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OUTCOME-BASED FINANCING FOR SERVICE DELIVERY

WITH KEY CONSIDERATIONS
FOR THE RECOVERY FROM COVID-19



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Jessica Lopez Taylor
Max Bode



Empty Nairobi Street during the lock down

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Acronyms

DIB	development impact bond
DFID	U.K. Department for International Development
FCDO	U.K. Foreign, Commonwealth & Development Office
GO Lab	Oxford's Government Outcomes Lab
GPRBA	Global Partnership for Results-Based Approaches
MCCU	Millennium Challenge Coordinating Unit
NGO	nongovernmental organization
OBF	outcome-based financing
OBA	output-based aid
PBF	performance-based financing
RBF	results-based financing
PforR	Program-for-Results
SIB	social impact bond
SDGs	(United Nations) Sustainable Development Goals
UNCTAD	United Nations Conference on Trade and Development
USAID	United States Agency for International Development
WASH	water supply, sanitation, and hygiene
WSPs	water service providers



Introduction

While the effects of the COVID-19 pandemic are experienced across the globe, the lives and livelihoods of vulnerable people in low-income countries are most at risk. The World Bank estimates that “71-100 million people will be pushed back into extreme poverty, representing the first increase in extreme poverty since 1998, effectively wiping out all progress made in combating poverty since 2017” (World Bank, 2020a). Economic and social inequities are at risk of widening, threatening the gains disadvantaged groups – such as women and minorities – have made over the past decades.

Publicly funded services have never been more essential than they are now. Throughout the pandemic recovery, the lives and livelihoods of the most vulnerable populations depend on the expansion of a host of publicly funded services and programs, such as health services, public safety nets, and programs that improve living conditions in crowded urban slums.

The current crisis exacerbates gaps in the financing and delivery of public services. Prior to the pandemic, the annual financing gap to achieve the Sustainable Development Goals (SDGs) in low-income countries was estimated at \$2.5–\$3 trillion (UNCTAD, 2014). Public services must be adapted and significantly expanded in order to respond to shifting and growing needs; however, a government’s ability to do so is constrained by the adverse effects on already-stretched public finances and government operations.

The economic and social impact of the pandemic will persist for years to come, as will the exacerbated public financing and service delivery challenges. While the world has not experienced a similarly disruptive pandemic since 1918, the public financing and service delivery challenges are not new– the international development community has significant experience in fighting poverty in severely capacity- and resource-constrained environments. To improve their effectiveness in fighting poverty, development practitioners have increasingly adopted outcome-based financing (OBF) approaches. This paper explores whether and how OBF can contribute to overcoming the enduring service financing and delivery challenges, while also supporting long-term rebuild and resilience in the context of COVID-19.

Section 1 provides a brief introduction to results-based financing (RBF) and details the paper’s primary focus: RBF instruments that incentivize service providers, public or private, and that tie a larger proportion of their funding to outcomes rather than more intermediate results. Section 2 explores how governments can leverage OBF for sustainable socio-economic recovery in the wake of the pandemic. Section 3 provides guidance on how to overcome challenges that practitioners may face in implementing OBF programs for COVID-19 recovery. Section 4 illustrates how OBF can be leveraged, for the recovery and beyond, in the education, employment, poverty, health, Water, Sanitation and Hygiene (WASH), urban, solid waste management, and environmental sectors.

1. Background on OBF for service provision

In the last decade, RBF spending has grown exponentially. Instiglio and Lopez (2018) estimated that between 2007 and 2017, \$25 billion¹ of development spending has been tied to results. While a diverse range of RBF instruments and terminology exists, commonality is found in the ultimate objective: to hold project implementers accountable for results, and to improve the effectiveness of development spending in achieving outcomes for beneficiaries. RBF instruments differ chiefly by which stakeholders they seek to incentivize through results-based payments—this is depicted in Table 1 below, which provides a typology for RBF instruments by incentivized agent.

Most RBF programs to date have tied funding to outputs (e.g., provision of a service or product) and/or other shorter-term results. This includes commonly used instruments, like performance-based financing and output-based aid, among others. OBF is an RBF arrangement in which payments are tied, in whole or in part, to metrics more closely related to the ultimate development objective: meaningful outcomes for beneficiaries. While any RBF program can integrate outcome-

level metrics into its results framework, this paper focuses primarily on programs which incentivize service providers and/or investors (see Section 2.4 on impact bonds) to achieve outcomes—categories 3 and 4 in Table 1.

While the conceptual distinction between outcomes and outputs is clear, this can be less obvious in practice, as it involves challenging judgments on where the results chain starts and ends (Gelb & Hashmi, 2014). What matters more than parsing whether a metric is an “outcome” or an “output” is to appreciate the importance of the trade-offs in tying funding to results further up or down the results chain (see Figure 1), as well as how well indicators capture attributable outcomes. While preferable, tying funding to outcomes can be challenging in practice, because (i) measurement can be costly, (ii) calibrating targets and prices can be difficult, and (iii) implementers may have less control over outcomes. Outputs tend to be observable— for example, the construction of affordable housing units for low-income families. In contrast, a development program’s outcomes—such as improvements in quality of life resulting from

Table 1. Typology of RBF Instruments

	Incentivized agent	RBF instrument categories
1	National Government	Performance-Based Loans (PBL), e.g. Program-for-Results (PforR) Performance-Based Grants (PBG), e.g. Cash-on-Delivery (COD)
2	Local Government	Performance-Based Transfers (PBT)
3	Service Providers	Performance-Based Contracts (PBC), e.g. Performance-Based Financing (PBF), Output-Based Aid (OBA)
4	Investors and Service Providers	Impact Bonds and Outcomes Funds, e.g. Development Impact Bond (DIB), Social Impact Bond (SIB)
5	Beneficiaries	Conditional Cash Transfers (CCT)

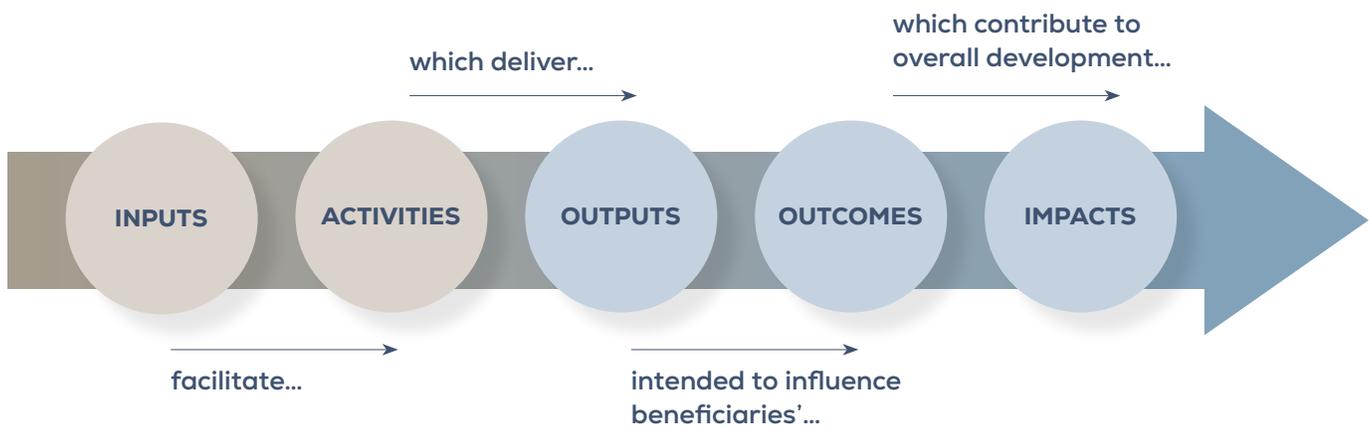
Source: Adapted from Instiglio & Lopez (2018)

¹ All dollar amounts \$ are in USD.

the construction of affordable housing units—are more difficult and costly to measure. Thus, it is often sensible to combine outcome- and output-level metrics, especially in the current pandemic environment; however, this presents additional challenges and barriers to outcome measurement (see section 3 for more information on the trade-offs between outputs and outcomes).

OBF programs in the public sector can also be designed to incentivize the achievement of metrics that capture institutional capabilities, such as improvements in service provision or customer fee collection by a public utility. The achievement of these metrics signal that a system or institution is making progress towards greater effectiveness and sustainability. These concepts will be further discussed in Section 2.2.

Figure 1: Results Chain



2. Value-add of OBF for COVID-19 response and recovery

The COVID-19 pandemic exacerbates capability and financing gaps in the delivery of public services. Prior to the pandemic, low-income countries faced a \$2.5–\$3 trillion annual financing gap. In addition, many of these governments lack sufficient organizational capability to achieve their SDGs: almost half of the historically low-income countries have weak state capability and worse yet, three-quarters of these countries have been regressing in recent decades (Andrews et al., 2017).

The World Bank (2020c) estimates that “pandemic-related external financing gaps for [low-income] countries could be in the range of \$25–\$100 billion per year.” The pandemic requires not only additional investment in service delivery but also increased cost-effectiveness and innovation. The demand for existing and new public services has grown rapidly. In delivering services, public and private service providers also face new operational challenges due to the pandemic’s restrictions on public life.

Low-income country governments’ ability to meet these challenges will determine how many lives and livelihoods can be saved during the pandemic and in the recovery phase. With diminishing fiscal space and the expanded demand for public services, overcoming these challenges will require significant innovation and improvements in the cost-effectiveness of service delivery.

Section 2 takes a closer look at how policymakers can leverage the advantages of OBF in responding to key service delivery challenges exacerbated by the COVID-19 pandemic, including by: (i) helping governments deploy resources more effectively and fostering innovation (Section 2.1), (ii) strengthening institutional capacity for service delivery (Section 2.2), (iii) targeting vulnerable and marginalized populations (Section 2.3), and (iv) attracting additional resources from the private sector (Section 2.4).

