Development impact bonds: learning from the Asháninka cocoa and coffee case in Peru

JOHN BELT, ANDREY KULESHOV, and ELINE MINNEBOO

Impact bonds effectively allow the risk of implementing social development activities to be shared with private sector investors. Social or development impact bonds replace the upfront financing of charitable activities with a pay-for-success contract. Four actors together agree upon the outcomes and their indicators: outcome sponsor, investor, project implementers, and verifier. Under such a contract, a charitable donor or government ('outcome sponsor') takes the obligation to pay the 'investor' an amount determined by a set of objective indicators reflecting the outcome desired by the donor. The investor, expecting contract-based future payout, can recruit and pre-finance project implementers ('service provider') to achieve the agreed results. The achievements of the outcome indicators are assessed by an independent verifier to conclude the payout from donor to investor according to the contract. The structure allows charitable donors to transfer a significant share of risk to investors and/or financial markets. The Common Fund for Commodities (CFC), the Schmidt Family Foundation (SFF), Rainforest Foundation UK (RFUK), and the Royal Tropical Institute (KIT) were the first to apply the model in the agricultural sector in an emerging economy. The main objective of the impact bond was to increase productivity and market sales of cocoa and coffee produced by the Asháninka people, an indigenous community living in the Peruvian Amazon. This pilot provides valuable lessons learned to contribute to the development of the mechanism.

Keywords: impact bonds, social investing, public–private partnership, result-based finance

IMPACT BONDS, SHORTHAND FOR SOCIAL IMPACT bonds, social benefit bonds or development impact bonds, are a new social investment mechanism that is growing in popularity (Warner, 2013; CGD and Social Finance, 2013; Drew and Clist, 2015; Gustafsson-Wright and Gardiner, 2015; Gustafsson-Wright et al., 2015; Flynn and Young, 2016). Impact bonds bring together private investors, non-profit and private sector service delivery organizations, governments and donors to deliver results that society values (CGD and Social Finance, 2013).

John Belt (j.belt@kit.nl) is Senior Economist at the Royal Tropical Institute (KIT), The Netherlands; Andrey Kuleshov (andrey.kuleshov@common-fund.org) is Strategy and Development Advisor at Common Fund for Commodities (CFC), Amsterdam; Eline Minneboo (e.minneboo@kit.nl) is Advisor at the Royal Tropical Institute (KIT), The Netherlands.

http://dx.doi.org/10.3362/1755-1986.16-00029, ISSN: 1755-1978 (print) 1755-1986 (online)

The current global social challenges are massive, including widespread poverty, unemployment, food shortages, lack of access to health services and education, and require large-scale and more effective ways of financing development programmes. Governments are looking for innovative models to finance their public agendas without substantially higher costs for society. Impact bonds seem an appropriate, innovative financial mechanism to use private funding to support public goals. Impact bonds mix result-based finance with impact financing and public–private collaboration (Gustafsson-Wright et al., 2015).

The prospects of impact bonds seem bright, but their application is still in its infancy. Impact bonds require a change in the financial structures of conventional donor and government agencies. Lessons can be drawn from the Asháninka Impact Bond in Peru, a pilot experiment by the Common Fund for Commodities (CFC), the Schmidt Family Foundation (SFF), Rainforest Foundation UK (RFUK), and the Royal Tropical Institute (KIT). The case presented here showcases the opportunities for impact bonds in the agricultural sector in an emerging economy.

In June 2016, CFC, the Ministry of Foreign Affairs of the Netherlands, and KIT organized the Symposium 'Development impact bonds: game changer or hype?' to discuss with donor organizations, scientists and development practitioners the state of affairs and lessons learned so far. It was concluded that the mechanism is bold in its design by using private investment to support public objectives. Currently, many NGOs and governments experiment with result-based finance and explore new principles to finance their development agendas, and impact bonds could be of interest to them. This article will help to unravel various aspects of impact bonds by presenting a practical case from Peru.

Impact bonds: a new approach in development finance

Increasing global challenges, lower development budgets, and a rising pressure to show impact have started a process of questioning traditional development finance, providing a trigger for innovation to finance development. Result-based finance is one way to put more focus on outcomes instead of outputs. Impact bonds build on this principle of paying for outcomes.

