

Financing Sustainable Development

IDEAS *for* ACTION

Edited by
Mahmoud Mohieldin
Djordjija Petkoski

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Y2Y | YOUTH TO YOUTH
COMMUNITY
ENGAGE, INSPIRE, EMPOWER



WORLD BANK GROUP

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1 2 3 4 17 16 15 14

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Overview

It is our pleasure to present Ideas for Action (I4A), a youth competition on financing for development jointly launched in November 2014 by the World Bank Group and the Zicklin Center for Business Ethics Research at the Wharton School of the University of Pennsylvania. The winners were selected from 330 submissions representing more than 1,500 youths in 130 countries. The level of participation in the competition and the quality of the proposals submitted provides a great sense of confidence about youth involvement in the future of development.

Of the world's population, nearly half—2.9 billion people—are under 25. Today's youth will be the people most affected by the outcomes of development projects and programs initiated today. They will also be the ones responsible for implementing the global development agenda that leaders aspire to adopt this year, including the Sustainable Development Goals (SDGs), a financing framework to support them, and a framework agreement on climate change.

The SDGs take a holistic approach to development, encompassing the economic, social, and environmental dimensions. They will be more ambitious than their predecessor, the Millennium Development Goals (MDGs), covering a broad range of interconnected issues from sustainable economic growth to governance, well-being, and global public goods. To realize this vision, a just-as-ambitious plan for financing and implementation is needed. The July 2015 “Financing for Development” conference in Addis Ababa adopted an outcome document outlining a global framework for financing development to support the SDGs and the next 15 years of development.

I4A values the ideas, inspiration, and leadership of those who will soon assume global and local responsibility for sustainable development and shared prosperity. It does not offer the winners a financial prize but something as important if not more so—access and opportunity. It provides opportunities for the next generation of leaders to contribute to the narrative shaping the Post-2015 Development Agenda and its objectives as well as to share ownership over its implementation. It also provides access to some of the leading professionals in the global development industry and the private sector.

Youth engagement throughout the design and implementation of the SDGs is critical for success. The innovative and fresh ideas it takes to tackle the new challenges the world faces will most likely need to come from the youth. The I4A competition engages young people around the world to

encourage them to develop and share their ideas for financing solutions to deliver the post-2015 development agenda.

The competition itself was driven by youth, who have been involved in every step of the process—from design to delivery. The competition drew global interest, reaching more than 260 universities and organizations and 26,000 online users. The highest representation came from India, Nigeria, and Peru.

The winners were selected through a vigorous selection process based on the creativity, significance, feasibility, and clarity of the proposals. Reviewers included young staff as well executives from the World Bank Group (WBG), the Wharton School, Citibank, PepsiCo, the G-24 Secretariat, and Firmenich. Other competition partners included the WBG's Youth to Youth Community (Y2Y), the Young Americas Business Trust (YABT), and the Organization of American States (OAS).

The winners will present their proposals at the Joint World Bank–International Monetary Fund Annual Meetings in October 2015 in Lima, Peru, as well as other high-level international events and will be offered select training and knowledge exchange opportunities by the Wharton School. Select teams have also been asked to present their proposals at other relevant events, such as the 2015 African Youth Society Summit at the sidelines of the African Development Bank Annual Meetings in Abidjan, Côte d'Ivoire.

I4A's first-place team, Pennsurance, from the University of Pennsylvania, spent more than four months developing their winning idea. "I4A incentivized us to construct an idea we would not have thought about otherwise. I liked how it was self-motivated rather than driven by grades," said team member Keshav Garud, a business school student at the University of Pennsylvania. The team proposes creating two microinsurance products for families heavily dependent on remittances: one to insure the stream of remittance income in case (for example, a worker gets sick) and another to redirect a portion of the remittance to provide health insurance for the family.

The second-place winners, Team OXYGEN (Oxfam Youth for Growth and Empowerment in Nigeria), propose the development of an automated warehousing receipt system to improve access to customized financing for smallholder farmers in rice value chains in Nigeria. Through an innovative public-private partnership model, the proposal demonstrates the potential of pooled private and public sector resources to improve smallholder farmers' access to financing. By using movable assets such as inventory as collateral to secure loans, smallholder farmers can get better access to agricultural inputs.

The third-place winners, Team OUTCOME (Oportunidades de Desarrollo a Través del Canon Minero, Development Opportunities supported by

Mining Royalty Funds), were inspired by the story of Juancito, a young boy from a small mining town in Peru who wakes up at 5:00 a.m. every day to walk two hours to get to school. To ensure that Juancito and others like him can access the services they need, the team proposes a four-pronged approach to help local governments better prioritize community needs and engage local communities in how mining royalties are spent.

One of the runner-up teams, Impact.PH, proposes a dynamic online database of registered nonprofit organizations and selected social sector objectives that could drive strategic philanthropy by making data transparent and accessible in the Philippines.

Another runner-up team, Team Backe and DeGagne, emphasizes that access to clean cookstove technology for citizens at the base of the economic pyramid can be directly improved through a participatory model of development impact bonds (DIBs). Their proposed bond model enhances the current structure of DIBs financially, while also building in an innovative component that supports local training, education, and knowledge sharing.

The final runner-up, Team Rolling Stones, looked into a crowdfunding marketplace as a potential avenue to raise money for development. This proposal outlines how the World Bank can test new funding mechanisms using Internet-based donation platforms.

I4A leverages the capacity and convening power of the World Bank Group, other development organizations, and leading universities to draw on the creative insights and thoughtful innovations of the next generation of business and public sector leaders and practitioners around the world. The submissions included in this book, as well as the rest of the 330 submissions, have clearly demonstrated the innovative potential of youth empowered by technology and sophisticated social media networks. Young professionals are often the best equipped to think of creative solutions to tough global problems.

I4A is not exclusively about the “essay competition.” Equally important is the creation of a new learning and knowledge exchange platform that helps young professionals to more systematically shape the ongoing debate on development. A series of engagement activities—video conferences, webcasts, short videos and articles, and other shared resources—have engaged both those young professionals who participated in the competition and those simply interested in global development. By taking advantage of the convening power of technology, the aim is to engage and connect leading schools of finance, management, and government around the world, bring them into the conversation, and help the World Bank Group and other development organizations to redefine the global conversation and leverage their resources and convening power more effectively. The focus is on

innovation and workable solutions exchange grounded in existing or proposed empirical evidence with high potential for impact, on building multistakeholder capacity for implementation, and on measuring impact.

We hope that this book, the exposure provided to the top teams, and the I4A initiative as a whole will provide additional space for the next generation of leaders and creative practitioners to break away from existing, often rigid and routine, approaches on development issues. We hope it will help young professionals change the conversation about development in their own companies and organizations, thus achieving distinct, lasting, and substantial performance improvements. We hope it enables students to become more actively involved in redefining university curricula. Finally, we hope that I4A will help the World Bank Group and other development organizations redefine the global conversation by incorporating perspectives from young leaders and professionals—*the very people whose lives are most affected by the decisions of today*.

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Acknowledgments

The World Bank Group (WBG) and the Wharton School of the University of Pennsylvania jointly launched the Ideas for Action (I4A) initiative in partnership with the WBG's Youth to Youth Community (Y2Y), the Young Americas Business Trust (YABT), and the Organization of American States (OAS). We would like to thank the young professionals from these organizations as well as several other volunteers who took leadership roles in implementing the initiative:

- *The WBG team* included Demet Cabbar, Arunima Dhar, Julius Gwyer, Farida Aboulmagd, Lisa Maria Castro, Martin Sterlicchi, Jemi Laclé, Stathis Anagnostou, Blythe Nicole Kladney, Aanchal Anand, Saskia Roskam, and Namrata Saraogi.
- *The Wharton team* included William Laufer, Laurretta Tomasco, Hanah Bae, Debi Ogunrinde, Bryn Ferguson, Brian Waweru, and Joon Choi.
- *The YABT team* included Luis Viguria and Isabella Troconis.
- *Others providing critical support* included Ned Shell, Kat Muller, and Will Docimo.

The selection process comprised three phases. The following individuals conducted the first round of reviews, resulting in the selection of 18 finalists: Farida Aboulmagd, Stathis Anagnostou, Brenda Uche Anugwom, Hanah Bae, Demet Cabbar, Minhae Chloe Choi, José Clautier, Will Docimo, Victoria Flamant, Julius Gwyer, Sumeet Kaur, Claudia Koerbler, David Kuijper, Jemi Laclé, Mphatso Matenda, Anjali Moreno, Katarina (Kat) Muller, Adebisi (Debi) Ogunrinde, Adriana Moreno Pardo, Marco Scuriatti, Ned Shell, Martin Sterlicchi, Isabella Troconis, Luis Viguria, and Brian Waweru.

In the second round, which selected the six top entries, the final 18 submissions were reviewed by *Susan McAdams*, senior advisor and WBG liaison on financing for development; *Jos Verbeek*, advisor, Office of the Corporate Secretary and President's Special Envoy, WBG; *Christopher Juan Costain*, lead financial sector specialist, Finance & Markets Global Practice, WBG; *Christian Eigen-Zucchi*, senior economist, Development Economics Vice Presidency, WBG; and *Prof. Djordjija Petkoski*, lecturer and senior fellow at the Wharton School, University of Pennsylvania.

In addition to the editors of this volume, the following people reviewed the final six proposals and made the final selection of the first-place, second-place, and third-place winners and runners-up: *Thomas J. Harrington*, managing director and chief information security officer,

Citi; *Jeff Lewis*, chief economist, Global Practices, WBG; *Mahmoud Mohieldin*, corporate secretary and the President's Special Envoy, WBG; *Luis Montoya*, president, Latin America Beverages, PepsiCo; *Prof. Djordjija Petkoski*, lecturer and senior fellow at the Wharton School, University of Pennsylvania; *David Shipman*, group vice president, Global Corporate Compliance, and president, Firmenich North America; *Nena Stoilkovic*, vice president, Global Practices, WBG; and *Marilou Uy*, director, G24 Secretariat.