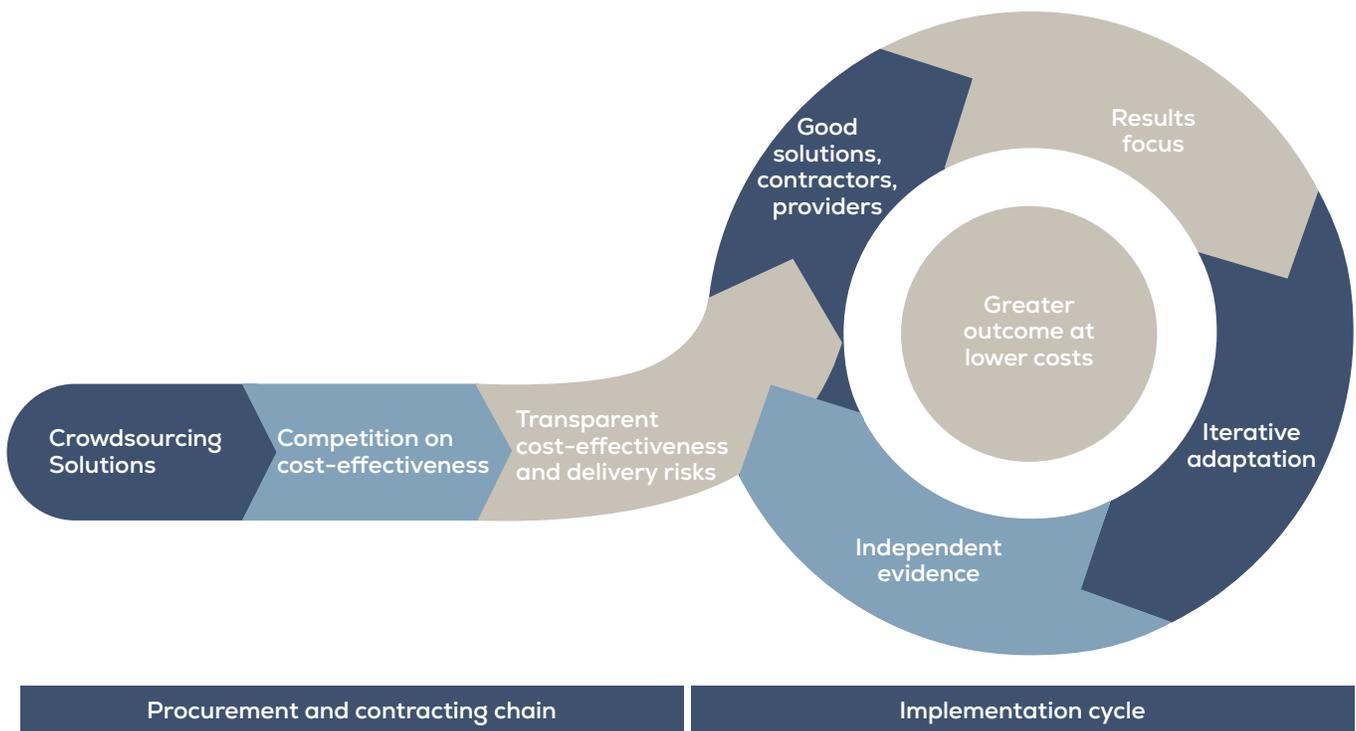
2.1 COST-EFFECTIVENESS AND INNOVATION IN SERVICE DELIVERY

COVID-19 challenge: Government resources are stretched thin, and new and innovative ways of doing business are required to meet the service delivery needs in low-income countries.

OBF has the potential to improve the cost-effectiveness of service delivery by promoting

innovation, efficiency, transparency, flexibility, and accountability for results. This makes OBF an important tool in incentivizing public and private service providers to produce the greatest outcomes at the lowest costs. Figure 2 provides an overview of the aspects of publicly funded service delivery that OBF can strengthen: the procurement and contracting stages of private service providers, as well as implementation cycles in both public and private service delivery.

Figure 2: Advantages of OBF in service provider contracting and implementation



Crowdsourcing solutions at the local level and leveraging private sector expertise

With the COVID-19 pandemic requiring new and innovative ways of doing business, OBF approaches allow for flexibility in service provider activities and actually crowdsource solutions from service providers themselves. By focusing on outcomes instead of intervention models or reforms, OBF projects can unearth solutions that the central planner may have never considered. Section 3.3 on poverty alleviation provides an example of the crowdsourcing of solutions.

Non-state service providers (for-profit or nonprofit organizations, including social enterprises) can often provide innovative solutions that the government may not have, or is not willing or able to take the

risk to fund upfront. OBF has been effective in contracting non-state providers, which Das et al. (2020) argue play a vital role in combating the fallout from COVID-19. First, “they have on-the-ground presence at the community level, with delivery systems already in place.” Many non-state providers “have long-standing experience in providing community-centered solutions and directing critical resources to populations disproportionately affected by a crisis,” and they are able to rapidly respond “in a crisis, especially where local government capacity is limited” because of their agility and innovation. Finally, many non-state providers can quickly collaborate and coordinate with a variety of public and private stakeholders due to their strong local networks.

Further, OBF projects can have a supplemental effect of helping to strengthen local markets by supporting the development of local enterprises and creating employment opportunities for low-skilled workers. Strengthening local markets to tackle service delivery challenges is important for long-term rebuild and for building resilience of communities to shocks such as the COVID-19 pandemic.

Competition on cost-effectiveness, not unit costs

In an OBF service provider selection process, service providers can compete on who can deliver the most outcomes at the lowest cost, or the most outcomes at a set price point. This contrasts with traditional selection processes in which service providers compete on program costs, which can create a race-to-the-bottom in unit costs at the expense of program impact.

Incentives for transparency: Revealing cost-effectiveness and delivery risk

An emphasis on cost-effectiveness forces service providers to reveal the expected costs of achieving the desired results, as well as the risks associated with delivering these results. Service providers are held accountable for achieving results at that price, and an independent verification agent ensures full transparency of project data and results.

Drawing attention to results that matter

With funding contingent on the achievement of pre-agreed outcomes, OBF draws attention to results that truly matter for program beneficiaries. An increased outcomes-orientation can lead to a shift in the service providers' culture and capabilities. To achieve targets in implementation, service providers often have to improve performance management systems, leverage data in decision-making, and switch from myopic activity-orientation (e.g., reporting on expenditures, inputs, and activities) to a far-sided outcomes-orientation.

Allowing iterative adaptation and learning-by-doing

Because OBF tightens the control over the achievement of results, funders can relax their control over expenditures and activities. With

more freedom to innovate, service providers can iteratively adapt their interventions and learn-by-doing. This works best when investment is made available that enables and/or encourages service providers to experiment and innovate. Section 4.1 provides an example from the education sector of how drawing attention to results and increased flexibility can drive greater outcomes at lower costs. In the wake of an external shock such as the COVID-19 pandemic, this flexibility is crucial for adapting programs to the changing needs and environment.

2.2 STRENGTHENING INSTITUTIONAL CAPACITY FOR SERVICE DELIVERY

COVID-19 challenge: Critical public services like health, water, and sanitation are more essential now than ever; however, governments in low-income countries are faced with the challenge of managing public service providers and frontline workers in low-capacity settings.

In response to the state capability and financing gaps, governments can leverage OBF to build institutional capacity and improve the cost-effectiveness of public sector service providers such as schools, health facilities, or utilities.

As with private service providers, OBF can draw the attention of public service providers to results, provide autonomy for experimentation, learning-by-doing, and iterative adaptation of local solutions, as well as generate strong feedback loops on performance. Public OBF programs can also make use of upstream metrics that capture improvements in institutional capacity and performance. To avoid service providers mimicking good performance without actually delivering improved outputs and outcomes, upstream metrics should be complemented by outcome- and output-level metrics. As an example, a GPRBA program in West Bank and Gaza was designed to help improve municipality performance with solid waste management; this project measured improvements in fee collection rates as a metric to gauge both the service provider's performance as well as their progress towards a full cost-recovery model (GPRBA, 2019).

The introduction of OBF for public service provision often occurs in response to the challenges of managing public service providers and frontline workers in low-capacity settings. A lack of autonomy, performance feedback and recognition, and financial incentives can lead to undermotivated and underperforming administrators and frontline workers. OBF can significantly motivate and improve the performance of public service providers by providing autonomy for innovation and experimentation, setting a clear objective and targets, providing feedback and recognition, and utilizing financial incentives.

Public OBF programs should avoid deepening structural inequities in outcomes by targeting low-capacity and under-resourced service providers. This can be done by setting different OBF prices for service providers based on criteria such as their location, or by investing in the capacity and infrastructure of low-capacity and under-resourced service providers.

Section 3.5 provides an example of how OBF has been utilized to incentivize improved performance and capacity building in a water utility in Sierra Leone.

2.3 TARGETING UNDERSERVED AND VULNERABLE POPULATIONS

COVID-19 challenge: While the effects of COVID-19 are experienced across the globe, the lives and livelihoods of vulnerable people in low-income countries are most at risk.

Addressing economic and social inequities is an enduring challenge for policymakers. While addressing inequality is a core development objective, it is also good economics as it enhances national productivity. As countries are working to contain the spread and impact of COVID-19, economic and social inequities are at risk of widening for vulnerable populations during and after the pandemic, reversing any gains made over the past decades.

OBF can be leveraged to hold project implementing agents accountable for achieving equal access and outcomes for all. To date, the power of OBF to explicitly address inequities has primarily been used

to address gender inequities as well as economic inequality. There are also RBF programs (using OBA (output-based aid)) which have targeted children with disabilities, such as a GPRBA project supporting education for deaf children in Vietnam. The same logic also applies to other identifiable vulnerable and disadvantaged populations, such as minorities, the youth, the elderly, LGBTQ+, informal workers, individuals with physical or mental disabilities, and communities that are underserved due to their remote location; this also includes instances of intersectionality within these factors. As noted in Section 2.1, OBF has been effective in working with non-state providers to serve particularly hard-to-reach populations that are often disproportionately affected by crisis.