Result-based financing and impact bonds replace the 'traditional' monitoring of process with evaluation of impact as the basis for providing development funds. There are advantages of impact monitoring as opposed to process monitoring:

- There is a lower administrative burden on the outcome sponsor who no longer needs to conduct costly monitoring and evaluation of activities.
- There is flexibility of implementation for the service provider because the contract does not need to list specific actions or a specific sequence of action. Instead, the obligations relate to achieving the outcomes.
- The sponsor is no longer compelled to make full payment for insufficient results on the grounds that activities were executed correctly but fell short of expectations due to external adverse events. The sponsor transfers these risks to other partners.
- Impact evaluation becomes an activity with significant material value; this will likely result in more credible impact assessments.

Basic structure of an impact bond

Compared with result-based financing, impact bonds include a third party, the investor, who pre-finances the necessary activities to achieve desired development outcomes. The investor is paid based on results achieved. Impact bonds generally involve four actors: investor, service provider, outcome sponsor, and verifier. The investor pre-finances the activities of a service provider, serving a particular societal outcome. An independent verifier assesses whether the outcomes are met according to the contractual arrangements. The outcome sponsor agrees to pay the investor once the agreed outcomes have been achieved. Impact bonds have variable returns, similar to equity investments, including interest on return (Gustafsson-Wright et al., 2015). The process to organize the design of an impact bond, including agreeing the outcomes and the specific contractual arrangements, can be complicated and time-consuming; therefore, an intermediary sometimes facilitates the process to create the structure for the development impact bond (DIB), including the legal and financial specifics (see Figure 1).

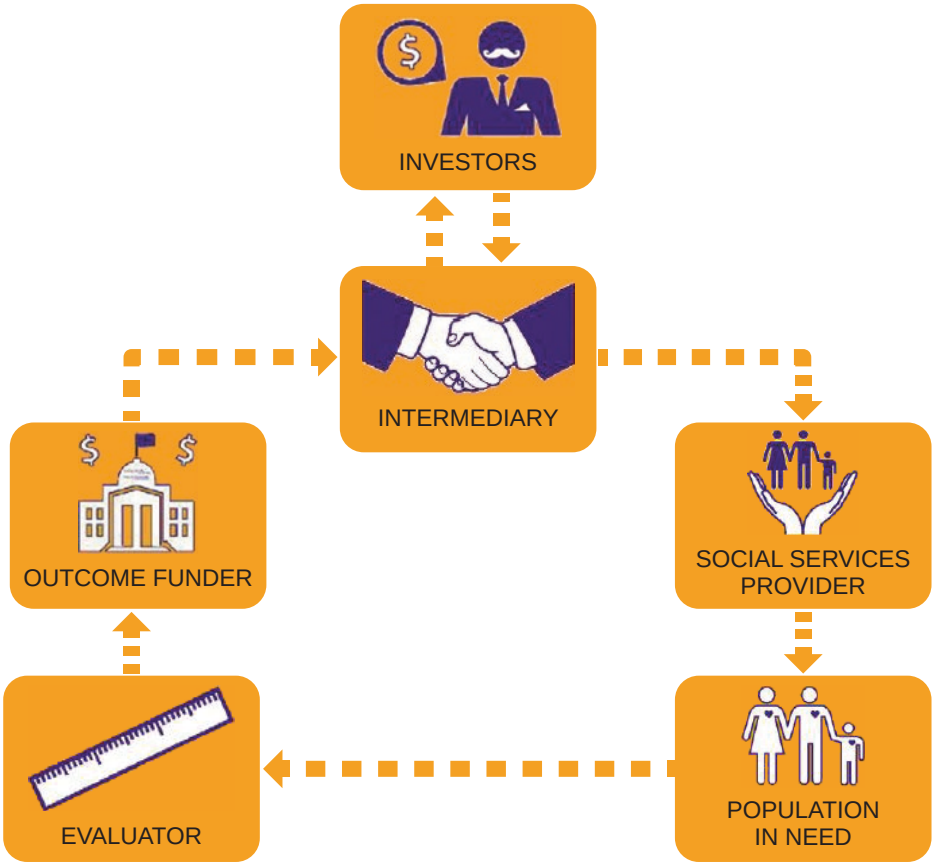

Figure 1 Impact bond mechanism
Source: Gustafsson-Wright et al. (2015)

An impact bond adheres to four criteria. Firstly, measurable outcomes are to be defined that can be measured by the independent verifier. The simpler and clearer the outcomes are, the easier it is to measure success in an unambiguous manner (Gustafsson-Wright et al., 2015). Secondly, a reasonable time horizon to achieve the outcomes needs to be defined. Thirdly, there should be evidence that the outcomes can be achieved successfully. This will motivate the investor to provide the pre-financing and take the risk. Fourthly, the appropriate legal and political conditions need to be in place to support the impact bond. If governments are involved as outcome sponsors, the legal structure should generally allow them to pay for outcomes achieved beyond the fiscal year (Gustafsson-Wright et al., 2015).

