de Educación 2017-2021.
- Ministerio de Educación Pública de Costa Rica MEP (2016). Principios de Gestión de las Direcciones Regionales de Educación: elementos constituyentes de los procesos administrativos.
- Ministerio de Educación República Dominicana (2018). Manual de Organización y Funciones.
- Ministerio de Educación República Dominicana (2017). Manual operativo de Distrito de Educación.
- Naslund-Hadley, E., Alonzo, H., & Martin, D. (2013). Challenges and Opportunties in the Belize Education Sector. IDB Technical Note 538.
- Perakis, R. & Savedoff, W. (2015). Does Results-Based Aid Change Anything? Pecuniary Interests, Attention, Accountability and Discretion in Four Case Studies.
- Ramírez, M. J. & Viteri A. (2019). El embudo de la exclusión educativa en Mesoamérica. Banco Interamericano de Desarrollo.
- Rápalo, R. (2003). Los procesos de descentralización educativa en América Latina y lineamientos de propuesta para la descentralización educativa en Honduras.
- Rondinelly, N. y Cheema (1983). Descentralization in Developing Countries: A Review of Recent Experience.
- Salud Mesoamérica (2015). Modelo de establecimiento de metas. Savedoff, William D, Incentive Proliferation? Making Sense of a New Wave of Development Programs. Washington, DC: Center for Global Development, 2011. https://www.cgdev.org/sites/default/files/1425405\_file\_Savedoff\_Incentive\_ Proliferation\_FINAL\_0.pdf
- Secretaria de Estado en el Despacho de Educación de Honduras (2013). Reglamento de Direcciones Departamentales, Municipales y Distritales.
- Sondergaard, L. (2020). In Ceara, Brazil, mayors have to improve education outcomes to receive more funds. World Bank Blogs En: https://blogs.worldbank.org/latinamerica/ceara-brazil-mayors-have-improve-education-outcomes-receive-more-funds
- Sue González, A. (2012). Marco Jurídico de la Educación en Panamá.
- UCLDF (2010). Performance-based grant systems. Concept and international experience.
- UNESCO (2017). Revisión de las políticas públicas del sector de educación de Guatemala.
- UNESCO-UNEVOC (2013). World TVET Database Belize.
- UNESCO-IBE (2010). World Data on Education Belize.
- UNESCO-IBE (2006/07). World Data on Education Nicaragua.
- Vegas, E. & Umanky, I. (2005). Mejorar la enseñanza y el aprendizaje por medio de incentivos: ¿qué lecciones nos entregan las reformas educativas de América Latina? Documento del Banco Mundial.

- Winkler, D. & Gershberg, A. (2000). Education Decentralization in Latin America: the effects on the quality of schooling. Documento del Banco Mundial.
- Winning K & Panzardi, R. (2014). Leading, Learning and Adapting Toward Development Results: An Example from Civil Service Reform in Sierra Leone. World Bank, https://bsc.cid.harvard.edu/files/bsc/files/leading\_learning\_and\_adapting\_toward\_development\_results.pdf
- World Bank. (2015). Project Appraisal Document: Dominican Republic Support to the National Education Pact. WashingtonDC: World Bank. Retrieved from http://documents.worldbank.org/curated/ en/858741468189574332/pdf/PAD850-PAD-P146831- R2015-0187-1-Box393201B-OUO-9.pdf
- World Bank Group (2015). The Rise of Results-Based Financing in Education. Retrieved from: https:// www.worldbank.org/content/dam/Worldbank/Brief/Education/RBF\_ResultsBasedFinancing\_v9\_web. pdf
- World Bank Group (2019). Results-Based Financing in Education: Learning from what work. Education Global Practice. Results in Education for All Children (REACH), http://documentsi.worldbank.org/ curated/en/915061548222619389/pdf/Results-Based-Financing-in-Education-Learning-from-What-Works.pdf
- World Bank (2021). Results-Based Financing in Education: Peru's Incentive Program and "Performance Commitments". En: https://www.worldbank.org/en/news/feature/2021/02/01/results-based-financing-in-education-peru-incentive-program-and-performance-commitments

### Annexes

49

Annex 1: Perverse Incentives 68

- **Creaming results:** Although this generally refers to efforts on beneficiaries, in government programs this occurs when payment metrics guide the incentivized agent to shift its efforts towards improving performance on indicators with little impact on the final goal but requiring less effort. For example, a Ministry of Finance could be incentivized to reform its Public Financial Management practices. If the payment metrics are not well designed, the Ministry could focus on passing legislation for public procurement practices, but ignore the need to provide the necessary training to ensure that civil servants are familiar with the new procedures and have adequate capacity to manage the new processes.
- **Parking:** This happens when the incentivized agent pays less attention to the most difficult outcomes to achieve. This could happen if, for example, the incentivized agent focuses on improving performance in specific municipalities or subnational regions because they are the easiest places to implement the systemic changes of the RBF program.
- **Gaming:** The incentivized agent can trick the system to artificially inflate their achievements to demonstrate success on a particular payment metric.
- **Signaling:** If incentives are not strong enough to motivate governments to adopt and execute a reform, a government may simply focus on adopting a systemic change as a signal of its intent. This may give them access to some of the resources conditional on outcomes without having to change internal practices.

<sup>&</sup>lt;sup>68</sup> Instiglio (2017). A practitioner's guide to Results-Based Financing.

December 2021 Inter-American Development Bank