Finally, very special thanks go to the 1,500 young people who contributed to the 330 submissions. It is also important to recognize the involvement of the 26,000 individuals who in very different ways engaged in the I4A initiative.

CHAPTER 1

Creating New Microinsurance Products for Remittance Service Providers in India

Team Pennsurance

Eggi Aytac, *The Jerome Fisher Program in Management and Technology, Class of 2015*

Arjun Bhaskar, *The Wharton School, Class of 2015*

Keshav Garud, *University of Pennsylvania College of Arts & Sciences, Class of 2015*

Matthew McPhail, *University of Pennsylvania School of Engineering, Class of 2015*

James Zhou, *The Wharton School, Class of 2015*

Abstract

REMITTANCES REPRESENT SIGNIFICANT financial flows between both developing and developed countries that have rapidly increased in volume in recent years. Families who are dependent on remittances from family members abroad are generally in a position of higher risk, and microinsurance is well suited to reducing the risk of lower-income families. Currently, India constitutes the largest proportion of global remittances received. Because a strong microinsurance infrastructure already exists there as well, India is a prime target for our solution. We chose to focus our analysis specifically on the corridor (flow) of remittances from the United Arab Emirates because it is the largest source of remittances to India. In addition, this corridor's primary demographic consists of poorer Indian migrants working in high-risk occupations like construction.

Our proposal recommends two new forms of microinsurance, which we have coined “income stream insurance” (ISI) and “family remittance insurance” (FRI). ISI insures the stream of income sent from migrant workers to their home countries in case they meet with an accident or fall sick. FRI

We would like to acknowledge Dr. Jeremy Tobacman, an assistant professor of business economics and public policy at the Wharton School. His research focuses on behavioral economics and microinsurance products in India. We would also like to thank Dr. Shing-Yi Wang, also an assistant professor of business economics and public policy at the Wharton School. Her research focus is on microeconomic issues and remittances. Dr. Tobacman and Dr. Wang provided us with invaluable advice on our proposal and offered their continued support for helping us implement our idea should we move forward with it.

directs a portion of the remittance stream into health microinsurance to help protect the livelihood of the migrant workers' families. An essential element of this idea is a partnership between remittance service providers (RSPs) and microfinance institutions (MFIs) that operate in India and service this particular corridor. We believe that these microinsurance products would not only expand insurance penetration among low-income families but also target the needs of a population heavily involved in remittance transactions. MFIs and RSPs have significant profit potential in accessing new sources of revenue and cross-selling to existing customers by implementing this idea as well.

Problem and Context: Remittance Benefits, Risks, and an Underserved Market

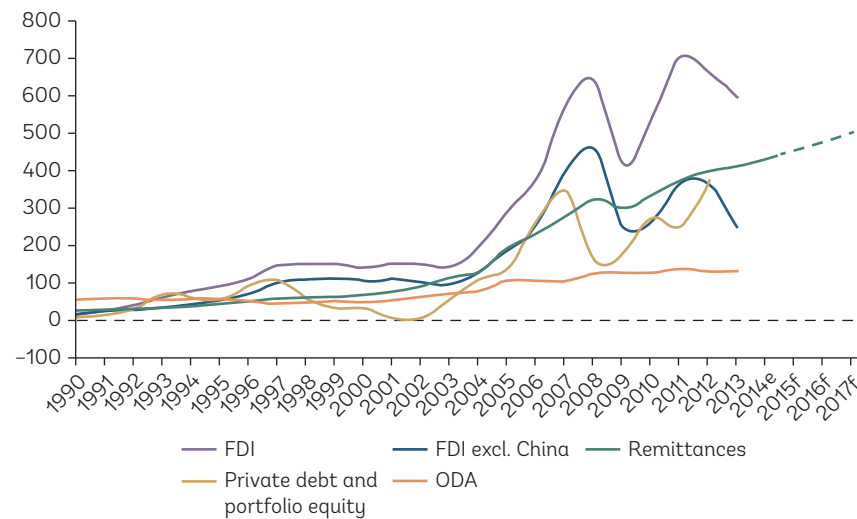
THE GLOBAL SUM OF REMITTANCES currently equals three times the total of all official development aid worldwide, reaching \$582 billion in 2014 (World Bank 2014a). Migrant workers commonly use remittances to support their families; after going abroad for more-promising work opportunities, they send some of their earnings home. However, several conditions increase financial risks for families that rely on remittances for survival: The worker who is abroad can no longer directly care for his or her family and is likely working in a dangerous job in their host country. At the same time, the family becomes highly dependent on remittances for its financial security. As a result of these risks, we believe families in India who depend on remittances would greatly benefit from taking out microinsurance policies.

Microinsurance products serve a market segment that cannot afford or access traditional forms of insurance (Mosely 2009). India's Ministry of Health and Family Welfare found that about 25 percent of all (insured and uninsured patients') hospitalizations pushed an individual or a family into poverty because of the cost of treatment—a situation that more extensive health microinsurance can help to prevent by providing a financial safety net (Rosenberg 2012). However, few microinsurance products are specifically tailored to meet the needs of remittance-dependent families. Because remittances bring a formal financial channel into many lives where none previously existed, microinsurance products tailored to remittance senders have a substantial target market as well as a distribution channel through which to thrive.

Figure 1 shows how integral remittances are to foreign aid. Despite the 2008–09 global financial crisis, the amount of remittance money sent internationally continued to grow; notably, this trend was distinct from other comparable development flows such as foreign direct investment,

Figure 1 Global Remittance Growth Relative to Other Investment and Aid Sources, 1990–2017

US\$ billion



Source: Migration Development Brief 19, World Bank Migration and Remittances Unit, Development Prospects Group (Nov 2012).

Note: FDI = foreign direct investment. ODA = official development assistance. 2014e = estimated total. 2015–17f = forecasted projections.

official development assistance, and private debt and portfolio equity.¹ Demonstrating the countercyclicality of remittances, the volume of remittances to the Philippines increased substantially after typhoons Reming (in November 2006) and Yolanda (in November 2013) to assist in relief and reconstruction (World Bank 2014a). The case highlights how people use remittances as an informal insurance mechanism in times of hardship.

Our proposal, on the other hand, seeks to formalize the insurance function of remittances. As a result, linking remittances to other financial products could potentially encourage the growth in remittances currently sent to India as well as worldwide.

Solution: Remittance-Tailored Microinsurance

OUR SOLUTION IS TO CREATE two new products that combine micro-insurance products with remittance transactions to India. To our knowledge, similar financial products have only been tried through a few pilot programs in remote regions of the world.

Our proposal creates two new products: family remittance insurance (FRI) and income stream insurance (ISI). No options currently exist to insure the remittances that flow from migrant workers to their families. For example, if a migrant worker falls sick for a long time, our ISI microinsurance product would pay out to cover the worker's family while they are no longer receiving regular remittances. Under our FRI proposal, a migrant worker could set aside a certain percentage of their remittances into an insurance account to cover his or her family's health care costs in case of emergencies back home in India.

ISI and FRI are comparable to two product types recently explored in an EA Consultants primer exploring the concept of remittance-linked microinsurance (Powers, Magnoni, and Zimmerman 2011).¹ Should we proceed to work further on developing and implementing this project, we advise interviewing and potentially working with the EA Consultants team of experts.

A Pilot Implementation Plan

Our microinsurance products target households earning \$2–\$4 per day; in contrast, the marginalized poor (earning less than \$2 per day) would not be able to pay anything for insurance, and wealthier families may already be served by existing insurance packages. Households earning \$2–\$4 per day, on the other hand, could set aside a small amount of income for insurance without jeopardizing their families' sustenance.

Both of our microinsurance products also aim to address the psychological distance between the family and the worker. Spending long periods of time abroad can cause a withdrawal effect from the household, making the remittance sender feel a significant loss of involvement in his or her family's lives and finances.

India is our choice of pilot location for two reasons. First, India is the largest recipient of remittances in the world, and the large volume of remittances flowing into India represents a substantial potential customer base (World Bank 2011). In 2013, over \$70 billion in remittances were sent to India—a significant portion of the world total of \$582 billion in 2014 (World Bank 2014b). Second, microinsurance products already have high penetration in India. In fact, the country has the fourth-highest microinsurance coverage ratio in the world at 9.22 percent (Microinsurance

¹ The primer states "Specific migration-linked insurance products include...iii) those seeking to tap into remittance flows or the distribution channels and networks created by migration; and iv) those that tap into the migrants' desire to protect their families in their absence by formalizing the informal insurance provided by migration, such as health insurance." Type iii) is similar to ISI, while iv) is similar to FRI.

Network, n.d.). Therefore, remittance service providers (RSPs) already have a large base of customers who regularly remit money back to their families in India. As shown in map 1 and figure 2 (panel b), the countries sending the largest remittance flows to India include the United Arab Emirates and the United States, making both of these countries potential target host locations for our customers.

Moreover, both the United States and the United Arab Emirates have notable Indian migrant worker populations. In particular, the United Arab Emirates has experienced rapid migrant population growth in the past 10 years, and is projected expand further in the coming years. This rapid growth has brought a drastic increase in the number of high-risk construction projects in some of the largest tourist cities in the world, including Dubai and Abu Dhabi. For instance, foreign workers constitute 96 percent of the total labor force in the United Arab Emirates (Joseph, Nyarko, and Wang 2015). Consequently, the country has a large demand for migrant construction workers, most of whom arrive from India. Of all the Indian migrant workers in the United Arab Emirates, 75 percent are employed in construction (World Bank 2012).