Some recent impact bond examples

In 2010, the first ever social impact bond (SIB) was implemented in the UK. It aimed at reducing prison recidivism among short-term male prisoners. Since then, a considerable number of impact bonds have been operational; by January 2016, almost 60 impact bonds in total had been launched in 14 countries (see Figure 2). Out of these, 22 projects have reported performance data where 21 indicated positive social outcomes. Of these, 12 projects payments have been made, either to investors, or to be used for additional service delivery, while in four projects the outcome sponsors fully repaid the investor capital (Dear et al., 2016). Most impact bonds are found in the UK – 31 in total – and all have a social focus including employment, homelessness, and child welfare (Dear et al., 2016). A SIB Innovation Fund set up by the UK Government was instrumental (Gustafsson-Wright et al., 2015).

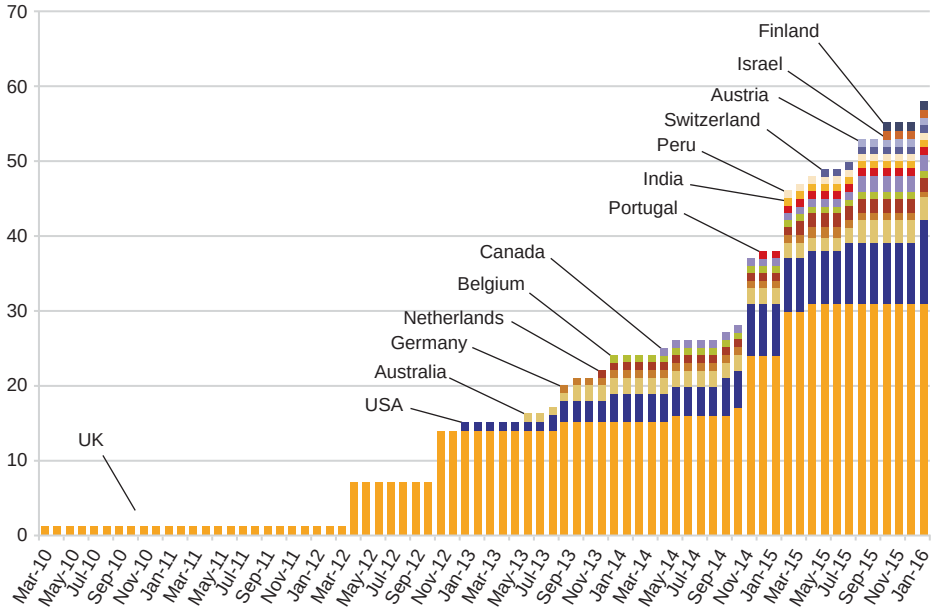

Figure 2 Impact bond contracts over time, 2010–2016
Source: Gustafsson-Wright et al. (2015), Brookings Institution

The scale of these impact bonds differs widely. The smallest SIB, in Canada, targets 22 children and their mothers, while the largest one, in the USA, focuses on about 10,000 youth (Gustafsson-Wright et al., 2015). The investments also vary, whereby the smallest amount of upfront capital commitment is a SIB in Portugal, at $148,000, while the largest SIB is the Child-Parent Center Pay for Success Initiative in Chicago, USA, involving $16.9 m (Gustafsson-Wright et al., 2015). It must be noted that it is sometimes difficult to calculate the actual size of investment, since some projects include revolving funds, loans, or grants.

Target indicators and DIB value to sponsor

A DIB contract must place a monetary value on a development outcome and it may be considered a major impediment for outcome sponsors if there is no clear basis for placing a value on a development result. Yet, finding a sound basis for setting the value of a development outcome depends on many assumptions and, at this stage, we see greatest potential in establishing a framework within which the outcome payer could be clear about the assumptions and methodology for converting these assumptions into a value. We can note the following possible options:

Replacement value. The value of the result can be evaluated as the cost that the outcome sponsor would need to incur if it wanted to produce the results itself. Results like operationalization of a production facility, construction of a warehouse, or installation of water pumps give a fairly precise approach to estimating their value. Outcome payers are likely to have all the necessary assumptions at hand, and it is immediately clear if financing via a DIB brings any benefits. At the same time, for a wide range of results, such as facilitating vertical diversification of smallholder producers, this approach is not directly applicable owing to the uncertainties of future developments in the value chain as the result of the project.