To drive improvements in the outcomes of disadvantaged populations, OBF can utilize differential pricing. Differential pricing is the practice of strategically setting different prices for the same outcomes in different populations. The usage of differential pricing is justified when certain groups are often left behind, or when the costs for achieving the same outcomes for disadvantaged groups are particularly high. When program participants face multiple disadvantages, differential prices can be compounded. This incentivizes service providers to help the most disadvantaged subgroups as well.

Differential pricing of outcomes is common in education and active labor market programs. For example, an education program may pay more for the learning gains of primary school girls in places where drop-out rates for girls are particularly high. A collection of case studies on active labor market programs that used OBF found that differential pricing has a powerful effect on improving outcomes for disadvantaged populations (Instiglio, 2018). Section 2.3 discusses the case of the Employment Fund in Nepal, which made extensive use of differential pricing.

It is important to acknowledge that differential pricing relies on an understanding of the differences in cost of generating outcomes for various disadvantaged groups. Because accurate data is often not available, programs utilizing differential pricing may rely on modelling and/or best estimates of appropriate pricing incentives. Flexible programs allow for adjustments as needed as more data is obtained.

2.4 CROWDING-IN PRIVATE SECTOR CAPITAL

COVID-19 challenge: With government resources stretched thin, the current crisis further exacerbates the gap in funding required to meet service provision needs and the 2030 SDGs.

While the pandemic increased the need for critical public services, the accompanying fiscal crisis has reduced many governments' ability to serve their citizens. Especially in times of protracted austerity, the public sector should seek opportunities for the private sector to jointly fund or finance service delivery. Well-designed OBF approaches blended with other sources of finance can add significant value in overcoming the government's funding and financing challenges, while also holding service providers accountable for delivering improved social outcomes. Private financiers can also take on the financial risk of program failure, thereby allowing governments to fund innovation.

The objectives of crowding-in private sector capital are (i) to expand immediately-available resources for service delivery and (ii) to shift the performance risk to the private sector. For instance, commercial bank loans can be used by social enterprises to expand their services; they are then subsequently repaid with their profits. Similarly, bank loans can also be leveraged by public utilities for investments and are repaid through user fees. These types of financing arrangements are more common with RBF instruments that disburse against infrastructure outputs such as OBA, which can be catalytic in attracting private financing. By acting as a subsidy, results-based payments cover the viability gap

of income-generating service providers while also holding the service provider accountable for performance. When combined with appropriate outcome indicators, such as continual service over a period of time, or providing 100 percent sanitation coverage in a community, these types of schemes can also support sustained outcomes for beneficiaries.

In Kenya, a GPRBA-funded program is supporting small and medium-sized water service providers (WSPs) to expand services in low-income areas. With the support of technical assistance from the World Bank, the WSPs obtained loans from local commercial banks to cover the upfront cost of the investments. The WSPs are held responsible for achieving the results—upstream infrastructure, billable household connections, and sustained service—and receive a subsidy covering 50 percent of the total project cost once pre-agreed results are achieved and verified. The WSPs are able to repay their loans through user fees with support from the results-based grant. When RBF programs crowd-in private investors and end-users pay for newly provided services, private-sector financing can be truly additional and thus narrow the public financing gap.

Impact bonds are an example of an OBF instrument where impact investors finance an intervention and are repaid by either the government (social impact bond) or a donor (development impact bond) upon the achievement of pre-defined outcomes. Impact bonds are often used when working with non-state providers with liquidity constraints and can be leveraged by governments who wish to fund innovation with reduced risk. Unlike approaches that crowd-in truly additional capital, like the GPRBA

Box 1: Strong demand for investable opportunities from impact investors

The demand of impact investors for investable opportunities remains strong during the crisis, as indicated by the UBS Optimus Foundation—a premier impact investor in the impact bond space. Depending on the profile of the investor, some investors want to be compensated for the increased uncertainty brought on by COVID-19, whereas others may be willing to take on greater risk due to their social mission. This is why some advocate

for capital protection or investment vehicles with a tranching structure. Socially-minded investors can leverage tranching structures to crowd more 'mainstream' investors into impactful programs. Especially in times of great urgency, outcome funders should carefully evaluate if the value-add of such arrangements outweighs the costs associated with their complexity.²

² Correspondence with Maya Ziswiler, Executive Director, UBS Optimus Foundation. September 30, 2020.

example in Kenya, impact bonds do not necessarily narrow the public funding gap, as the investment is ultimately repaid—typically at a premium—by the government and/or donor (assuming the successful achievement of program outcomes). Only if private financing is provided below risk-adjusted market rates do impact bonds have a degree of additionality.

In response to the COVID-19 pandemic, co-funding arrangements can also add value by alleviating the fiscal burden of the crisis and allowing for public

funding of innovation in service delivery. To ensure continued operations of their business and a strong economy, large employers, for instance, have an intrinsic interest in co-funding the fight against COVID-19.

While essential to accelerating the economic recovery from the COVID-19 crisis and narrowing the public financing gap, the value-add of private sector financing should also be carefully weighed with the additional complexity and costs associated with such arrangements.



3. OBF challenges for COVID-19 response: adapting project design and crisis resilience

To achieve the SDGs by 2030, the international development community must do more with less. OBF is a promising tool for achieving greater levels of cost-effectiveness in service delivery, especially for the recovery from COVID-19. OBF contracts that emphasize innovation and flexibility allow service providers to adapt and respond to the unique challenges presented by COVID-19. An assessment of RBF programs during the Ebola crisis demonstrated that projects that had adapted and tailored themselves for the fragile conditions of their context were most successful (Bertone, et. al, 2018).

While RBF, and more recently, OBF, have grown rapidly over the last decade, the overall size remains small compared to overall public spending on service delivery. Long project lead times and high transaction costs are commonly-cited challenges of OBF instruments which curb the adoption of the mechanism.³ The costs associated with OBF are investments in greater outcomes and will continue to decline with sustained standardization and scaling of the practice. Therefore, an important focus of this section is on overcoming long lead times—balancing speed with quality of design and appropriate metrics for a sustainable response to COVID-19.

The COVID-19 crisis has demonstrated the importance of actively managing risks in the design, contracting, and implementation phases of OBF projects. A review of how 20 impact bond projects responded to the pandemic provides valuable insights for advantages and disadvantages of OBF approaches under an externally-induced shock (Gustafsson-Wright, 2020). By tying funding to results, the risk that outcomes of interest may not be achieved is made explicit in an OBF project. This creates powerful incentives for all signatories of an OBF agreement to manage risk carefully. OBF's flexibility and strong emphasis on robust systems of monitoring and evaluation also allows service providers to more swiftly react to unforeseen circumstances. The review concludes that "if outcomes can be achieved by pivoting services to meet the emerging needs of the population, then financing by [OBF] is a benefit."

Establishing governance mechanisms that encourage active risk management and collective problem-solving can help address challenges associated with the rigidity of OBF contracts. While OBF-induced incentives and flexibility are especially valuable in a crisis, the rigidity of contractually binding outcomes metrics and prices, timelines, and measurement framework can present challenges. An adverse shock may render results targets unachievable or may prevent results verification. If this occurs, service providers and financiers are at risk of not being paid due to events outside of their control. In the worst-case scenario, implementers might have to seize operations in a situation where beneficiaries need their services most.

This section makes recommendations on how to overcome challenges associated with OBF and how to decide when – and as importantly, when not – to use OBF for COVID-19 response. In addition, this section presents viable alternatives to in-person verification and data collection for OBA programs in the face of an external shock.

RECOMMENDATION 1: SCALE OBF THROUGH GOVERNMENTS

Where appropriate, development finance institutions should work with national governments to scale OBF programs to strengthen service delivery. Government-led scaling of RBF projects will considerably reduce the lead time and relative size of transaction costs of OBF projects.

The World Bank's Program for Results (PforR) loan instrument for national governments has been used for structuring around \$30 billion in RBF programs. An assessment of PforR (World Bank, 2019b) shows that while the average costs for preparing PforRs are higher than other World Bank instruments, average costs declined 23 percent from the period of 2012–2015 to 2016–2018, demonstrating that as experience with the instrument grows, costs decline.

³ Comparisons of transaction costs between traditional funding arrangements and OBF can be misleading, as many costs associated with OBF programs are investments in program effectiveness and lower the risk of paying for program activities that do not produce results.

While reliable statistics on the aggregated funding volume of OBF programs for service delivery do not exist, it is estimated that these programs are in the low hundreds of millions. Most OBF projects remain one-off transactions, rarely exceeding \$20 million in funding volume. Ultimately, OBF approaches for public and private service provision will only be scaled more significantly if they are in demand by national governments. International development organization such as the World Bank and bilateral donors can play an important ecosystem role in providing technical advice and are well-positioned to promote effective reform approaches. The wide adoption of PforR loan instruments is evidence of this.

Governments can also leverage outcomes funds – a vehicle to commission multiple OBF programs or to work with multiple service providers under a common financing framework – to drive outcome-oriented innovation at scale. While the growing experience in structuring OBF instruments has reduced lead time and costs, only scaling OBF interventions will significantly reduce the relative size of transaction costs.

RECOMMENDATION 2: FOCUS ON THE ISSUE, NOT THE INSTRUMENT

The underlying development challenge should guide funding decisions. By focusing on the issue first, an appropriate combination of funding and financing instruments and metrics can be considered to address service delivery challenges.

COVID-19 has resulted in an urgent need for rapid delivery of public services, while also heightening the need for improving their cost-effectiveness. While OBF has considerable advantages in driving cost-effectiveness and providing service providers with flexibility, its shortcomings – potentially long lead times and rigid contractual structure – present challenges during the pandemic. Thus, it is important to carefully consider whether OBF is the right instrument for the issue at hand. In some cases, funders may opt for hybrid models in which they tie only a portion of the funding to outcomes, blending output and outcome metrics as well as more traditional input-based financing arrangements as appropriate.