A large segment of those workers labor under harsh conditions. A *Construction Week* investigation found that 880 migrant construction workers died in the United Arab Emirates in 2004, 460 of whom came from India (Egbert 2005). The high-risk work sites and harsh conditions under which Indian migrants operate in the United Arab Emirates make

Map 1 Heat Map of Remittance Flows to India, 2014

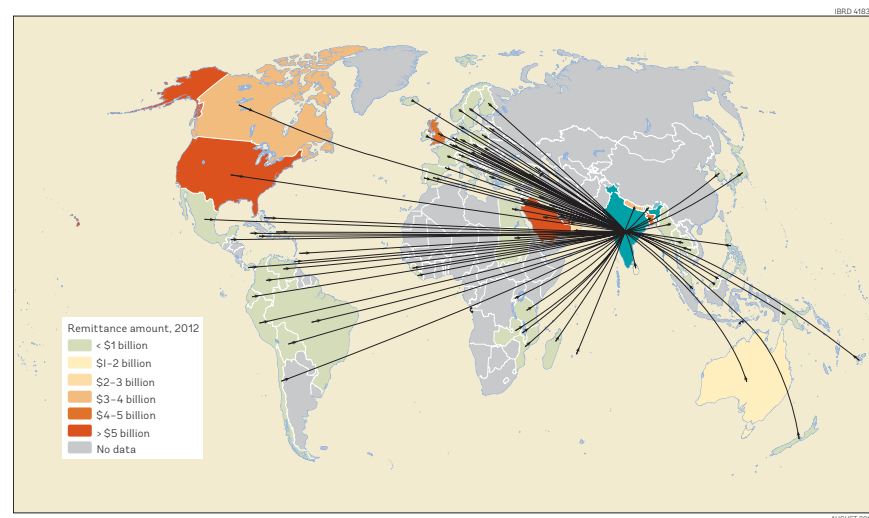
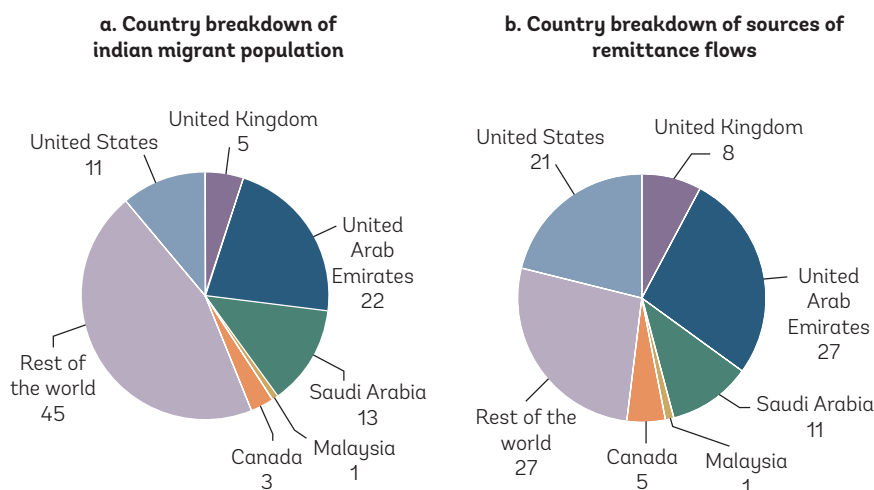


Figure 2 Estimates of Migrant Destinations and Remittance Flows



Source: World Bank 2012.

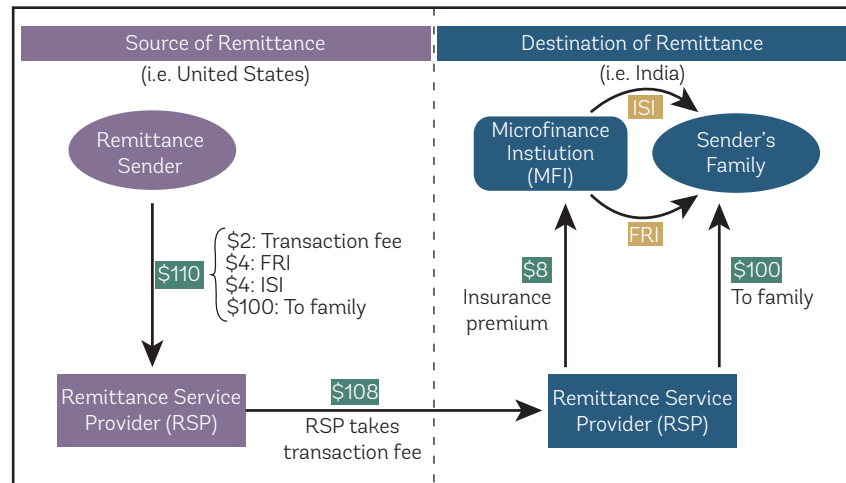
the probability of injury substantial, thus insurance is a potentially valuable tool. Moreover, we have identified a significant need there for our remittance insurance products (ISI and FRI): according to 2011 World Bank Global Findex data, 78 percent of United Arab Emirates migrants did not save their money in a financial institution, and migrants are unlikely to bring cash and valuables back with them to their countries of origin (Joseph, Nyarko, and Wang 2015).

We believe this is most likely because migrant workers' conditions are so harsh that they lack security for their streams of money being sent back to families in India. Because the United Arab Emirates hosts such a large proportion of Indian migrant workers who have a perceived need for our product, it would be an ideal location to target our product.

Our FRI product would give migrant workers who prefer that their remittances be used for investment over consumption the opportunity to invest directly in their families' well-being. They can use FRI to dedicate a certain percentage of their remittances to a microinsurance product insuring their family's health. This is a key behavioral feature of our product, as the remitter gains influence by having the money invested rather than spent entirely for consumption.

Our proposal allows families and migrant workers to sign up for either ISI, FRI, or both. Figure 3 depicts a hypothetical flow of remittance money from a migrant worker to India when the worker is signed up for both ISI

Figure 3 Sample Design of Remittance-Linked Microinsurance Product



Note: FRI = family remittance insurance. ISI = income stream insurance.

and FRI. Migrants will decide with their families how much money to allocate toward their ISI and FRI accounts. (In the figure 3 example, the migrant worker and his or her family decide to allocate \$4 toward the ISI premium and \$4 toward the FRI premium.) Cash would stream from the migrant worker to the family as follows:

1. The first stream of money is a \$100 base amount of remittance money that families in India would directly receive.
2. The second stream is a \$4 premium toward the FRI account.
3. The third stream is a \$4 premium for the ISI account.
4. The final component is a \$2 remittance service provider (RSP) transaction fee.

Once the remittance reaches India, the RSP there keeps the \$2 transaction fee. Under our proposed plan, the RSP is also responsible for distribution of the remittance base amount of \$100 to the family. The microfinance institution (MFI) is responsible for holding insurance premiums in an account under the family's name and distributing insurance payouts when the conditions of the FRI or ISI products apply.

RSPs will have a strong incentive to cooperate with MFIs because a segment of the population that did not previously use RSPs will now be drawn to use their services because their payments would be safeguarded against risk. With more customers, RSPs will also increase their profits by handling more cash and generating more RSP fees. Table 1 lists the various benefits and potential risks to stakeholders in our proposed solution.

Table 1 Benefits and Risks to Microinsurance Product Stakeholders

Migrant	Family	Microinsurance Institution	Remittance Service Provider	World Bank
Benefits: <ul style="list-style-type: none"> Protects family back home Reduces psychological distance from family Provides more control over how remittance money is spent Reorients spending behavior from consumption to investment Helps families avoid poverty due to costs of treatment Potential opportunity to build credit history Potential risks: <ul style="list-style-type: none"> May not want to pay for the price of the product Potentially a double-margin problem 	Benefits: <ul style="list-style-type: none"> Provides access to insurance Insurance and risk reduction against health or accident shock that can cause families to enter poverty Potential risks: <ul style="list-style-type: none"> May prefer money to be spent at own discretion 	Benefits: <ul style="list-style-type: none"> Additional revenue in insurance premiums Access to previously untapped customer base Potential risks: <ul style="list-style-type: none"> Infrastructure setup costs, SG&A, and overhead costs Opportunity cost 	Benefits: <ul style="list-style-type: none"> New source of revenue in remittance fees Appeal to new base of customers Additional revenue from existing customers Potential risks: <ul style="list-style-type: none"> Infrastructure setup costs, SG&A, and overhead costs Opportunity cost 	Benefits: <ul style="list-style-type: none"> Adheres to its mission and strengthens global brand through practical and innovative application of research from the World Bank's Migration and Remittances Team Potential risks: <ul style="list-style-type: none"> Dealing with government regulations Strong-arming the duopoly in the remittance market

Note: SG&A = selling, general, and administrative (costs).

Product Design and Infrastructure

As with traditional forms of insurance, an ISI or FRI policy would require a claim to be initiated for payments to be issued. For ISI policies, the migrant worker would be responsible for filing a claim demonstrating a forced interruption in remittances (that is, long-term recovery after an accident). However, because the MFI will not have a local presence in the migrant worker's host country, a system must be created that allows the worker to send claim documents back home to the Indian MFI.

We propose that the RSP be in charge of this linkage and, in their partnership with the MFI, create a channel for transmitting claims documents. With FRI, the whole process would be similar to a regular health insurance policy, and the family in India would need to file a claim with the local MFI branch.

Only minimal additional technology would need to be developed for the implementation of the ISI and FRI products. The novelty of the FRI product is that it allows a migrant worker to fund his family's health insurance, but the health insurance product already offered by the MFI otherwise remains unchanged. This means that beyond changing the source of revenue on the policy, the processing system is the same. As mentioned above, for the ISI product a channel would need to be created for transmitting claims documents, but outside of that addition, no significant development would be required.

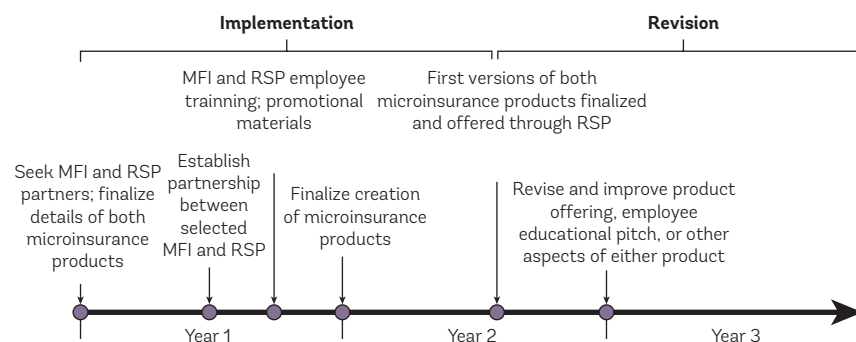
Timeline

Our prospective timeline for implementation spans three years. During the first year, we would seek to find both MFI and RSP partners and begin finalizing the details of both microinsurance products. With input from the insurance, financial, and legal sectors required to formally launch our microinsurance products, we would expect the full creation of both products to take 8–12 months. To accelerate our timeline, we would first seek an MFI partner so insurance product development can begin as early as possible. Once this process is under way, our search for a suitable RSP partner would begin.