Activity-based approach. If the schedule of activities to be implemented towards the achievement of the result is known, it is technically not difficult to calculate the cost of implementing these activities. The total budget for activities, plus a certain level of profitability, provides a fair benchmark for projects focusing on issues such as education, vaccination campaigns, or quality certification for market access, among others. The negotiations between outcome sponsor and investor on the value of the DIB would be fairly simple in such cases. However, this approach faces a natural limitation because the investor would essentially need to take the risk of not reaching the intended results despite full and diligent implementation of activities ('effectiveness risk'). This risk would vary by sector, and the negotiation of profitability mark-up by the investor may be expected to fail if the expected effectiveness of proposed activities is insufficient in mitigating the effectiveness risk. At this stage it is not entirely clear where such a limit of activity-based approach would lie in practice because the limit will mainly be seen in the failure of negotiations of DIBs. It seems that identifying and examining such cases presents a separate research challenge to provide more insight into the practical applicability of an activity-based approach.

Financializing economic impact. This approach assumes that the outcome payer can agree on some measure of the economic impact of a project. The net economic value of a project could be calculated using assumptions as is commonly done in commercial projects. It is worth noting that a reasonable net present value of a project is a good indication of its commercial viability; the involvement of the outcome payer is only justified in projects where the economic value cannot be monetized, i.e. cannot be expected to generate a flow of revenues commensurate with economic impact. The outcome sponsor may wish to get involved in such projects because the use of normal forms of financing is not possible owing to lack of viable monetization. The determination of the value of such a DIB would best be based on objective economic indicators such as revenue, price premium for quality, or volume of transactions in a microfinance scheme, among others. The estimates of a net economic value are notoriously imprecise and, in the absence of some objective indicators, the negotiations of a DIB are also likely to fail. However, the list of specific activities to be financed under a DIB contract does not need to be negotiated and specified under such a contract, which opens considerable scope for the investor to monitor and mitigate the risk of delivering the intended result by adjusting the activities in the implementation process.

Financial analysis, risk evaluation, and pricing of a DIB by the investor

Approaching the matter of pricing a DIB contract from the standpoint of the investor, it is important to come to an estimate of the minimum required premium for the risk taking linked to a DIB contract. As mentioned above, the investor has to form an opinion about the 'effectiveness risk' referring to correct assessment of impact of activities to be financed on the indicators recorded in the contract.

At this stage it appears that investors are only willing to work with service providers with whom they have a prior relation and first-hand experience of their effectiveness in implementing planned activities. However, the possibility remains of making an incorrect assessment of the scope and magnitude of activities needed to achieve the target outcome indicators specified in the DIB contract, which may be called the 'process-outcome coordination risk'.

In this context, we would like to mention the 2013 Social Impact Bond with the Municipality of Rotterdam, Netherlands, where the ABN-AMRO Bank was the investor (ABN-AMRO, 2015). The bank valued the SIB payment in case of success by postulating a fixed mark-up rate to be added to the cost of agreed activities. The rate was not calculated but negotiated with the bond sponsor. We believe that this approach was largely the result of uncertainty about the effectiveness of envisioned activities. More precision will come in this risk assessment as experience accumulates.

The arrangements for settlement of a DIB contract are also a potential source of risk for the investor. The 'appropriation risk', referring to the risk of a public agency renouncing its obligations under a DIB contract due to failure to appropriate the required funds in the relevant year's budget, had been noted in the implementation of Rikers Island scheme by Goldman Sachs and MDRC (Rudd et al., 2013).

Furthermore, in the discussions of the DIB concept with UN agencies and charitable organizations, it has become apparent to the authors that many see a challenge in convincing their respective governing bodies about signing a commitment to pay public or charity funds to a commercial organization. This relates closely to the reliability of the valuation of DIB contracts, underlining the importance of establishing an agreed valuation framework for DIBs.