Through an event hosted by Devex and UBS Optimus Foundation (2020) on COVID-19 and the future of OBF, Maitreyi Das discussed the value of hybrid models during the pandemic, including the option for OBF programs to temporarily ease payment metrics in cases where social distancing measures make it difficult to achieve outcomes. The World Bank's Ghana Education Outcomes Fund, highlighted in Box 2 below, provides a good example of this.

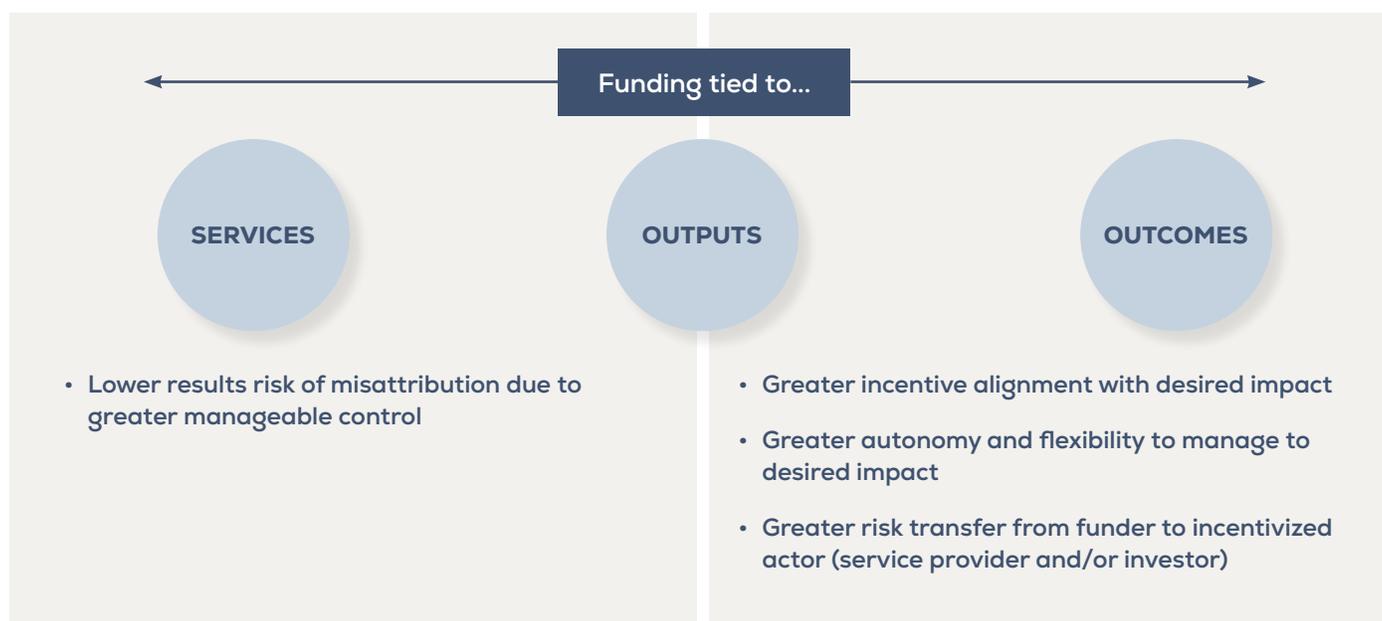
It is important to highlight that while tying less funding to outcomes decreases performance and financial risk for service providers and/or investors, it may also reduce the incentive alignment, autonomy, and risk transfer to service providers. The trade-off between tying funding to outcomes further up and down the results chain is illustrated in Figure 3 below.

Box 2: Ghana Education Outcomes Fund – contingencies in light of COVID-19

In July 2020, the Government of Ghana, the U.K. Foreign Commonwealth and Development Office (FCDO), and the World Bank approved a \$30 million Outcomes Fund for Education in Ghana. The project aims to help out-of-school children reintegrate into Ghana's formal education system and improve learning outcomes, with specific emphasis on girls, children with disabilities, and children from lower-income households. The program allows for a transition from an outcome-based to output-based design in the case of a significant event, such as school closures due to COVID-19 or other events for

which distance learning is required. Rather than tying all payments to learning gains and risk undermining the success of the project, the relaxed payment matrix under this significant event may include the number of mainstream schools reached with the intervention or number of children who complete the program. Once the significant event is overcome, the project would then transition back to outcome payment metrics. For clarity and transparency, the contracts and bidding document for social investors reflect this flexibility in the payment matrix in the case of significant event.

Figure 3: Trade-offs of tying funding to services, outputs, and outcomes



Source: Adapted from Instiglio (2017a)

RECOMMENDATION 3: OBF DESIGNS SHOULD BE MADE AS SIMPLE AS POSSIBLE WITHOUT COMPROMISING EFFECTIVENESS

Overly complicated OBF designs can reduce the effectiveness of OBF arrangements and increase transaction costs and lead times. Especially in a crisis, in which speed and effectiveness are of vital importance, OBF arrangements should be kept simple by limiting the number of outcome metrics and avoiding overly complicated pre-financing arrangements.

Strive to limit the number of outcome metrics

A high-level impact metric can often capture a program's desired impact in its entirety; it sets a clear signal that the ultimate performance in terms of impact is prioritized above all else. Simple results metrics also enhance the program's effectiveness, limit the costs of designing, negotiating, and evaluating the program, and allow funders to institute price auctions. OBF projects that can define results in terms of the ultimate outcome of interest can tie funding to only one or two outcome metrics, such as "income increase in ultra-poor

households" (Box 6), "defecation-free villages" (Box 9), or "job placement and retention of hard-to-place populations" (Box 5).

Avoid overly complicated pre-financing arrangements

Avoid complicated pre-financing arrangements by setting a higher bar for complex arrangements with private-sector financing amidst the COVID-19 pandemic. Policymakers increasingly face pressures to crowd-in private sector financing to close the funding gap. If not managed carefully, this pressure can result in arrangements that lower the effectiveness of OBF programs, due to the high costs of private sector capital and the transaction costs associated with complex financing arrangements. While there are obvious benefits of tapping into private sector finance (see Section 2.4), it can come at a cost greater than public sector or philanthropic financing. Savell (2020), suggests "funding provider delivery costs for an initial period (e.g., 6–12 months), with contract renewal/expansion contingent on outcomes, would remove the need for investment as a source of pre-financing and accelerate outcomes-based contracting."

RECOMMENDATION 4: MANAGE RISK THROUGH STRONG GOVERNANCE AND PREPARATION, AND PIVOT WHEN THE NEED ARISES

Actively managing risk by planning in advance for worst-case scenarios can greatly mitigate the uncertainty induced by unforeseen events and provide OBF programs with the flexibility to adapt as needed.

Specify who bears force majeure risk

In anticipation of the possibility of an unforeseen shock, OBF stakeholders should contractually stipulate who carries the risk that a force majeure event limits the service provider's ability to achieve outcomes.

Agile and lean governance (Dispute resolution mechanisms)

Strong governance and flexible and lean dispute resolution mechanisms should be established at the onset of the project. Dispute resolution committees have the advantage of being able to incorporate current information into decision-

making on whether and how an OBF design can be changed during implementation. Dispute resolution mechanisms should emphasize continuous monitoring and evaluation of risk, allow signatories to collectively discuss solutions within the confines of the contract, and hold the power to make decisions on contractual changes, with the committee's composition and decision-making rules stipulated in advance.

Plan for worst-case scenarios and adapt project design accordingly

At project design stage, stakeholders should discuss alternative approaches which may be appropriate in responding to a force majeure event, establishing contingencies from the start to allow projects to adapt to changing circumstances during implementation. Creating a shared understanding of which alternative responses exist, as well as stakeholder preferences, will enhance the stakeholders' ability to collectively respond to a crisis. Box 3 provides illustrative examples of how OBF contracts can be amended in response to an externally-induced shock, and which questions should guide the decision to do so.

Box 3: Adjusting the design in response to an externally-induced shock

The following questions and considerations can guide the decision to make amendments to OBF project design during implementation.

Options for adjusting outcome-based programs include (but are not limited to): i) replacing outcome metrics with output- or activity-level metrics; ii) replacing funding tied to results with unconditional grant emergency funding; iii) providing an advance to service providers to be repaid at the end of the program; iv) extending the timeline of the program; v) providing additional bridge funding; vi) lowering results targets; or vii) replacing the existing results metrics with metrics that are more relevant during the pandemic. In deciding if and how to adjust an OBF program's design in response to an external shock, funders should weigh the impact of their decisions.

- How does the change impact the strength and alignment of incentives with the desired impact?
- Does the change give service providers the resourcing and flexibility needed to adjust their intervention to meet the changing needs of beneficiaries?
- Do the changes need to reduce the payment risk and cash flow concerns of service providers?
- Can verification be delayed to strategically avoid periods in which COVID-19 infection rates are high?
- What are the costs, and how long does it take to make these adjustments? For example, designing new results metrics during implementation may be technically complex and costly, while temporarily converting results funding to emergency grant funding is a simpler solution.

Other thought leaders in OBF have also published useful guidance on adapting outcome-based programs in times of crisis. Key recommendations from Brookings Institution (Gustafsson-Wright, 2020) based on a survey of ongoing impact bonds include establishing contingencies upfront within service provider contracts in the case of crises and greater investment in digital technologies. Oxford's GO Lab (2020) provided a framework outlining six contract-management responses to the COVID-19 crisis and their implications, ranging from adjusting outcome payment terms to terminating the contract where the program is no longer feasible. A series of webinars hosted by GO Lab in 2020 informed findings published by Savell and Airoidi (2020) on how ongoing outcome-based programs have responded to the COVID-19 pandemic. They conclude "the mechanisms for rapid adaptation that were built into many [existing outcome-based] contracts have enabled them to shift their operations to provide continued support to vulnerable populations in this time of crisis."

RECOMMENDATION 5: ROBUST ATTRIBUTION AND SAFE DATA COLLECTION

With social impact at its core, OBF programs tend to have robust monitoring and evaluation frameworks. Given the challenges associated with results attribution and data collection amidst an external shock, alternative verification approaches, enhanced safety measures for onsite data collection, and digital innovations should be explored.