Toward the middle of the first year, our team's focus would be on establishing a partnership between the selected MFI and RSP, followed by employee training and initial development of promotional materials. We estimate these actions would take approximately 3–6 additional months. Roughly 20 months after the process begins, the first versions of both microinsurance products would begin to be offered through the RSP, ending the implementation period.

We would diligently collect feedback from early customers and store visitors, proposing changes to the MFI and RSP as frequently as possible. To provide time for fully understanding the needs of our emerging market segment, we are allocating an additional year in which changes would be made to the product offering, employee educational pitch, or other aspects of either product. Figure 4 illustrates our proposed timeline.

Figure 4 Proposed Implementation Timeline for Microinsurance Products



Note: MFI = microfinance institution. RSP = remittance service provider.

Expected Impact

WE BELIEVE OUR SOLUTION will improve the lives of lower-class families in India in several ways:

- *Risk reduction.* Our microinsurance products tied to the RSP services can reduce risks for families whose lives are already particularly vulnerable to many unexpected events (such as health- and weather-related shocks).
- *Financial literacy.* The families our plan targets will also become more financially literate regarding the importance of insurance and various ways of spending and saving their money.
- *Worker empowerment.* Our unique solution will enable migrant workers to invest in their families' welfare through insurance. We believe migrant workers will feel more secure about their families' safety and future.
- *Remittance growth.* More migrants may be attracted to RSP services, increasing the remittances consequently sent overseas to families in India that depend on these funds to sustain their livelihoods.
- *Potentially increased MFI and RSP profits.* Table 1 earlier presented the benefits and risks to each stakeholder of our idea. To assess the products' potential profitability for MFIs and RSPs, the next steps would entail market sizing, market research, and modeling out pricing and claims rates (with migrant risk behaviors as the main variable). A high volume of detailed, high-quality data and analysis would be necessary to fully carry this out.

Comparable Product Offerings

SIMILAR PRODUCTS ARE rare but do exist around the world. However, they not only operate on a much smaller scale than what we are proposing but also lack the World Bank's heft to provide advice and technical assistance to the RSPs, MFIs, and government players. Despite these differences, we summarize here two microinsurance products for comparison: one offered by Seguros Futuro in El Salvador and the other by the Center for International Development and Research in the Comoros Islands.

In November 2007, Seguros Futuro, a cooperative insurance company in El Salvador, piloted a "Repatriation and Remittance" microinsurance product in five cooperatives. It was marketed to a customer base of low- to middle-income sectors in both urban and rural areas of El Salvador with especially high volumes of remittance transactions over a three-year period. Should the migrant worker in the United States or Canada die, the policy covers the full cost of repatriating the relative's body and provides 12 monthly payments varying between \$1,000 and \$10,000 to substitute for the workers' prior \$300 monthly average remittances that the families had withdrawn from cooperatives or service points of Seguros Futuro. As a result of the project, Seguros Futuro tripled its underwritten premiums, proving the success of leveraging remittance flows for microinsurance as a growth factor for insurance companies (Impact Insurance Facility 2013).

In 2007, the Center for International Development and Research (CIDR) began to enable the sharing of premium payments between migrants and their families in the Comoros Islands off the east coast of Africa. CIDR markets the product through by contacting the migrant organizations in southern France and addresses the migrants during their vacations home on the Comoros (GIZ 2011). By linking remittances and microinsurance, the CIDR intends to support the families' financial viability, because their insurance collection scheme previously suffered from high dropout rates. Families had dropped out primarily because they either couldn't pay the yearly premium or used remittance money for consumption rather than preventative purposes such as insurance.

Potential Challenges

THE FIRST AND FOREMOST challenge in our path will be ensuring the cooperation of MFIs and RSPs to create a linkage for our remittance microinsurance product. To convince these two stakeholder groups to join the initiative, the incentives they will receive from enabling these transactions must be clearly communicated to them.

In the case of MFIs, the most important incentive for their cooperation in this project is revenue growth; MFIs will be able to provide a new micro-insurance product that will result in a new revenue stream and strengthen their relationship with the migrant worker customer segment. However, the biggest challenge to ensuring an MFI partner's involvement will be the large sum required for infrastructure setup as well as the MFI's selling, general, and administrative (SG&A) costs. Therefore, it must also be clarified to the MFIs that the proposed product has scalability and promises positive returns in the long run. Only through a rigorous pitching process and sound quantitative analysis showing profitability can an MFI be persuaded to join the remittance microinsurance project.

In the case of RSPs, the incentives for cooperation are, similarly, a potential new revenue stream and strengthened customer relationships with the migrant worker segment. India has many different types of RSPs: Banks enable 60 percent of the remittance transactions, including the largest ones (table 2). Money transfer operators (MTOs), such as Western Union and MoneyGram, have 35 percent of the market. The rest of the market is served by Internet remittance providers. Among the RSPs serving the United Arab Emirates-to-India remittance corridor, the banks charge the highest remittance fees. This is why we recommend the involvement of an MTO as an RSP partner for our project in the long term; although having an MFI enable the remittance transactions would be a simpler short-term solution, involving an MTO in the RSP role will put a lower margin on the product. Because affordability is important for a microinsurance product, an MTO's cooperation is essential.

The second important challenge is keeping the remittance microinsurance product affordable. Because two different types of financial service

Table 2 Average Remittance Size, Selected Banks and RSPs
U.S. dollars

	Banks					Money Transfer Operators (MTO)			
	Citibank	ICICI bank	HDFC bank	Axis	SBI	WU/ HDFC	Wall Street Forex	WU	UAE Ex.
<i>Average Remittance Size</i>	2,000–3,000	1,500–2,000	5,000–10,000	1,600–2,000	1,000	500–700	400–500	500	350–450
Internet (Times of Money)					India Post				
<i>Average Remittance Size</i>	2,000					70			

Sources: Gabi G. Afram, "The Remittance Market in India", World Bank 2012.

Note: SBI = State Bank of India. UAE Ex. = UAE Exchange. WU = Western Union.

providers will be involved, there will be two different expectations of profitability from the product, which will lead to a double-margin problem. We sincerely hope that the host and home country governments, as well as the World Bank, can play significant roles in demonstrating this product's potential for international development to selected RSP and MFI partners in order to negotiate affordable premiums, and bring its final price to a reasonable range. It would be extremely beneficial if either the host country (United Arab Emirates) or home country (India) governments, the MFI, or the RSP could provide subsidies to make this product affordable throughout pilot program.

The third biggest challenge will come during the implementation phase of our project. The logistics of aligning remittance transactions with their designated microinsurance accounts will require a great deal of communication and collaborative information technology efforts on the part of both MFIs and RSPs. The process of setting up the infrastructure for transferring premiums and fees from the remittances to their respective MFI and RSP destinations will definitely require the expertise, funds, and time from both parties. Our ultimate goal is to create a partnership whereby MFIs will contribute their expertise in microinsurance products and RSPs will contribute their channels for international money transfer. If both parties respond promptly, the timeline of implementation can definitely be shortened.

Another important challenge to the implementation phase of our project involves the regulatory structure for India's microinsurance, which needs to be understood. India imposes several rigid regulations on microinsurance, including but not limited to the following (Allianz AG, GTZ, and UNDP 2006):

- Minimum capital requirements for insurers (Updated 1938 Indian Insurance Act, Article 6)
- Limit on a foreign partner's involvement in a joint insurance venture (Updated 1938 Indian Insurance Act, Article 7[A][b])
- Restrictions on offering life insurance and other insurance products together (Updated 1938 Indian Insurance Act, Article 11)

None of these regulations renders our proposed product unfeasible; however, they do impose certain guidelines that must be followed. To comply with the national regulations in India, the MFI and RSP strategic partnership will have to design the product within legal limits. For example, it may be impossible for the MFI in this partnership to offer the ISI and FRI insurances within the same package as pure life insurance. We must also bear in mind that if this solution is considered for implementation in other countries as well, the local insurance regulations may differ drastically, which can necessitate alterations in product design.

Last but not least, a challenge for the use of the remittance insurance product may come from unexpected conditions that current national insurance regulations do not cover. For example, if a remittance sender were to fall short on periodic insurance payments for a month because of a behavioral lapse, illness, or accident, regulations must be in place to ensure that the microinsurance provider will not take any unfair measures that negate the positive wealth effect of the remittance insurance product. Immediate insurance cancellation or unreasonable fee increases should not be immediate consequences of such a situation.

Alternative Implementation Opportunity

As JUST DISCUSSED, one potential challenge that our proposal faces is the necessity to create linkages between MFIs and RSPs. We believe that this issue can be resolved through several means:

- We must demonstrate sufficient gains for both MFIs as well as RSPs from adopting our proposal.
- We must appeal to an existing institution which can fulfill the roles of both MFI and RSP, making it a perfect pilot institution for our proposal. ICICI Bank allows migrants to send remittance money to India (our target country). The institution also recently started its first microinsurance policy called Sarv Jana Suraksha. We believe that ICICI Bank will be a perfect institution through which to implement our products because of its large size and the compatibility with its current model. Piloting our proposal with ICICI Bank will cut the remittance fee required by the sender in half, because instead of having to pay two separate fees (insurance premium and remittance fee) to an MFI and an RSP separately, senders would now have to send only one fee to ICICI Bank. However, the main problem with this solution is that the prices charged by banks, such as ICIC, in the remittance corridor between India and the United Arab Emirates often exceed RSP prices by over 10 times (table 3). Again, to resolve the affordability issue, we will need the involvement of the World Bank in product price negotiations.