Legal considerations

One of the likely impediments to the wider use of impact bonds is their legal structure, which presents considerable challenges because the basic setup involves at least four distinct parties. As main drivers of the model, the outcome sponsor and the investor need to agree on the critical legal issues. The contract specifies the indicators, the methodology of evaluating the outcome indicators, the time frame, and the schedule of payment. The agreement on these points is reached on the basis of a shared commitment to the objectives of a project; the DIB contract establishes a connection between development goals of the sponsor and financial returns of the investor. This contract makes development outcomes investable; the contract needs to be sufficiently precise in creating a clear mapping of development outcomes to undisputable indicators that can be assessed by the financial markets. The project itself can be defined in any mutually agreed form and the parties only need to express intention to support the goals of the project while agreeing that these goals are adequately represented by the indicators.

In principle, after the conclusion of such a bilateral impact bond contract, the sponsor and investor are free to take any steps necessary to arrange the implementation of development activities towards agreed indicators on the investor side, and verification of these indicators on the sponsor side. In ideal circumstances, this can be achieved by placing the two functions to open competitive bidding with reference to the DIB contract. Assuming that a private investor can achieve better implementation results in such a competitive setting than a not-for-profit organization, this creates a potential for efficiency gains compared with the 'traditional' aid scenario.

The investor would normally want to include a number of considerations in the contract commissioning the service provider to deliver development activities. Some of these identified in the context of the Asháninka project are as follows:

- The investor should impose an obligation on the service provider to make the project implementation sites accessible to the verifier and, possibly, the commissioner.
- The intellectual property rights need to be clearly specified, if any.
- There should be indemnity for the investor and commissioner for liability due to actions by the service provider.
- There should be a commitment to observe applicable international good practice standards and other restrictions such as international sanctions and anti-corruption laws.

Depending on the particular interests of the commissioner and/or investor, the parties may further agree to restrict the list of admissible activities to be financed from the proceeds of the impact bond. While this would probably be a limiting factor in the implementation, many charitable foundations that could potentially act as outcome sponsors have specific lists of permitted activities. We expect that further discussion may be in order to produce a 'good practice' list of standard conditions for a service contract based on a DIB.

The Asháninka Impact Bond

Sharing an interest in the DIB approach, CFC, RFUK, SFF, and KIT developed a partnership that allowed them to put a DIB in practice, thereby evaluating its effectiveness and efficiency while learning from the legal, administrative, and other operational implications for each of the implementing parties. They identified a longer running collaboration by RFUK in the Peruvian Amazon as ideal for their pilot. SFF took the role of the investor, pre-financing RFUK to cover the costs of implementing DIB project activities. RFUK was the service provider performing all activities, together with its partner organizations in Peru, required to achieve the results defined by the DIB. CFC was the outcome sponsor committed to pay the investor for the results achieved, up to a maximum of US$110,000. SFF and CFC agreed to engage KIT as the independent party to verify the accomplishment of the jointly agreed results. Details of the DIB setup were documented in a formal DIB agreement, which was undersigned by all the involved parties.

Target indicators

The overall objective of the DIB, as described in the DIB agreement, was to support the indigenous Asháninka people of Peru by assisting the members of their cooperative, the Kemito Ene Association, in establishing an environmentally sound production and marketing system for coffee and cocoa (CFC, 2014). The following outcomes were agreed among all the parties involved, formulated as specific, objectively verifiable outcome indicators (see Figure 3):

1. 60 per cent of the members of the Kemito Ene Association increase their supply to their association by at least 20 per cent, thereby improving their income.
2. At least 60 per cent of the members of the Kemito Ene Association improve their cocoa yield to 600 kg/ha or more.
3. The Kemito Ene Association buys and sells at least 35 tonnes of cocoa in the last year of the DIB project.
4. At the end of the DIB project, 40 members of the Kemito Ene Association have established at least 0.5 ha with a leaf rust-resistant coffee variety.

In the DIB agreement, the payment per level of achievement for each indicator was defined in detail (see Table 1).