Attribution of results to service provider activities

In the event of an external shock, attribution of results to service provider activities becomes a challenge. Verification approaches that rely on pre-post comparisons of beneficiary outcomes may erroneously conclude that the implementer's services had no effect on, or even reduced, beneficiary wellbeing; in reality, they may have prevented even worse outcomes. As the economy recovers, a pre-post comparison may also erroneously overestimate a service provider's contribution to improved outcomes.

Misattribution can be mitigated either by tying funding to results over which service providers have greater control, such as outputs, or by using rigorous evaluation approaches, such as randomized control trials, to measure performance. While the latter is more costly, rigorous evaluation approaches allow funders to continue to focus on outcomes for beneficiaries. Instiglio's RBF guide (2017) provides more in-depth guidance on the numerous trade-offs between using pre-post and rigorous evaluation methodologies for RBF programs.

Data collection

In the context of the pandemic, verification should consider the need to limit face-to-face interactions, while ensuring that data is both reliable and reflective of actual results on the ground. Effective measures can be implemented to ensure the safety of on-site data collection. Additionally, remote approaches for data collection that leverage technologies should be explored. The decision of whether to conduct in-person data collection should be grounded in a careful assessment of the transmission risks (COVID-19 prevalence vs. protective measures), the overall benefits of the projects, the costs of alternative approaches or delaying data collection, and any secondary benefits, such as the economic impact on enumerators. If not feasible, the following alternatives to on-site data collection can be considered.

Phone surveys are increasingly viable as an alternative to in-person surveys, given the increased cell-phone penetration in many low-income countries. Verifiers can also introduce apps or SMS services that facilitate active or passive self-reporting. Prime examples of this are contact-tracing apps or fintech solutions. A considerable risk, however, associated with mobile phone approaches is that they are exclusionary of populations that do not have access to a mobile phone or have differential response rates to calls, SMS, or push notifications. In many insecure environments, for instance, women often have less access to phones than men (Chelsky & Kelly, 2020).

Verifiers can also make use of approaches that utilize remote sensing technology or photographic evidence. Satellite imagery or drone footage can be used to proxy or directly measure outcomes. For instance, crop yields or deforestation can



be estimated using satellite or drone imagery, household wealth can be estimated by observing the characteristics of a house, economic activity can be estimated by measuring traffic on roads and in a market, and air pollution can be estimated by measuring visibility. Photographic evidence provided by the beneficiaries can also be combined with asynchronous verification checks where the outcome of an event can be observed ex-post. For instance, in Sierra Leone, the timing of water valve turning was measured using time-stamped photos

of the turned valves; these photos were submitted by the utility and subsequently verified through random spot-checks of the valves by an auditor (MCCU, 2018).

Global Public Policy Institute's guide on technologies for monitoring in insecure environments provides a toolkit for practitioners exploring the usage of technology for data collection (Dette, 2016). Das et al. also provide guidance on data collection for RBF programs during the pandemic (2020).

4. OBF sector applications for rebuild and resilience

The outbreak of the COVID-19 pandemic particularly threatens the lives and livelihoods of the most vulnerable people in low-income countries. This section explores how OBF approaches can be leveraged in eight different sectors to support service providers in their efforts to mitigate the impact of the pandemic and support medium- to long-term rebuild and resilience. OBF can also provide an opportunity to break down silos across sectors by defining programs in terms of outcomes instead of sector-specific actions. This allows for a more holistic approach to development challenges and can induce cooperation across government ministries and service providers. Section 4.3 on poverty alleviation provides an example of one such intersectoral approach.

4.1 EDUCATION: INNOVATION FOR THE LEARNING CRISIS AND REMOTE LEARNING

Before the COVID-19 pandemic, the world was already facing a learning crisis, with “53 percent of students in low- and middle-income countries – and 87 percent in sub-Saharan Africa – unable to read a simple text by the time they are 10 years old” (BMGF, 2020). While student enrollment rates have increased steadily over the last few decades, girls,

minorities, and nomadic communities in particular still lack access to education (UN, 2015). The spread of COVID-19 is exacerbating these challenges. As of March 2020, more than 190 countries have mandated some form of school closures, impacting the learning and economic opportunities of at least 1.7 billion children (World Bank, 2020b). As the long-term impacts of prolonged school closures are likely substantial, alternative service delivery solutions are crucial.

Education is the most common sector for OBF. The World Bank alone increased its results-based commitment in the sector from around \$0.8 billion in 2014-15 to \$1.6 billion in 2018-19 (REACH, 2019). Of 18 total documented impact bonds in developing countries, education makes up 17 percent of these (Brookings Institution, 2021), with interventions now being scaled with outcomes funds. The rationale for using OBF in education is that it can drive improvements in learning outcomes and gender parity, especially because the main outcomes of interest can be measured reliably.

In response to the COVID-19 pandemic, many institutions have been emphasizing the introduction of distance learning. Given the threat of school closures, the World Bank’s Ghana Education Outcomes Fund (see Box 1) will leverage the specialized knowledge from service providers to develop approaches for distance learning. Through the competitive selection process, service providers

Box 4. Educate Girls Development Impact Bond

In Rajasthan, 40 percent of girls drop out before reaching fifth grade and only 15 percent of children in primary schools can read a simple story in Hindi. In response to these challenges, a DIB scaled the afterschool program of the Non-Governmental Organization (NGO) Educate Girls. The DIB tied all of its funding to the improvement in learning outcomes (numeracy and literacy in English and Hindi) and enrollment of out-of-school girls. Motivated by falling short of the ambitious learning targets in the first year of the DIB, Educate Girls iteratively experimented with adjustments, leveraging the operational and financial flexibility granted by the DIB. In the third and final year of the program, these

adjustments paid off. Learning outcomes grew 79 percent more in Educate Girl’s treatment schools than in control schools – almost the difference of an entire additional year of instruction. Overall, Educate Girls exceeded targets for both girl’s enrollment and learning, achieving 116 percent and 160 percent of targets, respectively. The CEO of Educate Girls credits the outcomes-focus pressure for generating a cost-effectiveness drive (Brookings, 2018). Following the DIB, the NGO continued to iterate to improve its effectiveness. For instance, to aid its program’s targeting, it now routinely uses AI to predict which villages are likely to have the highest percentage of out-of-school girls.⁴

⁴ Interview with Ben Brockman, Associate Director, Innovation Team, IDInsight. September 4, 2020.

are expected to include proposals for distance learning strategies using various technologies as part of their bid. These proposals must be developed to reach children who may not have access to internet or even electricity. In this instance, OBF is creating a platform for crowdsourcing innovative solutions in the public education system.

In India, the Quality Education India Development Impact Bond (DIB)—the world’s largest DIB in education, aimed at improving learning outcomes for India’s most marginalized students—emphasized flexibility as one of the most important qualities that has allowed the program to continue operating during the pandemic. The DIB structure gave service providers the flexibility to innovate, and “unlike in traditional grant models, the DIB allowed service providers to adapt throughout the project based on intermediate results without needing pre-approval from funders. This benefit was particularly helpful in adapting to COVID-19, which required a speedy adoption of new digital technologies and different strategies to teach students and train education practitioners remotely” (Markowitz and Gustafsson-Wright, 2020).

While efforts to scale distance learning are important during the pandemic, it will remain “beyond the reach of many students,” which is why “we need to focus on helping students catch up quickly when they return to their regular classrooms” (BMGF, 2020). To prevent falling farther behind, many developing countries’ education systems need to improve. A good education system ensures that all students, irrespective of background, learn reading, writing, and math, while also developing social-emotional skills. The safety of the school environment is also key. The most common OBF metrics to date have been (i) enrollment, with greater emphasis on previously under-enrolled demographics such as girls; and (ii) literacy and numeracy, as measured by standardized tests. Box 4 provides an example, the Educate Girls DIB; tying funding to learning outcomes and girls’ enrollment spurred significant improvements in educational outcomes. While the DIB was a small-scale demonstration projects, scale-up projects such as the Ghana program build on its success.

4.2

JOBS: RAPID ADAPTATION OF ACTIVE LABOR MARKET PROGRAMS

Achieving full and productive employment and decent work for all is a global challenge. The adverse impact of COVID-19 disproportionately threatens the jobs and livelihoods of already disadvantaged populations, such as poor women and youth. Targeted active labor market programs play an important role in ensuring that they are not left behind during the crisis, or in the subsequent economic recovery.

Employment is one of the most common sectors for OBF. Between 2006 and 2017, at least 20 active labor market programs in low-income countries have used RBF and/or OBF approaches, with an overall volume of \$7.6 billion (Instiglio, 2018). The rationale for using OBF is that it holds service providers accountable for beneficiaries’ success in gaining and retaining quality employment, and incentivizes them to focus their efforts on vulnerable populations.

A review of active labor market OBF programs revealed that it is common to supplement outcome-level metrics (e.g., job placement and job retention) with output-level metrics (e.g., skills improvements) and even activity-level metrics (e.g., trainings completed) (ibid.). Supplementing outcome-level metrics with output-level and activity-level metrics is often desirable for two reasons. First, measures of skills improvements complement short-term measures of labor market success in predicting the ultimate impact—long-term labor-market success. Second, when program impact is measured with a pre-post approach, training outputs are less sensitive to external factors than labor market outcomes. Combining outcome-level metrics with output-level metrics, therefore, significantly reduces payment risk.

The use of differential pricing for disadvantaged groups is prevalent among active labor market OBF programs (ibid.). Its purpose is to incentivize service providers to invest in hard-to-place people, thereby achieving greater parity in outcomes among different social groups.