Future Outlook

REMITTANCE MICROINSURANCE will directly improve the income sustainability of Indian lower-class migrant workers and their families. The thorough product design allows for scalable implementation and promises long-term profitability.

Table 3 Costs of Remittances to India from Selected Source Countries, by Remittance Size

Source Country	Average cost of remitting US\$200		Minimum cost of remitting US\$200		Maximum cost of remitting US\$200		Average cost of remitting US\$500		Minimum cost of remitting US\$500		Maximum cost of remitting US\$500	
	%	US\$	%	US\$	%	US\$	%	US\$	%	US\$	%	US\$
Canada												
Banks	10.3	20.7	4.4	8.7	20.1	40.1	6.9	34.6	3.0	14.9	15.9	79.4
MTOs	7.3	14.6	5.6	11.2	9.1	18.2	4.5	22.5	2.8	14.1	5.8	28.8
Total average	9.5	18.9					6.2	31.0				
Saudi Arabia												
Banks	5.1	10.3	4.4	8.8	5.8	11.7	3.1	15.3	2.4	12.0	3.6	17.9
MTOs	4.7	9.5	3.1	6.3	5.8	11.7	2.7	13.6	1.9	9.7	3.6	17.9
Total average	4.9	9.8					2.9	14.3				
Singapore												
Banks	6.1	12.2	3.1	6.2	11.0	21.9	3.8	19.1	2.6	13.0	5.8	29.0
MTOs	3.9	7.8	2.9	5.8	5.5	11.0	3.3	16.4	2.8	14.2	3.9	19.3
Total average	5.0	10.0					3.5	17.7				
United Arab Emirates												
Banks	26.0	51.9	22.6	45.1	29.4	58.7	11.7	58.4	10.3	51.6	13.0	65.2
MTOs	2.7	5.4	1.4	2.8	4.2	8.4	1.6	7.8	1.0	5.0	2.6	12.8
Total average	4.9	9.8					2.5	12.7				
United Kingdom												
Banks	3.9	7.8	1.3	2.6	5.5	10.9	2.2	10.9	1.3	6.5	3.0	14.8
MTOs	6.2	12.3	2.6	5.2	10.2	20.4	4.1	20.3	2.5	12.3	6.5	32.3
Total average	5.4	10.8					3.4	17.2				
United States												
Banks	8.4	16.7	1.2	2.4	15.0	30.0	5.5	27.3	1.2	6.0	10.8	54.0
MTOs	5.9	11.7	2.3	4.7	8.4	16.9	3.5	17.7	1.6	7.9	6.7	33.7
Total average	7.0	13.9					4.4	21.9				

Source: World Bank 2012.

Note: MTO = money transfer operator.

Additionally, if a pilot program for this product is successfully implemented in India, we see the potential for expanding our idea into different geographic regions where remittance income is essential to a significant fraction of the population. Several other countries would have strong demand for such products, including the Philippines, where incoming personal remittances constitute 9.8 percent of gross domestic product. Furthermore, the Philippines has an established microinsurance market and a thriving financial technology sector that is ripe for mobile remittance payments. Therefore, it is the ideal next setting to launch a remittance microinsurance product. In the future, we would like to explore regulatory and cultural constraints in the Philippines, as well as in other eligible countries, to make our idea scalable and global.

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CHAPTER 2

Innovative PPP Model for Promoting Financial Deepening and Inclusion in the Rice Value Chain in Nigeria

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Abstract

THE GOAL OF THE PROPOSAL is to provide a practical and scalable innovative solution for improving access to customized financing for smallholder farmers in the rice value chain, thus promoting sustainable poverty reduction in Nigeria.

This proposal first examines the challenges of smallholder rice farmers, including inadequate institutional frameworks and agricultural policies, limited access to financing, and lack of adequate storage facilities. In addition, there are gender-related social issues: the land tenure system makes it even more difficult for female smallholder farmers to acquire land for cultivation, inhibiting their ability to reach their full productive and income-generating potential.

Our proposal proffers the development of an automated warehousing receipt system to improve access to customized financing for smallholder farmers in Nigeria's rice value chain. It demonstrates this through an innovative public-private partnership (PPP) model, the potential of private sector capabilities, and public sector resources to improve smallholder farmers' access to financing using movable assets such as inventory as collateral to secure loans and get better access to agricultural inputs.

To implement our solution, we propose a consortium of government agencies, private sector partners such as agribusinesses and small and

medium enterprises (SMEs); financial institutions including microfinance institutions; and smallholder farmers and cooperatives. Factors for success of the solution include a clear understanding of roles and responsibilities, risk and benefit sharing, mainstreaming of efficiency-enhancing information technology innovations, and measures to ensure equal participation of men and women.

Problem and Context: Constraints on Smallholder Rice Farmers

WITH THE DECREASING ABILITY OF DONORS to devote sufficient funding to international development, institutions such as the World Bank, the Leading Group on Innovative Finance for Development, and the Organisation for Economic Co-operation and Development (OECD) have recommended that new sources of development finance be explored to bridge the funding gap. This challenge provides opportunities to explore innovative financing for development and to make it more efficient. Such financing is truly a vast field, comprising innovations in fundraising methods, alternative funding sources, and the ways to spend funds on international development (UNDP 2012).

A growing need has arisen to explore new mechanisms and incentives to address market failures or scale up ongoing agriculture and food security development in Africa. World population growth trends, particularly in developing countries, indicate that the global demand for food will increase by 60 percent by 2050 (FAO, IFAD, and WFP 2012). Meeting this challenge in Africa, particularly in Sub-Saharan Africa, is important because although the continent is expected to experience the world's highest population growth, it has also faced stagnant yields in recent years as well as negative impacts of climate change on agricultural productivity.

The recent drop in global oil prices has caused the government to embark upon more sustainable economic restructuring to foster renewable energy and generate economic growth through non-oil sectors. Significant efforts have been made in Nigeria to shift from a mono-product (oil) economy to a more diversified one that is sustainable and can also narrow the country's income inequality gap.

To that end, the government has invested significantly in revamping the agriculture sector because of its huge potential to increase productivity, food security, job creation, and poverty reduction for sustainable development in Nigeria. About 85 percent of Nigeria's total area is agricultural land (78.5 million hectares), of which 39.5 million hectares are arable.

Of the arable land, only 60 percent has so far been cultivated, and only 13 percent of the country's agricultural land is irrigated (Eluhaiwe 2010).

A major focus has been on improving rice production because Nigeria is one of the world's largest importers and a major consumer of rice, spending about \$2 billion per year on rice importation. The government has set a target for Nigeria to become self-sufficient in rice by 2015 (Nigeria, Ministry of Agriculture 2011). To achieve this, various policies including the Agricultural Transformation Agenda and the Growth Enhancement Scheme have been established to improve the accessibility and affordability of agro-input support such as improved seeds and fertilizers for small-holder farmers across the country.¹ Additionally the government has made notable efforts to boost dry-season farming activities in various parts of the country to improve rice and other crop production. Over a period of 30 years, Nigeria has seen a 300% increase in rice imports. From figure 1 below, barely 500,000 tons of the commodity was imported in 1980 compared with 2 million tons in 2010. Today, Nigeria is the second largest importer of rice in the world.

Figure 1 Rice Production and Milled Rice Imports in Nigeria, 1970–2012



Source: FAOSTAT database, <http://faostat.fao.org>.

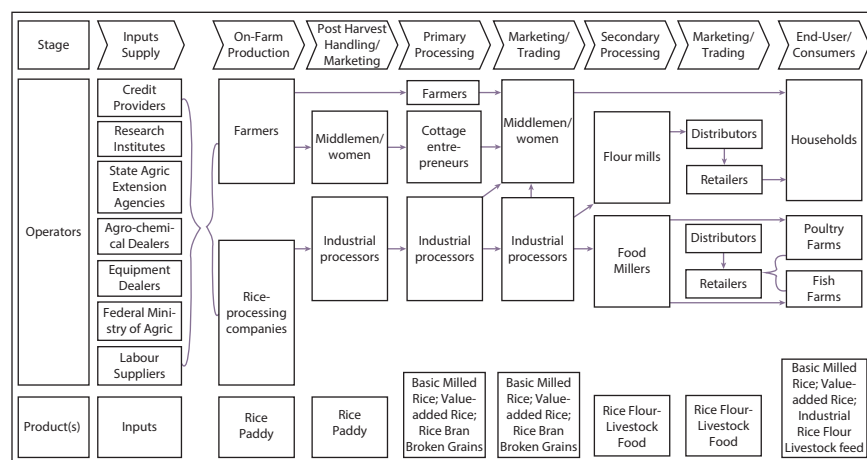
¹ The Federal Ministry of Agriculture and Rural Development's (FMARD) Agricultural Transformation Agenda comprises four components: NIRSAL (the Nigeria Incentive-based Risk-Sharing System for Agricultural Lending), development of private sector-driven marketing corporations, the Growth Enhancement Support scheme, and Staple Crops Processing Zones. For more information, see the FMARD website: <http://www.fmard.gov.ng/ata-fmard-transformation-agenda>. FMARD's Growth Enhancement Support scheme provides incentives to "encourage the critical actors in the fertilizer value chain to work together to improve productivity, household food security, and income of the farmer." For more information, see the FMARD website: <http://www.fmard.gov.ng/Growth-Enhancement-Scheme>.

Despite government efforts, certain issues involving the land tenure system and access to finance remain major constraints to self-sufficiency. Nigeria's land tenure system is not favorable to the poor, especially to women, who constitute the vast majority of smallholder farmers. In many parts of Nigeria, women have no farm lands because of economic, social, and cultural issues that pose difficult challenges in achieving their optimal production capacity. In addition, most smallholder farmers have limited fixed assets and rarely keep accounts in standard and comprehensive formats (much less, audited formats), which are prerequisites to access current credit schemes initiated by the government. Nigeria also lacks legal and regulatory environments that encourage the use of movable assets (equipment, inventory, accounts receivable, and so on) as collateral.