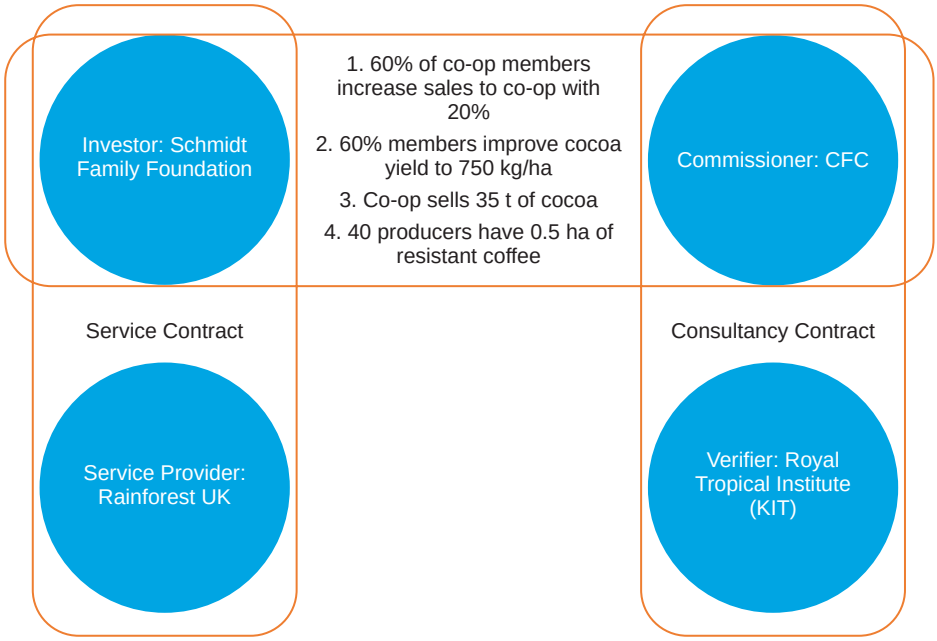

Figure 3 Asháninka DIB structure

The independent verifier collected the information on the extent to which the outcomes were achieved, assigning the range category for each of the different outcome indicators. To collect reliable information on the defined indicators, the following evaluation methods were applied:

- review of project documentation of the service provider and its partners, including progress reports, field activity reports, and publications;
- on-site meetings and discussions with the service provider's project team, mainly focusing on information and data collection related to the defined outcomes;
- analyses of the data provided by the project staff;
- direct observations in the field through visiting project sites;
- focus group discussions with coffee and cocoa farmers at the two project sites, involving women and men;
- informal interviews with female and male farmers and other stakeholders during the field visits.

To verify the progress of the four outcomes, for each indicator the main sources of data were identified (see Table 2).

Pricing of the Asháninka DIB

It was agreed among the parties to assign the same weight to each of the four outcomes, implying that each represented a maximum of 25 per cent of the

Table 1 Payment by level of achievement for each outcome indicator of the Asháninka DIB

	Target 100% achieved	*Target 75% achieved*	*Target 50% achieved*	*Target not achieved*
1	60% of the members of Kemito Ene Association increase their supply to their association by at least 20%	Between 59% and 41% of the members of Kemito Ene Association increase their supply to their association by at least 20%	Between 40% and 20% of the members of Kemito Ene Association increase their supply to their association by at least 20%	Below 20% of the members of Kemito Ene Association increase their supply to their association by at least 20%
2	At least 60% of the members of the Kemito Ene Association improve their cocoa yield to 600 kg/ha or more	Between 59% and 41% of the members of the Kemito Ene Association improve their cocoa yield to 600 kg/ha or more	Between 40% and 20% of the members of the Kemito Ene Association improve their cocoa yield to 600 kg/ha or more	Below 20% of the members of the Kemito Ene Association improve their cocoa yield to 600 kg/ha or more
3	The Kemito Ene Association buys and sells at least 35 tonnes of cocoa in the last year of the DIB project	The Kemito Ene Association buys and sells between 24 and 34 tonnes of cocoa in the last year of the DIB project	The Kemito Ene Association buys and sells between 12 and 23 tonnes of cocoa in the last year of the DIB project	The Kemito Ene Association buys and sells less than 12 tonnes of cocoa in the last year of the DIB project
4	At the end of the project, 40 producers have 0.5 ha of newly established coffee plots with leaf rust-resistant varieties	Between 39 and 30 producers have 0.5 ha of newly established coffee plots with leaf rust-resistant varieties	Between 29 and 19 producers have 0.5 ha of newly established coffee plots with leaf rust-resistant varieties	Below 19 producers have 0.5 ha of newly established coffee plots with leaf rust-resistant varieties

Table 2 Outcome indicators

Outcome indicator	*Description*	*Data source*
1	60% of the members of the Kemito Ene Association increase their supply to their association by at least 20%, thereby improving their income	Purchase records of the Kemito Ene specifying the amounts bought each year from each Kemito Ene member
2	At least 60% of the members of the Kemito Ene Association improve their cocoa yield to 600 kg/ha or more	Productivity figures for each farmer for each cocoa harvest reported by the project's field staff
3	The Kemito Ene Association buys and sells at least 35 tonnes of cocoa in the last year of the DIB project	Sales data of the Kemito Ene specifying for each year the amounts sold to its buyers
4	At the end of the project, 40 producers have 0.5 ha of newly established coffee plots with leaf rust-resistant varieties	Figures on number of hectares with newly established coffee plots for each coffee farmer reported by project's field staff

total DIB budget. When one performance indicator was achieved, the outcomes sponsor would reimburse the investor with the full amount for that specific outcome. When the target for an indicator was 75 per cent achieved, the outcome sponsor would reimburse the investor 75 per cent. When 50 per cent was achieved, the sponsor would reimburse 50 per cent. The outcome sponsor would not pay anything to the investor for targets which were not achieved.