Box 5. Nepal Employment Fund

In 2008, almost 90 percent of the youth entering the Nepali labor market each year were unskilled, and 46 percent of youth were either unemployed or underemployed. The Government of Nepal, World Bank, Department for International Development (DFID), Swiss Agency for Development and Cooperation (SDC), and Helvetas established the Nepal Employment Fund, which issued Performance-Based Contracts for 57 service providers to provide skills trainings to approximately 100,000 beneficiaries. OBF funding tied 60 percent of all program funding to 3–6-month job retention and 40 percent of funding to improvements in

marketable skills. Differential pricing incentivized providers to target poor women and beneficiaries who have disabilities, are classified as Dalit caste members, or are affected by violence. In response to the incentives, many providers adjusted their services to meet the needs of these groups. For instance, to enable mothers to participate in their trainings, they offered childcare services and evening classes. The program was a success, with 75 percent of beneficiaries in gainful employment six months after the program; 80 percent of those placed were considered disadvantaged (Instiglio, 2018).

The pandemic is speeding up structural economic transformation processes such as the transition from physical to online retail, while also temporarily depressing other sectors, such as tourism. Job and skill conversion schemes can provide an opportunity for job seekers to take advantage of a surge in labor demand in skill-adjacent occupations. For instance, hospitality or retail workers can leverage their skills in call centers. The crisis also provides a valuable opportunity for countries to future-proof their economy as the opportunity cost of training is reduced.

Under volatile economic conditions, funders should carefully consider the risks of tying large portions of funding to the achievement of outcomes and outputs (see Section 3). While limiting the size of OBF payments and associated differential pricing may diminish the targeting of hard-to-place people, during an economic crisis, policymakers may prioritize cost-effectiveness in placing as many people as possible into jobs. During the subsequent phase of economic recovery, however, OBF programs should shift funding back to outcomes and the targeting of disadvantaged populations, in order to ensure that the recovery from the crisis is equitable.

4.3 POVERTY ALLEVIATION: A CROSS-SECTOR PERSPECTIVE

The COVID-19 pandemic has caused an estimated 71–100 million people to fall back into extreme poverty, effectively wiping out all progress made in combating poverty since 2017 (World Bank, 2020a). To regain the ground lost due to the pandemic, funding of poverty alleviation has to become more cost-effective, especially given that decreased fiscal space in developed and developing countries will likely reduce the funding dedicated to such programs.

A poverty alleviation program is any intervention in which the primary objective is to increase the income of poor households. While interventions for financial inclusion, poverty graduation, unconditional and conditional cash transfers, livelihood development, upskilling, or smallholder farming are often categorized into different sectors, they all strive to achieve the same outcome: to significantly increase the income of ultra-poor households over the short- and long-term. To maximize the effectiveness of development finance, it is therefore important to ask which of these interventions are the most cost-effective.

Evidence-driven approaches to improving the cost-effectiveness of funding face the challenge that even rigorous evidence of programs drastically differs from context to context. For instance, randomized control trials of poverty alleviation programs across six countries found that in five countries, the programs had a positive impact of up to 433 percent return, while in one country, the program had a negative impact of 198 percent (Banerjee et al., 2015). Instead of looking at past evidence to make their funding decisions, policymakers can rely on future evidence by asking investors to provide the working capital for interventions, and then tying the repayment of program costs to the achievement of well-evaluated results. This does not only generate a greater cost-effectiveness of public resources but also creates competition in cost-effectiveness between many disparate solutions to the same problem. Box 6 describes the Poverty Alleviation Outcomes Fund initiative, which refers to OBF funds that create competition between many different types of poverty alleviation interventions.

4.4 HEALTH: MAINTAINING ESSENTIAL SERVICES DURING THE PANDEMIC

Countries around the world are aiming to provide quality, affordable health services to everyone – regardless of their ability to pay. Despite some significant progress, the world remains off-track in achieving the SDG’s 2030 target of Universal Health Coverage (WHO, 2019). The outbreak of COVID-19 has further stretched the capacities of many countries to provide quality and affordable health services for all. The pandemic has both a direct and secondary impact on public health, as the delivery of essential health services has been severely disrupted. A World Bank analysis from June 2020 reveals that “childhood vaccination was the most disrupted service,” putting the lives of millions of children at risk (Global Financing Facility, 2020). In fact, “because of COVID-19, vaccination rates are going back to 1990s levels” (BMGF, 2020). Additionally, “many women were at greater risk of complications or death from pregnancy” (Global Financing Facility, 2020).

Box 6. Poverty Alleviation Outcomes Fund

The Poverty Alleviation Outcomes Fund (PAOF) is an Instiglio initiative that strives to create a platform for African governments to contract the scaling of impactful and innovative poverty alleviation interventions across a multitude of sectors. The Fund’s first transaction, the Village Enterprise Development Impact Bond (DIB), was launched in 2017 in Kenya and Uganda (Instiglio, 2017b). The implementing NGO, Village Enterprise, committed to increase the income levels of at least 12,600 ultra-poor households. The \$4.3 million outcome payments are all tied to increases in household income attributable to Village Enterprise’s intervention. Outcome payers include Department for International Development (DFID) and United States Agency for International Development (USAID), and an anonymous donor. As all funding is tied to results and because the Fund directly contracted the NGO, Village Enterprise raised the upfront funding from impact investors after it was awarded the impact bond. The DIB will conclude in mid-2022.

In response to the COVID-19 pandemic, the PAOF launched a COVID-19 Adaptation Fund in close collaboration with the governments of Rwanda and Kenya. Rather than using OBF initially, the COVID-19 Adaptation Fund aims to provide eight service providers with \$100,000 grants each. The grants are intended to support the service providers in adapting their programming to better alleviate poverty during the pandemic. PAOF’s choice to leverage innovation grants instead of OBF illustrates the importance of identifying the appropriate financing instrument for the given context. While OBF is excellent at incentivizing service providers to iteratively improve their programming, small unrestricted grants are useful in supporting the initial development of entirely new approaches under great uncertainty. Following the 1-year innovation period, the Fund intends to scale the most successfully adapted interventions using OBF modalities such as impact bonds.⁵

⁵ Interview with Douglas Emeott, Manager, Instiglio. September 4, 2020.

Box 7. Living Goods Outcomes Fund – quality essential health services during the pandemic

After a successful RBF pilot in 2018-19, the Government of Uganda, USAID DIV, and Deerfield Foundation partnered to scale-up Living Goods' community health worker (CHW) program. The RBF program's design is remarkable in three ways. First, it is launching in October 2020 despite the COVID-19 outbreak, in order to mitigate the pandemic's disruptions in essential health services for women and children. Living Goods has taken considerable measures to ensure the safety of the CHWs and the populations they serve, included enforcing no- and low-touch protocols, providing all CHWs with personal protective equipment, and leveraging digital technology to ensure the safety of service provision during the pandemic.⁶

Second, it combines traditional health-sector output-level metrics with strong emphasis on the quality-of-service provision. Nine metrics capture the assessment, consultation, treatment, and effective referral in three categories: maternal and newborn health, under-five child health, and family planning. The quality and appropriate timing of services is ensured by the verified and correct utilization of an mHealth app in the CHWs'

smartphones, which stores patient records, prompts CHWs to follow-up with patients, and guides CHWs to ensure quality of care to patients when providing diagnoses and treatments. To further strengthen service quality, three cross-cutting payment metrics were introduced that measure patient awareness and satisfaction, as well as community-health worker competence. Finally, a final set of "quality safeguard" metrics cover minimum targets for coverage and targeting of services, CHW supervision, the timeliness of services, and the effectiveness of referrals.

Third, Living Goods is using its own capital for upfront financing from unrestricted philanthropic grants. With all the funding tied to results, the funders only pay for those results that are achieved, while Living Goods provides all upfront capital for the program. The advantage of the internal capital sourcing is that it is cheaper than raising financing from impact investors. Using cheap internal financing allows Living Goods to reach more beneficiaries, and it allows the organization to retain full autonomy over how to achieve the results.

Box 7 provides an example of how OBF can be used for expanding essential health services during the pandemic. The immediate public health needs to combat COVID-19 are best addressed through fast-tracked, emergency funding arrangements; however, OBF can play an important role in sustaining essential health services. During the pandemic, OBF can be used to incentivize health care providers to provide care safely, which encourages patients to continue to seek essential services. While new OBF projects for essential health services can be launched as soon as service providers have adapted their operations to the crisis, it is also important that existing programs continue to be resourced to avoid putting health service delivery of vulnerable populations at risk.

During the Ebola crisis, a USAID-funded RBF health services program in Liberia was able to temporarily shift activities in order to assist the government during the early outbreak phase. More emphasis was

placed on capacity building of the Ministry of Health and county health teams, supporting supply chain flow, training of health workers on infection prevention and control, and contact tracing (USAID 2015).

While health is the most common sector for RBF, most existing projects tie funding to the achievement of outputs rather than outcomes. Similar to other social sectors, the rationale for OBF in health services is largely that (i) it holds service providers accountable for saving and improving lives, and (ii) it provides service providers with greater autonomy, which enables them to operate at greater levels of effectiveness. However, in contrast to other social sectors such as education, poverty, and jobs, the health sector poses more significant measurement challenges for OBF. While it is possible to measure the main outcomes of interest - mortality and morbidity - and attribute them to service provider actions, the costs of doing so are typically prohibitive for OBF approaches.

⁶ Correspondence with Nayantara Watsa, Deputy Director Business Director/Innovative Finance, Living Goods. September 29, 2020.

To capture the impact of health services, the most common approach for RBF programs in the health sector has been to supplement measures of the volume-of-service provision with measures that proxy service quality. Commonly used metrics for health facility performance in output-based RBF programs, commonly known as Performance-Based Financing (PBF), are new outpatient consultation, family planning method consultations, institutional deliveries, ante-natal and post-natal care visits, the completion of vaccination regimes, or mosquito net distribution (Fritsche et al., 2014). These common service volume metrics tend to be supplemented with health facility quality checklists, which differ substantially from one context to another. PBF programs can significantly improve health facility performance by motivating public frontline health workers with greater autonomy and financial incentives, as well as performance-driven supervision and feedback. Box 7 provides an example of an OBF program that ties funding to results further down the results chain, which is particularly desirable in the contracting of private service providers who already have considerable autonomy but face performance-pressure on volume.