A value chain map shows the operators and products at each stage of the rice value chain (figure 2). It also indicates links between the operators across the stages. Basic milled rice and value-added rice are the two main final products of the rice value chain. The other products are rice flour and livestock feed.

Rice is cultivated throughout Nigeria, from the mangrove swamps of the Niger Delta to the arid region near Lake Chad. Nevertheless, three states are crucial for rice cultivation: Nasarawa, Kogi, and Niger (map 1). The dominant rice systems in these areas are irrigated lowlands, rainfall lowlands, and rainfall uplands (Longtau 2003).

Figure 2 The Nigerian Rice Value Chain



Source: GIZ 2014. Further permission required for reuse.

Map 1 Map of Nigeria Highlighting Nasarawa State



Source: en.wikipedia.org/wiki/Nasarawa_State

The pilot location for our solution is Nasarawa State. This choice is in line with the recent strategic efforts by the Federal Ministry of Agriculture and Rural Development to improve the rice value chain. In July 2014, the Nigerian government commissioned Olam Nigeria's 105,000-metric-ton integrated rice processing mill in Nasarawa - the largest integrated rice mill in Africa (Nigeria, FMARD 2014).

Solution: Customized Financing for Smallholder Farmers

THE RELEVANCE OF OUR IMPLEMENTING solution stems from its focus on increasing access to customized financial services and improving financial inclusion for smallholder farmers and small and medium enterprises (SMEs)—groups with limited fixed assets to secure loans—in a bid to improve their livelihoods and reduce poverty. It promotes public-private partnership (PPPs) that can drive economic growth and sustainable development by providing much-needed support toward enabling and empowering small producers. Additionally, it incorporates a gender mainstreaming strategy to ensure that marginalized populations, especially women,

benefit equally from opportunities in both domestic and global markets to achieve sustainable poverty reduction.

Our solution employs a new mechanism for innovative financing in Nigeria: warehouse receipt financing that caters to the marginalized groups (smallholder rice farmers and rice-processing SMEs) that lack the capacity to access needed financing to ensure increasing sustainable yield or business growth. As the United Nations' (UN) Food and Agriculture Organization has noted, "Warehouse receipt financing is especially interesting for rural small and medium enterprises, which are often unable to secure their borrowing requirements owing to lack of sufficient conventional loan collateral" (FAO 2009, 7).

This mechanism provides a sustainable PPP model that both (a) improves efficiency and effectiveness of existing funding, and (b) encourages policy changes and institutional framework improvements that could attract new financing. This dual function is supported by the report prepared by the Secretariat of the UN's High-Level Panel on the Post-2015 Development Agenda, which highlights "the pitfalls of trying to assess financing at the recipient country level from a 'needs' approach, without also considering policy changes, institutional improvements, and other parts of the development strategy. Instead, financing must be understood as one component of a strategy that includes private sector efficiency and public sector productivity improvements" (World Bank 2013, 9). Our proposal also integrates a gender mainstreaming strategy and information technology, thus addressing both gender-equity and efficiency considerations.

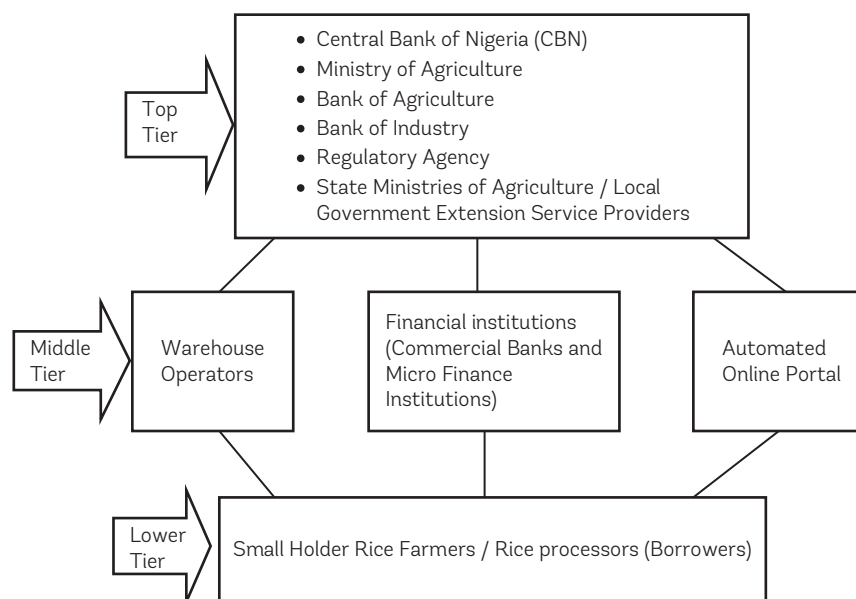
A Pilot Implementation Plan

To implement our solution, we propose a robust consortium of government and private sector partners such as agribusinesses, SMEs, and financial institutions including microfinance institutions and smallholder farmer cooperatives. This is in line with the model put forth by the Dutch Ministry of Foreign Affairs, which defines a PPP as "a form of cooperation between government and business (in many cases also involving NGOs, trade unions and/or knowledge institutions) in which they agree to work together to reach a common goal or carry out a specific task, jointly assuming the risks and responsibilities and sharing their resources and competencies" (Netherlands, Ministry of Foreign Affairs 2010, 6).

The governance structure shown in figure 3 features the linkages between various stakeholders in our innovative PPP model.

Top tier. The top tier comprises government agencies such as the Central Bank of Nigeria (which will be instrumental in providing a credit

Figure 3 Governance Structure for Warehouse Receipt System



guarantee scheme key to facilitating access to finance for smallholder rice farmers and other players in the rice value chain); the Bank of Agriculture, specializing in agricultural finance; and the yet-to-be-established regulatory agency for the warehouse operators. To that end, “A Bill for an Act to Establish the Nigerian Independent Warehouse Regulatory Agency and Other Related Matters” is in its second reading in Parliament (Nigeria, National Assembly 2013).

Middle tier. The middle tier is made up of key private sector players: warehouse operators, financial institutions (microfinance institutions and commercial banks), and private parties providing other infrastructure or services essential to the warehouse receipt system. The automated online portal is the monitoring platform and database where critical information is stored and accessed for the smooth operation of the warehouse receipt system.

Lower tier. Smallholder rice farmers, processors (millers), and other players along the rice value chain constitute the lower tier of the governance structure.

Table 1 and figure 4 present the pilot implementation plan and proposed operational model in greater detail.

Table 1 Pilot Implementation Plan: Who, What, How, and When?

Who?	What?	How?	When?
<ul style="list-style-type: none"> • Government institutions such as Central Bank of Nigeria • Other related government authorities, including the Ministry of Agriculture, Bank of Agriculture, Bank of Industry, NIRSAL • States and Local Government Areas 	Establishing a legal and regulatory environment that encourages the use of movable assets (such as inventory) as a collateral to access finance	<p>The government provides the institutional framework and establishes agricultural policies tailored to implement the use of the warehouse receipt system. The Nigerian Independent Warehouse Regulatory Agency (Establishment) Bill is currently in its second reading in parliament (National Assembly).</p> <p>The government channels funds from existing pools (for example, the Growth Enhancement Scheme; Youth Employment in Agriculture Programme [YEAP]; and Micro, Small and Medium Enterprises Development Fund [MSMEDF]) to specialized financial institutions such as microfinance institutions (MFIs) to provide inventory credit to potential borrowers (farmers, traders, and processors) through a credit risk guarantee scheme, thus creating an enabling environment for financing agribusiness activities.</p> <p>The credit risk guarantee scheme will be provided by Nigeria's Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL), a nonbank financial institution and an initiative of the Central Bank of Nigeria. NIRSAL's main goal is to build the confidence of banks to take up more risk in agriculture. Its mandate is to facilitate the flow of credit to agribusinesses and collaborate with stakeholders to make agricultural value chains (including the rice value chain) in Nigeria more efficient. NIRSAL's Risk Sharing Fund^a will create incentives and catalyze processes to encourage the growth of formal credit (direct or indirect) for agricultural value chains. NIRSAL is dedicated to providing credit risk guarantees associated with agricultural business value chains. Lending can be secured against loss by purchasing a "Credit Risk Guarantee" product from NIRSAL PLC over the life of an underlying loan or credit contract.</p>	This will take place after completion of a proper needs assessment and mapping of key actors in the rice value chain in Nigeria.

table continues next page

Table 1 Pilot Implementation Plan: Who, What, How, and When?
(Continued)

Who?	What?	How?	When?
Financial institutions (governmental and nongovernmental)	<ul style="list-style-type: none"> • Providing soft loans to agribusinesses and smallholder farmers and cooperatives • Providing capacity-building training to improve financial and credit management of clients 	<p>MFIs such as AB Microfinance Bank Nigeria will provide customized products and services like inventory microcredit that encourage the use of movable assets such as inventory as collateral to access credit facilities' financial services.</p> <p>Micro Finance Institutions will develop credit agreements that understand and accommodate the borrowers' capacity to repay loans (for example, providing bullet loan structures).</p> <p>Groups will be trained in financial literacy, financial management, and skills development for entrepreneurship and agricultural productivity. Capacity-building support to the state and local government staffs should focus on training related to group formation and management, data collection and reporting, rural business plans, and innovative group-based delivery models such as bullet loan structures.</p>	This will take place after the government has developed the institutional implementation framework based on the findings of the needs assessment.
Private sector players	Developing the business strategy for the workability of the warehouse receipt system as well as the necessary business infrastructure for its implementation	<p>The private sector partners will develop a business case for the warehouse receipt system and explore possible funding.</p> <p>The business case will be backed up by the market opportunity that exists for agricultural storage warehousing in Nigeria. Apart from providing the necessary platform for the operation of the warehouse receipt system, warehousing could also significantly reduce postharvest losses and wastage of agricultural produce, currently estimated at about 40 percent of total production in Nigeria.</p>	This will take place after the government has developed the institutional implementation framework based on the findings of the needs assessment.
Smallholder farmers and cooperatives, traders, and processors	1. Organizing of established groups with aligned commercial and development objectives	1. Smallholder farms will form cooperatives and other groups. The formation of organized groups of producers and processors should include specific attention to women's and youth groups. There will also be clear eligibility criteria to select groups and organizations, including, among others, the size of group members' land and the processing capacity of small-scale rice processors. Good governance, social inclusion, and participation will be considered as criteria for selecting participating organizations where the solution will be implemented. In addition, other attributes of the farmers' groups will be investigated, including funding sources, income levels, and types of assistance received in the past.	1. Some of these groups are already established but have very limited access to financial products and services tailored to meet their unique needs.