While the indicators in the Asháninka project are consistent with calculating the monetary value of development outcomes ('financialization of economic impact' approach as indicated above), the actual negotiations were based on calculating the total cost of envisioned activities.

The estimate of the net economic impact was not included in the discussions, in the contract, or in the evaluation because of the lack of reliable data. To give a benchmark for evaluating the outcomes, estimates can be made retrospectively from the information available in the verification (KIT, 2015) by translating gains in yield, production, and turnover into US dollars at market prices for the farmers participating in the project (see Table 3).

The apparent bias of impact towards target three is balanced by the expectation that targets one, two and four will result in permanent gains, i.e. be cumulative into the future. With a 10-year horizon, the gross impact of the project amounts to $300,000, at 7 per cent discount rate, equivalent to circa 10 per cent gross rate of return. In retrospect, it is apparent that even the simplest estimate of this kind applied at the negotiation phase would yield useful insights into the relative value and payment commitment by the outcome sponsor for each of the target indicators.

Legal setup

The Asháninka DIB contract was initiated by RFUK and not by the CFC and SFF. This is not consistent with the ideal DIB model described above, particularly because the only choice for the investor is to accept or reject the DIB contract with a given specific service provider. KIT, acting as the verifier, was also closely involved in the project origination. Consequently, the impact bond contract was concluded in amended form reflecting this information: RFUK became the third signatory of the impact bond contract, and the CFC undertook the responsibility

Table 3 Net economic impact

	Impact target (US$/year)	*Impact actual (US$/year)*	*Expected after 5 years (US$/year)*
Target 1	6,700	5,500	5,500
Target 2	18,000	6,000	6,000
Target 3	64,000	98,000	n/a
Target 4	Planting of leaf rust-resistant coffee does not generate impact in the first few years		23,000
Total	88,700	109,500	34,500

to appoint KIT as the verifier, with the terms of reference for appointment based on the agreed methodology for evaluation of the indicators.

The considerations mentioned above have been included in the Asháninka impact bond contract as follows:

- access to implementation sites by CFC, SFF, and KIT;
- indemnity for the CFC and SFF for liability due to actions by the service provider;
- commitment to observe applicable international good practice standards and other restrictions such as international sanctions and anti-corruption laws.

The remaining parameters of the contract have, essentially, been taken unmodified from the standard conditions used by the CFC and the SFF.

Discussion of the Asháninka DIB outcomes and results

The verifier evaluated the delivery of project outcome indicators by conducting a field mission envisioned in the verification contract between CFC and KIT, and in accordance with the terms of reference included in the DIB contract. The overall assessment is that the DIB has been a learning exercise for all the parties involved.

The verification report (KIT, 2015) concluded that some of the impact indicators were met, while others were not. The target for the first outcome was 75 per cent achieved, the target for the second outcome was not achieved, while the targets for outcomes three and four were both 100 per cent achieved.

A number of observations were recorded by the verifier concerning the experience of the various actors in project implementation under a DIB contract.

- The field team, including the local partner of RFUK and the Kemito Ene Association, was well prepared to describe the project objectives, the activities completed, the equipment bought, the collaborations set up, and so on. The team could also explain in detail why certain tasks were accomplished, and others not; why certain targets were met and others not.
- The field team did not fully realize that a DIB report mainly focuses on results and not on the way these outcomes have been achieved or explanations of why certain targets were met, or not. This was a major learning point.
- The large degree of freedom to design a project in such a way that outcomes are achieved was an eye-opener to them. This is obviously logical considering the team has been operating in conventional development projects, following strict rules by donors regarding project design, approach, priority themes, and reporting requirements including output-based monitoring and evaluation, among others.
- There was also insight that as project implementer you can have a direct influence in formulating results and setting targets, based on your knowledge and practical experience of the project area, incorporating learning from previous initiatives, responding to new insights and so on.
- Proposing outcomes and agreeing to a set of indicators, however, also means that you have the responsibility to take these seriously, to focus on reaching the mutually agreed targets.