4.5 WASH: FROM MARKET SHAPING TO INSTITUTIONAL CAPACITY BUILDING

Access to water is vital for human life – it maintains health, prevents the spread of disease such as COVID-19, and grows food. Despite water’s importance, 785 million people in the world still lack access to basic drinking water sources. Worse yet, 2 billion people live without access to basic sanitation, with almost 673 million of these people practicing open defecation (World Health Organization & UNICEF, 2019).

RBF approaches in partnership with service providers are common in the water, sanitation, and hygiene (WASH) sector. Beyond results-based PforR loans for national governments, the World Bank’s GRPBA popularized the usage of OBA approaches with utilities and private companies, with WASH projects over \$90 million. While OBF with service providers has not yet been used extensively for WASH interventions, it is feasible to do so, given that many meaningful outcomes are measurable. For sanitation projects, for instance, rather than



⁷ Interview with Maada Kpenge, Managing Director, Guma Valley Water Company. September 25, 2020.

Box 8. Water Utility in Freetown, Sierra Leone

Freetown's one million inhabitants and businesses suffer from unreliable access to clean water. The Millennium Challenge Corporation's 5-year program aims to improve the performance of the city's water utility, Guma Valley Water Company (GVWC), by implementing policy reforms, building institutional capacity, and strengthening the regulator. An RBF program was implemented in the final year of the program. It incentivized GVWC to increase revenue collections from private and public customers, lower non-revenue water by improving leakage management, enhance supply reliability by improving valve management, and improve regulatory reporting.

GVWC achieved 127 percent of the ambitious performance targets, earning about \$1.3 million from the program. This represents a remarkable turnaround of the organization, given that RBF targets were set considerably above baseline performance (MCCU, 2020). For instance, the revenue collections from private customers increased by 33 percent during the RBF program,

leakage prevention and repair metrics collectively exceeded targets by 27 percent, and, for the first time in the organization's history, GVWC fully met the regulator's reporting requirements. A qualitative evaluation revealed that the RBF program led to greatly increased staff motivation, diligence, and initiative; greater coordination across and within departments and offices; enhanced performance management and operational practices; increased awareness of political bottlenecks within government and in the press; and improved service-orientation and client responsiveness.

Despite the short duration of the RBF program, GVWC's management believes that improvements can be sustained by deepening the service and performance culture and leveraging the increased revenue to make essential investments; this includes delivering water to off-grid households in quarantine due to COVID-19. It also has adapted the RBF metrics and targets for internal monitoring and a newly-instituted staff incentive program.⁷

measuring the expansion of infrastructure to underserved households, verifying that communities are free of open defecation has the advantage of incentivizing an outcome that directly benefits public health. In projects with public utility companies, incentivizing greater financial sustainability, expansion of water access to off-grid households, and improved efficiency by lowering non-revenue water is also feasible. Importantly, due to a lack of basic water and sanitation facilities, many underprivileged communities cannot follow the simple guidance of COVID-19 preventive measures, like washing hands. In light of these issues, OBF WASH projects can provide the infrastructure necessary for both immediate and longer-term recovery from the virus.

Interventions that target those who lack access to water or sanitation are commonly provided by public utilities or private companies like social enterprises. Different OBF approaches have the potential to drive the performance of these organizations. For utility companies, OBF can be leveraged to instill a mindset centered around serving clients, expanding access to water and sanitation, and achieving financial sustainability. For income-generating service

providers such as utilities, social enterprises, and private companies, OBF can be used to bridge the viability gap by incentivizing the expansion of services to underserved households and communities. For NGOs that administer market-building programs, OBF can be used to provide flexible financing that allows for program innovation and adaptation. The cases in Boxes 8 and 9 demonstrate the value add of OBF with different types of service providers, while also showcasing the importance of flexibility in effectively responding to COVID-19.

The case of Guma Valley Water Company (Box 8), Freetown's public water utility, demonstrates the ability of OBF to drive performance in a low-resource environment.

The case of the Cambodia Rural Sanitation DIB (Box 9) illustrates the potential for OBF to incentivize a targeted approach in closing the viability gap, leverage private financing, create a flexible funding arrangement that allows for innovation and adaptation, and sustainably expand access to quality sanitation products for marginalized populations by fostering market supply and demand.

⁸ Interview with Greg Lestikow, Director, Global WASH, iDE. September 21, 2020.

4.6 URBAN: HOLISTICALLY ADDRESSING POVERTY IN URBAN SLUMS

One in eight people in the world, or 881 million, live in informal settlements (Habitat & UN, 2016). Overcrowded slums are hotspots for COVID-19 transmission, as social distancing and hygiene measures like handwashing are challenging. A city's ability to respond to COVID-19 will be largely determined by existing infrastructure systems and its ability to deliver critical public services. While RBF approaches that tie funding to outcomes are less common for combating urban poverty, they can enhance the effectiveness of a wide breadth of informal settlement interventions.

OBF can be leveraged to hold policymakers at national and local governments accountable for reducing urban poverty and focusing on multifaceted interventions. This is important because "individual approaches such as upgrading and formal titling alone have largely failed to improve livelihoods in slums" (Marx et al., 2016). Evidence strongly indicates that slums are poverty traps, necessitating holistic, big-push approaches. Indeed, countries that successfully curbed slum growth undertook

large programs that simultaneously increased public investments in the supply of affordable housing, and improved local governance and transparency; these programs also improved the efficiency of land markets (López et al., 2010). To ensure the successful implementation of ambitious policy agendas, OBF metrics should focus on the ultimate outcomes of interest and positively correlated intermediary outcomes. Ultimate outcomes of interest are, for instance, slum dwellers' household income or labor market participation. Examples of positively correlated intermediary outcomes include increased private investment, utilization and maintenance of infrastructure, mobility, safety, and tenure security.

OBF design is challenging in environments that lack reliable baseline data and evidence on the effectiveness of interventions. Data on slum inhabitants tends to be poor, and little rigorous evidence exists for many interventions that combat poverty in slums (Marx et al., 2016). The resulting uncertainty in setting targets and prices generates non-disbursement risk for funders and payment risk for the incentivized agents; however, these challenges can be overcome with time by collecting outcome data and iteratively increasing the funding volume tied to outcomes.

Box 9. Cambodia Rural Sanitation DIB

High levels of open defecation are linked with the spread of disease, the contamination of drinking water, and poor health outcomes, especially for children. Open defecation also adversely impacts the safety and dignity of all household members, especially women, girls, and the elderly. In Cambodia, significant progress has been made to end open defecation, with sanitation coverage rates rising from 20 percent to above 60 percent over the last 15 years. Making progress towards realizing universal sanitation coverage is now becoming more challenging as the focus shifts to the hardest-to-reach communities.

In response to this challenge, USAID, the Stone Family Foundation, and iDE launched the world's first DIB for WASH in 2019, with the goal of eliminating open defecation in 1,600 rural Cambodian villages (iDE Global, 2019). For each open defecation-free village, USAID pays a unit outcome payment, in total up to \$9.9 million. The program utilizes a market-based approach: the program team continuously innovates by using human-centered design methods

to improve sanitation solutions; this is done in partnership with local producers, who provide products and services for the villages and local sales teams and then generate the demand for high-quality sanitation solutions. Households identified as poor through the national "IDPoor" system are eligible for partial toilet subsidies. The upfront financing for the DIB is provided by the impact investor, the Stone Family Foundation.

The rationale for the impact bond is that iDE requires significant flexibility to adjust its program in light of the last-mile challenges it now faces. This flexibility has already been utilized during the COVID-19 crisis, as it allows iDE to leverage its network of sales agents and village mobilizers to spread information about the disease and proper handwashing technique, while also distributing handwashing kits to ensure people have the resources they need to practice good behaviors⁹. The program leverages a lean verification mechanism that uses iDE's strong cloud-based monitoring system in combination with the government's ODF claims process.

OBF can be used to hold governments, service providers, and communities accountable for successfully implementing interventions to support land titling and tenure security, housing improvement, and land use planning (with key considerations for COVID-19 in mind). OBF can incentivize the responsible authorities to roll-out tilting intervention at scale. Rigorous research has found that lowering the price of land titling among the poor and women significantly increases the number of households with women on the title (Ali et al., 2016; Cherchi et al., 2019). RBF could, therefore, be used to subsidize the price of land titles and incentivize governments to streamline land titling processes. Land titling programs also can have unintended consequences, such as increasing evictions or deepening existing ethnic patronage (Marx et al., 2016; Marx et al., 2019). Improved outcomes for women, minorities, and tenants should be incentivized to promote greater equality in outcomes and avoid these unintended consequences.

OBF could also enhance the return of urban infrastructure projects by rewarding participatory decision-making processes for investments and improving infrastructure maintenance. If women are included politically in local investment decisions, evidence suggests that they will select to invest in public goods that benefit women more (Besley et al., 2004). For instance, women might prioritize streetlights, since they are essential for their public safety and enable them to commute at all hours. OBF could be used to incentivize equal representation in decision-making committees or to align investment decisions with preferences of otherwise marginalized groups. A lack of infrastructure maintenance can significantly reduce the return of costly investments. OBF can also be used to incentivize communities to establish systems to maintain infrastructure, such as road drainage ditches.

Lastly, the expansion of labor-intensive work programs, such as community-based solid waste management, cash transfers, and WASH interventions, can curb the economic impact of COVID-19 in slums. OBF can be used to hold implementers accountable for project outputs and outcomes, such as employing vulnerable workers, successfully making targeted cash transfers, and utilizing water and sanitation equipment.