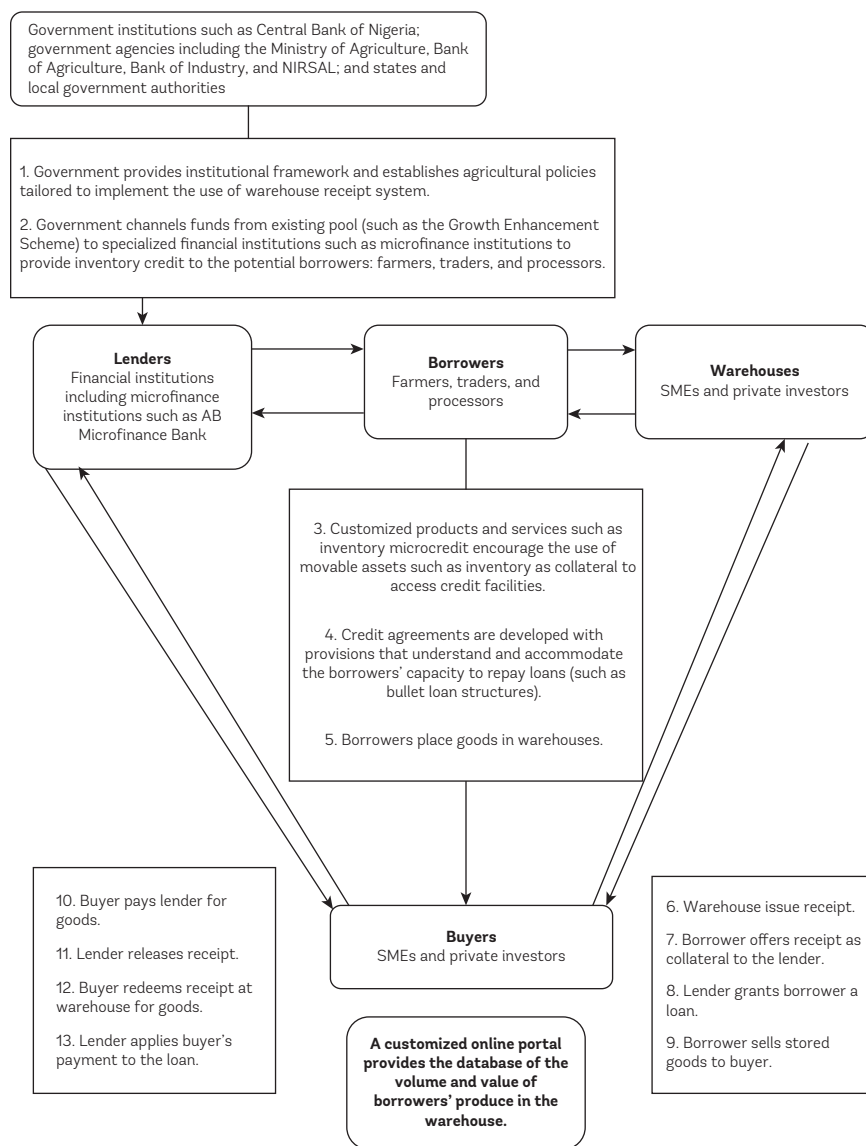
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Table 1 Pilot Implementation Plan: Who, What, How, and When?
(Continued)

Who?	What?	How?	When?
		The current operational levels of these groups regarding these attributes as well as other findings will support recommendations on the possible types of intervention to build institutional capacity based on specific needs assessment. Interventions should incentivize youth group participation, encourage women's groups to mobilize, and the enable technical assistance delivery through organized grassroots NGOs and community-based organizations for effective participation of the more-relevant farmer groups in the rice value chains.	
	2. Linking of the groups with reputable MFIs that have the capacity to support them in accessing finance, using inventory as collateral	2. These cooperatives will start off as savings and loans associations, and after cycles of demonstrated borrowing and loan repayments, will go on to open cooperative and small group accounts with MFIs such as GUFAX Bank (with a strong track record in small-scale agricultural lending) that could possibly participate as lenders under the proposed inventory credit scheme.	2. This will take place when the funds are released based on signed credit agreements with the lenders.
	3. Producing high-quality, competitively priced agricultural commodities (in this case, rice) that can be used as collateral to access loans and acquire better agro-inputs and services to improve production	3. To employ modern farming techniques and practices, these cooperatives will receive pre-season, in-season, and postharvest training to strengthen their ability to increase productivity of high-quality agricultural commodities that can be used to access finance to generate more income. The training programs will include farm site selection; land preparation; sowing, transplanting, and broadcasting; fertilizer application; weeding; pesticide application; and harvesting. Demonstration plots will be established, and extension agents will provide practical farm demonstrations using modern farming techniques and practices.	3. This will take place when the cooperatives have been organized and the needs assessments conducted.

a. A NIRSAL seed fund of ₦75 billion (75 billion naira) is to be used to operate its five pillars: risk sharing, technical assistance, insurance, bank rating, and incentives (NIRSAL 2014). Stakeholders such as the Federal Ministries, Departments and Agencies, States, and Third parties (domestic and foreign, government and private) can coinvest in the fund.

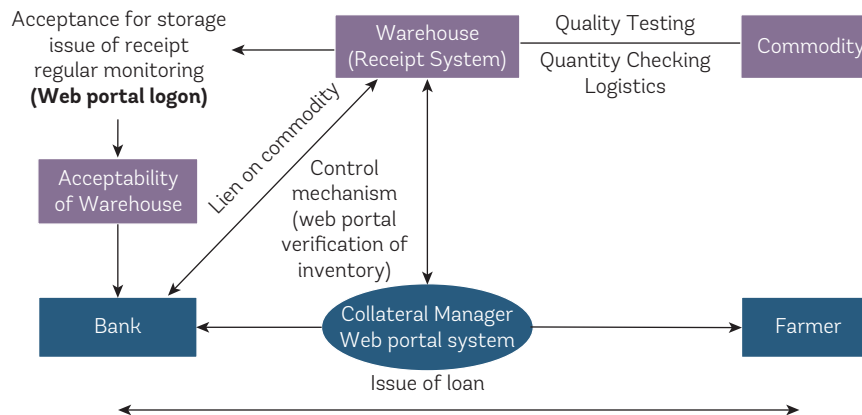
Figure 4 Proposed Operational Model for Warehouse Receipt Financing System



Customized Online Portal for Warehouse Receipt System

The web portal system will be designed with flexibility to address the time that banks or lenders need to perform spot checks in assessing the borrowers for a loan facility. The lender will receive log-on credentials to access

Figure 5 Methodology of Receipt System and Portal



the portal and verify the warehouse receipt information as well as quality of the commodity stored in the warehouse. The methodology of the receipt system and portal is as follows (figure 5):

- The commodity deposited by the farmer will be checked against a list of standards and requirements to meet quality testing at an accredited warehouse.
- The warehouse manager will log this information on the portal at the time of storage. Examples of quality data to capture will include rice variety, harvesting date, grade, weight, and so on. Nonquality parameters include location, monetary value of the rice based on its prevailing price, date of storage, and number of bags.
- The warehouse receipt issued to the farmer will be captured and uploaded on the web portal to enhance physical verification and authenticity by lender or buyer.

Expected Impact

OUR SOLUTION PROVIDES A PRACTICAL, scalable new mechanism for improving access to tailor-made microcredit services for smallholder rice farmers, traders, and processors as well as related SMEs in Nigeria for financing. It also provides access to inputs and supplies as well as to other investment initiatives to improve their livelihoods.

Moreover, our proposed solution has definite potential to open up access to remunerative markets, enhance liquidity in the Nigerian rice value chain, and reduce postharvest losses of smallholder rice farmers.

Comparable Examples

WAREHOUSE RECEIPT FINANCE is used widely in Africa - from Egypt to Zambia, from Liberia to the Sudan - and in all parts of the supply chain, for commodities as well as for manufactured products. In Tanzania, for example, after the warehouse receipt system was introduced, farm gate prices increased, leading to an immediate and positive impact on farmers' income. The system enabled farmers to improve the quality and increase the quantity of their produce and to access financial services and loans.

Generally, warehouse receipt finance is based on a system of field warehouses, mostly at ports (for international trade) but also inland. The financiers include local, regional, and international banks, and the clients include local, regional, and international traders, cooperatives, processors, distributors, and manufacturers. Both local and international collateral management companies are active. Apart from rice, warehouse receipt finance has been successfully implemented for a wide range of commodities and products such as cocoa, coffee, sesame seeds, tea, fish, logs and timber, petroleum products, and vegetable oil.

Potential Challenges

POTENTIAL CHALLENGES TO THE IMPLEMENTATION of the warehouse finance receipt system and proposed mitigation measures are discussed in the table 2. To ensure a smooth and effective implementation, tackling government bureaucracy and possible non-acceptance of the financing solution by financial institutions seem to be key priorities that could lay a foundation for a fairly easy resolution of the other challenges. This is so because government bureaucracy could slow or completely hinder effective implementation while the non participation of financial institutions translates to the absence of a platform to disburse credit to the small holder rice farmers. However, the likelihood of these is significantly reduced by our proposed mitigation strategies.