- In conventional development projects, explaining why certain targets are not met, perhaps because they were unrealistic from the start, is allowed and perhaps even common practice in such a difficult context as development. DIBs, however, are different in this aspect; not reaching targets has a direct financial implication.
- The project team faced some limitations, particularly for the second impact indicator on cocoa productivity, in presenting the required data to substantiate the progress made in the impact indicator. The information became available, but only after the tedious work of reviewing numerous field reports and interviewing field staff; the team should have realized what kinds of data requirements were connected to the different impact indicators, and designed the project monitoring system around those data needs.
- The verifier could directly observe how this DIB led to a fundamental shift in looking at development projects among staff of the service provider and project team.

Each party will draw its own lessons from what it has learned by doing this DIB. A more entrepreneurial, performance-oriented perspective has the potential to help development projects to be more flexible, to respond more quickly to what works and what does not in achieving clearly defined results. The notion that the investor, motivated by getting its investment back and ideally obtaining a reasonable return on it, will assist the service provider to operate in a more entrepreneurial, result-oriented way, is potentially a very attractive proposition but in this DIB this relationship was still to emerge.

The impact bond in Peru is of a rather small scale, which is beneficial for learning and managing, though overhead costs can be substantial. An often heard claim about impact bonds is their ability to scale up easily compared with traditional non-governmental services, which are restrained by their financial means. Development impact bonds might be a promising tool to achieve scale, but more funding is required. Their scale is better measured in relative terms than in absolute numbers (Gustafsson-Wright et al., 2015). The DIB in Peru started on a small scale and the project can possibly scale up; however, it is too soon to tell. Time will also tell whether the project has led to sustainable impact, with the cocoa farmers managing to implement the activities as taught to keep up the improved results.

Conclusions

Impact bonds promise a radical change in the incentive structure in social and development finance, aligning public and charity finance with their intended results. However, is this innovative finance mechanism mature enough to deliver on the promising claims made?

The meaning of the DIB from a financial valuation standpoint amounts to connecting a development outcome with the value of financial reward commensurate with the achievement of the result. As indicated above, this creates a number of challenges which will potentially lead to failures in the negotiation of

DIB contracts. One of the proposals made to address the issue would be to establish a non-profit agency service to independently provide the evaluation of a DIB contract and to provide an independent custody service to resolve the appropriation risk challenge.

The key advantages of impact bonds are in transferring the risk of ineffective use of public funds to the private investors and in governments or donors only paying in accordance with the achieved intended results. If the project does not obtain the intended result, the outcome payment is reduced and the investor may take a loss. This changes the mindset of donors and places the focus on measurable results instead of the usual monitoring of activities. For the private sector, impact bonds create a whole new set of investment instruments that are based on effective delivery of social outcomes. Essentially, impact bonds make social and development outcomes tradable in the financial markets by 'monetizing' them through the sponsor's commitment to the outcome. A set of challenges emerges in establishing the framework for effective and credible valuation of such instruments and their related risks.

Incomplete information about opportunities ('information friction') is obviously a serious impediment to impact bonds, where four or more independent players need to find a point of shared interest. Also, the legal structure is considerably more complicated, though not insurmountable as demonstrated in the case of the Asháninka project.

The facilitating role of KIT, the verifier, in reaching agreement on the indicators must be clearly recognized. It is not clear at this stage whether the role of the verifier in the conclusion of the impact bond contract always needs to be significant, or if it could be taken over by the bond arranger if present.

The development impact bond in Peru shows the opportunities for DIBs in emerging economies within the agricultural sector. From the Asháninka DIB, serving as a pilot for the participating organizations, interesting lessons emerge, including:

- the intensive preparation time and transaction costs required for designing the impact bond;
- the need for a clearly defined and easily measurable outcome matrix;
- a new demand for gathering monitoring data by project staff;
- a dramatic change in the donor–implementer relationship;
- the role of the investor vis-à-vis the implementer to safeguard their rate of return;
- the position of the community that ultimately reaps the benefit of the investment;
- the advantages of the model over conventional development projects and grants.

The successful completion of the Asháninka DIB contract demonstrates that the structure works as intended and the project results, as well its learning outcomes, have led the participants to open a discussion on a new DIB contract, thus expanding the impact of the pilot.

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