4.7 ENVIRONMENT: GREEN INFRASTRUCTURE, POLLUTION, AND CLIMATE CHANGE MITIGATION

Beyond the inherent value of environmental protection, ecosystems provide services for economic growth and sustainability for fisheries, agriculture, tourism, economic resilience against floods and landslides, public health benefits, and climate change mitigation. Climate change could force more than 100 million people into extreme poverty by 2030 and more than 143 million people to move within their countries in Sub-Saharan Africa, South Asia, and Latin America by 2050 (Hallegatte et al., 2015; Rigaud et al., 2018). Each year, climate change causes approximately 8 million premature deaths in low-income countries and 6 percent of economic output globally (Landrigan et al., 2018). Nature-based solutions (NBS), also known as green infrastructure (GI), often present a more cost-effective and sustainable alternative to traditional gray infrastructure solutions for water resource management, disaster risk reduction, and climate change adaptation. Improving air, land, and water pollution management is critical for public health and economic growth. This section explores the usage of service provider-level OBF for environmental outcomes, focusing on ecosystem services, NBS, pollution management, and climate change mitigation.

OBF can give service providers the incentives and flexibility needed to achieve environmental outcomes with greater cost-effectiveness. In contexts in which interventions produce increased public revenue or savings, governments can use blended finance instruments – such as impact bonds – to finance the project privately and shift risks to investors (see Box 10 on DC Water). This is particularly valuable in times of reduced fiscal space for environmental protection and infrastructure in the wake of the COVID-19 pandemic.

Environmental interventions often produce positive externalities for many different beneficiaries. For instance, “mangroves provide coastal protection, but can also support fisheries and food security, timber [and] non-timber forest products, tourism, and act as a significant carbon sink” (World Bank, 2019). In this example, an environmental ministry seeking to

⁹ Correspondence with Siegrid Holler, Associate Partner, Instiglio. September 18, 2020.

Box 10. Pollution Management through Nature-Based Solutions - DC Water Environmental Impact Bond

As a result of climate change, the frequency and severity of intense rainfall events have increased, leading to annual flow of 2.5 billion gallons of combined stormwater and sanitary sewage into the Rock Creek and Anacostia tributaries, the Potomac River, and ultimately the Chesapeake Bay (DC Water, 2016; Quantified Ventures, n.d.). This results in bacteria, trash, and heavy metals contaminating DC's watershed.

In 2016, DC Water sold a \$25 million impact bond in a private placement to the Goldman Sachs and Calvert Foundation, financing the pilot to create 20 acres of GI. The impact bond's performance target is to capture an additional 650,000 gallons of stormwater annually. The performance is verified by measuring precipitation and sensors in the sewer system.¹⁰ If the GI performs as expected, DC Water will further expand it to avoid greater grey infrastructure costs.

While the costs of installing the GI are ultimately paid for by DC Water, the GI's performance risk in managing stormwater runoff is shared by DC Water and the investors. As a result, payments on the impact bond may vary based on the success of the intervention. The rationale for the impact bond is to raise private sector capital, thereby shifting downside performance risk away from the municipal service provider and to the investor. The impact bond structure differs from those commonly deployed in low-income countries, as it seeks to reduce the service provider's risk exposure. Hedging the performance risk enables DC Water to take on GI projects which are expected to achieve the same goals as grey infrastructure, at a significantly reduced cost; but it does come with greater uncertainty.

improve a mangrove restoration project's economic viability could use OBF to crowd-in additional funding from local tourism and fisheries industries, carbon offset markets, and international results-based climate finance mechanisms.

For environmental outcomes, OBF and other forms of RBF are most commonly employed in the climate mitigation and adaptation space, with an estimated peak market capitalization of \$2.6 billion in 2015; 90 percent of these funds are dedicated to forestry and land-use sectors (World Bank, 2017). Billion-dollar aid initiatives such as REDD+ incentivize low-income countries to prevent deforestation. The World Bank's PforR instrument is also commonly used to incentivize national governments to achieve environmental outcomes or project milestones.

While OBF approaches are common for incentivizing national governments to achieve environmental outcomes, "incentives for the implementing agency are only observed in very few cases, even though they play a key role in supporting the achievement of results" (World Bank, 2017). This is especially surprising because results measurement and attribution is feasible. National governments already report on results for their RBF programs. In general, many environmental outcomes can be measured

using remote sensing technology, satellite imagery, and drone footage. For instance, deforestation can be estimated using satellite or drone imagery; stormwater mitigation can be measured using sensors in runoff systems (see Box on DC Water); air pollution can be measured by air quality sensors and can, at times, even be attributed to individual polluters by measuring pollution at smoke stakes (Duflo et al., 2013); water pollution can be measured using quality probes and can even be attributed to factories if measured at industrial outlets (ibid.); and river plastic pollution can be measured by sensors attached to bridges (Meijer et al., 2019).

Box 10 describes the United States' first environmental impact bond, which uses nature-based solutions to mitigate water pollution in Washington, DC. In addition, the Kemito Ene DIB – which is still under development – is an excellent example of an OBF instrument focused on environmental protection, climate change mitigation, and livelihoods.⁹ The Kemito Ene DIB will support indigenous Peruvian cocoa producers and their cooperative, and will combat rainforest deforestation in the Ene river basin, a tributary to the Amazon. It will directly incentivize a local NGO and a local cooperative to reduce deforestation and improve farmers' yields.

¹⁰ Interview with Benjamin Cohen, Director, Quantified Ventures. September 30, 2020.

4.8 SOLID WASTE: CLOSING THE VIABILITY GAP FOR UTILITIES AND SOCIAL ENTERPRISES

In low-income countries, over 90 percent of waste is disposed of in unregulated dumps or is openly burned. These practices create serious health, safety, and environmental consequences and contribute to global climate change through methane generation. While managing waste properly is essential for building sustainable and livable cities, it remains an elusive challenge for many low-income countries. While annual waste generation is expected to increase by 70 percent until 2050, effective waste management is expensive, often comprising 20 to 50 percent of municipal budgets. Particularly, in light of diminishing fiscal spaces brought on by the pandemic, the ability of OBF to enhance the cost-effectiveness of solid waste management (SWM) is of increasing importance.

The value-chain of SWM spans (i) waste generation, (ii) waste collection and transport, (iii) waste division, (iv) waste recycling, composting, and digestion, (v) waste disposal, and (vi) energy recovery. Tying funding to outcomes along this chain enables funders to hold service providers accountable for real improvements in services, instead of paying for the nominal roll-out of new practices. The expansion of services, access to services, and quality of services can be verified and measured using spot checks and customer satisfaction surveys.

Innovative GPRBA pilots for SWM in the West Bank and Nepal have led to widespread adoption of the practice across the World Bank's portfolio.

Banna et al. categorized the emerging portfolio into three categories along the SWM value-chain (2014). First, results-based projects (focused on a combination of outputs and outcomes) in the West Bank and Nepal incentivized improved solid waste service delivery and fee collection. To enhance the financial sustainability of SWM, OBF can be used to incentivize service providers to increase the cost-effectiveness of their operations as well as raise additional revenue. The water utility case in section 4.5 provides a good example of how entrepreneurial civil servants can respond to ambitious outcomes targets and leverage OBF's flexibility to increase operational efficiency.

Second, results-based projects in China, Indonesia, and Malaysia incentivized improved recycling and source separation. More generally, OBF approaches can be used to incentivize reduction in environmental pollution from illegally disposed waste and methane emissions from landfills. In the OBF program's planning phase, service providers will have an incentive to identify the cheapest form of achieving those results – whether through preventing, minimizing, reusing or recycling waste, or by producing energy from the waste itself. Payment metrics can then be designed to reflect the outcomes from the most effective activities.

Third, results-based projects in Mali, Tanzania, and Jamaica incentivized improved waste collection and transport in under-served communities. In locations where a public entity does not provide solid waste collection, OBF can be used to incentivize local entrepreneurs and community-based organizations to improve waste collection, thereby increasing unskilled labor opportunities for vulnerable populations.

Box 11. Solid Waste Management OBF in Gaza

A World Bank program financed the Palestinian Authority's completion of a landfill and transfer station, which serves one million residents in Gaza's three southern governorates. To further enhance SWM's financial and environmental sustainability in the Gaza strip, GPRBA supplemented the World Bank's infrastructure financing with a \$2 million results-based grant. The indicators incentivize the service provider to successfully implement improved operational standards for the landfill, the

transfer station, and hazardous medical waste. The disbursement of funds is linked to the quality and scope of services provided and the environmental impact of the services. To ensure the operational and financial sustainability of the gains made under the World Bank project, outcome indicators also incentivize the service provider to reach reasonable levels of cost-recovery by increasing their collections from municipalities and medical waste producers (World Bank, 2020d).

As Banna et al. (2014) notes, “improving SWM services does not always require more staff, more vehicles, more equipment or bigger landfill space.” Especially in times of severely constrained public resources, OBF has the potential to drive the performance of public and private SWM entities to achieve greater cost-effectiveness in service delivery, better financial sustainability, and improved environmental outcomes.

Conclusion

COVID-19 severely threatens the goal of the international development community to end poverty globally, in all its forms. The spread of COVID-19 is pushing millions into extreme poverty and is significantly limiting low-income countries’ fiscal and administrative ability to deliver essential services. The lives and livelihoods of the most vulnerable populations depend on the availability and expansion of public services and programs, such as health care, as well as programs that improve conditions in crowded urban slums.

OBF has the potential to deliver development assistance in a more efficient, transparent and accountable way, and scaling its application can play a vital role in reversing the losses and making new gains towards ending poverty. With fiscal and

administrative resources stretched, international development organizations and governments should seek opportunities to employ OBF to improve public service delivery, deploy resources more effectively, and foster innovation. OBF can be used as an instrument to target the most vulnerable and underserved populations, as well as to crowd-in private sector capital and expertise. However, policymakers should carefully weigh the benefits and costs of more complex financing arrangements with the private sector – especially in times of great urgency.

Moving forward, the design and implementation of OBF programs is undoubtedly complicated by the pandemic. The technical impediments associated with setting outcome targets and prices in a time of great uncertainty, as well as undertaking results verification in a time of social distancing, pose significant challenges. However, the core features underpinning an outcome-based contract, including innovation, efficiency, transparency, accountability, and flexibility, make OBF a powerful and important tool for improving the impact of service delivery for the recovery from COVID-19. The evidence and case studies presented in this paper illustrate how these challenges can be overcome, and that it is feasible to continue exploring opportunities for OBF moving forward.



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