Gender Mainstreaming Strategy

WOMEN CONSTITUTE MORE THE VAST MAJORITY of smallholder rice farmers in Nigeria and, as discussed earlier, are constrained by issues such as discriminatory land tenure system, lack of collateral, and its attendant lack of access to capital. In response, our solution will integrate adoption of the

Table 2 Potential Challenges to Warehouse Receipt Finance and Proposed Mitigation Measures

Challenge	Mitigation measure
Inconsistency in policy formulation	The Nigerian government has, to a large extent, followed through on key policies. In the event of a drastic policy shift or change, civil society organizations could raise the necessary awareness and pressure the government to “stay the course.”
Government bureaucracy	The main government institutions involved in our model have proven over time to be more efficient at project implementation and delivering on their objectives than other government departments and agencies. Development partners with keen interest in the rice value chain could also help facilitate timely implementation, leveraging their influence with the government.
Nonacceptance by financial institutions	The proposed credit guarantee scheme in our model should allay the fears of participating financial institutions on the potential for default. Government policy will also help ensure compliance.
Cost of funds	Our model proposes soft loans, which will offer flexible payment terms at below-market rates affordable to smallholder farmers.
Security of warehoused commodities and products	Security concerns can be mitigated by the engagement of experienced warehouse practitioners with strong track records in providing warehousing services or facilities. These include Africa Exchange Holdings (AFEX), which is already in talks with the Nigerian government to establish warehouses across the country. Warehouses will also be insured by reputable insurance companies.
Default risk by small-scale farmer cooperatives	Cooperatives left to their own devices, create checks and balances to reduce or prevent outright defaults, but in such cases the credit guarantee scheme reduces the lenders' risk of exposure. Lenders will also build the cooperatives' capacity regarding proper financial and credit management to address this risk.
The challenge in engaging a reputable company to develop and manage the warehouse receipt system portal	Due diligence will be carried out during selection of the company. Upon selection, a stringent contract will be signed with clear roles, responsibilities, and sanctions in carrying out tasks.
Sluggish system with possible time-out issues due to low bandwidth to accommodate high traffic	High bandwidth will be provided to accommodate high traffic on the portal.
System hacking	Back-end access to the portal will be restricted to a trusted web developer. State-of-the-art firewalls and security will be constantly updated.

Gender Action Learning System (GALS), a community-led empowerment methodology to address gender related issues important to the effectiveness of development (Mayoux 2014). GALS brings women and men together for individual life and livelihood planning; collective action and gender advocacy for change and institutional awareness raising; and promotion of equal power relationships with small holder farmers, service providers, the private sector and government bodies.

GALS will be incorporated all through the implementation stages to ensure that gender mainstreaming is well accounted for. It will be delivered through training sessions (by GALS consultants) for relevant stakeholders in our implementation plan - government agencies, private sector, civil society and the small holder farmers.

We expect that participating stakeholders see the challenges posed by gender inequality and use their respective roles in project implementation to help in addressing it.

GALS consists of the following:

- A set of principles related to gender justice, participation, and leadership
- A series of visual diagramming tools for visioning, analysis, change planning, and tracking by individuals, households, stakeholder groups, or in multistakeholder settings
- Peer learning mechanisms and structures for ongoing action learning in communities
- Mechanisms to sustainably integrate GALS in organizations or interventions such as financial services, business development services, and agricultural extension

GALS is designed as a complementary methodology and can be integrated in various economic development interventions. In the context of value chain development, it would involve, first and foremost, development of gender specific action learning skills of vulnerable stakeholder groups in the value chain, skills that enable them to identify and implement sustainable strategies to increase incomes, resources, economic choices, and negotiation power. Second, the use of GALS would engage the skills, energies, and resources of the more-powerful private sector and institutional stakeholders in the value chain to change gender inequalities, based on a clear human rights and business case, by promoting collaboration and negotiation of win-win strategies.

The GALS process starts with creating community ownership and action priorities for gender justice through entry-point events with community members and the professional staff of local service providers.

The methodology then takes participants through four stages, all of which are participatory and depend on the use of visual, rather than written, material. This makes it ideal for inclusive, effective joint analysis and planning by both literate and nonliterate participants. The stages are as follows:

1. Preliminary value-chain mapping of gender issues and power relations
2. Participatory action research with vulnerable stakeholder groups to identify the poverty and gender issues at each level, identify and implement immediate short-term change strategies, and strengthen collaboration and peer sharing
3. Identification, planning, and negotiation of multistakeholder win-win strategies, involving the more-powerful stakeholders
4. Promotion of sustainable action learning processes, including peer up-scaling (expanding the context in which GALS is used) to include policy advocacy, and ongoing change planning in existing platforms

GALS has proved effective in creating beneficial collaborations between marginalized communities and businesses, service providers, government agencies, and traditional authorities, as well as in changing gender relations concerning property rights, decision making, and violence. It has been piloted or implemented in more than 11 countries in Africa, Asia, and Latin America (Mayoux 2014).

Impact Measurement

OUR PROPOSAL HAS DETAILED how the warehouse receipt system would facilitate access to finance for smallholder rice farmers and other players in the rice value chain in Nigeria by means of inventory credit. However, it is incomplete without a discussion of the impact measurement of this PPP intervention, which will be performed based on a scientific and proven approach using propensity score matching. This statistical method matches individuals from a large population of nonparticipants who are observationally similar with participants in terms of general characteristics (for example, sex, educational level, and marital status) that are not affected by the intervention (the inventory credit facility). Each target group member is matched with a similar control group member. The average difference in outcomes between the two groups is then compared to assess the impact of the intervention (for example, microfinance). Research factors of interest will include incomes, living standards, economic empowerment, and food security.

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CHAPTER 3

Decreasing Poverty in the Mining Communities of the World through the Empowerment of Communities in the Control of Mining Royalty Funds: An Application to the Peruvian Case

Team *OUTCOME* (Oportunidades de Desarrollo a Través del Canon Minero, Development Opportunities Supported by Mining Royalty Funds)

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Abstract

ALTHOUGH MINING GIVES GOVERNMENTS in many countries access to significant resources through taxes on the mining of minerals, governments often fail to invest such funds in projects aimed at the human development of their populations. Our proposal grounds itself in the case of Peru, in pursuit of a strategy that increases the effectiveness of how mining royalties are spent in satisfying the needs of the population. First, we propose the use of qualitative indicators to prioritize projects objectively. Subsequently, we focus on the involvement of an external agent of information and control given the task of informing the population of how local government actors are spending mining royalties. We then propose the idea of a project incubator that would serve to finance, implement, and monitor initiatives involving investments in infrastructure and capacity building. Last, should irregularities in the use of mining royalties be found, we propose a mechanism by which civil society may raise its complaint to the level of the National Comptroller enabling that office to investigate the validity of such claims. This would be possible through a link between the National Comptroller and the committees of vigilance and oversight of mining communities.

Problem and Context: Increased Mining Royalties Bringing Few Benefits for Mining Communities

SINCE THE MID-1990S, LARGE-SCALE mining has resulted in a substantial windfall for the Peruvian government via taxes paid by private sector entities for the mining of minerals. However, the government has had difficulty managing and spending tax revenues effectively. Consequently, in 2013, regional governments spent just 57 percent of the funds budgeted for investment projects (Hidalgo Suárez 2013). This has translated into the implementation of few public investment projects aimed at the human development of populations living in areas affected by the extraction of minerals. An investigation by CAF Development Bank of Latin America found that, between 2003 and 2007, municipalities receiving larger mining windfalls did not experience significant improvements in such performance indicators as the number of municipal or public health establishments or the number of beneficiaries of social organizations relative to municipalities where this source of income had not risen (Arreaza and Reuter 2012).

Even if the mining sector has been responsible for Peru's exceptional economic growth, it has also been the main contributor to social conflicts threatening the country's political stability, says author Jaime de Arellano, **associated with University of Sussex (in Development Studies)**. Tension between the central government's efforts to attract private investment and the will of communities to reject mining projects has led to conflicts that have discredited the central government in areas outside of the capital, he says (Arellano-Yanguas 2008). Consistent with the "natural resource curse," the Peruvian government has been unable to convert its mineral wealth into policies contributing to poverty reduction while also avoiding social conflict.

An interesting case is the Tintaya mining project in the province of Espinar, department of Cusco. Although the project has been operating for approximately 29 years, only recently, between 2007 and 2012, has it brought a substantial increase in mining royalties. Even following the increase, Espinar's most important projects to date have not been undertaken with funds derived from mining royalties, nor has the quality of life improved significantly for the residents of Espinar. Indeed, the areas farthest from the provincial capital continue to experience the same levels of poverty as before and find themselves still in a subsistence economy (Hidalgo Suárez 2013). For example, in 2009, 64.4 percent of Espinar's

residents were below the poverty line, with 33.3 percent living in extreme poverty compared with 51.1 percent and 20.7 percent living in poverty and extreme poverty, respectively, in the department of Cusco overall (INEI and UNFPA 2010).

We believe that the problem, as described above, results from a combination of factors, including but not limited to corruption of a portion of municipal authorities, inadequate oversight and control of municipal authorities, prioritization of physical infrastructure projects with little or no relevance to the population's real needs, lack of expertise in the project development and implementation, and lack of a coordinated work plan that links national goals with local ones.

With that being said, and given our experience working on development projects in both Peru and Bolivia, we believe in the importance of building the capacities of public administrators as well as community leaders to guarantee that mining royalties are spent on public investment projects that contribute to the human development of mining communities.

Strategy to Prioritize Mining Communities' Needs

Proposal Relevance and Innovation

We are aware of efforts such as the Extractive Industries Transparency Initiative (EITI), which proposes a global standard of transparency by which both governments and mining companies report to civil society on how mining royalties are spent. EITI creates a forum for debate and, at the same time, **attempts to foster trust between governments and local communities**. Many countries have implemented strategies and mechanisms to increase transparency or have joined initiatives such as the EITI. In spite of these countries' efforts, some of the same communities that receive the world's highest mining royalties are ironically those facing high poverty rates.¹

In the case of Peru, the adoption of EITI principles has been an important achievement, but mining populations will probably still have problems accessing information concerning how royalties are spent, voicing opinions as to how they should be spent, and registering complaints for irresponsible municipal spending behaviour. We see an unmet need for a mechanism to verify whether royalties are being spent efficiently and effectively, yet the

¹ For more information about the Extractive Industries Transparency Initiative (EITI), see its website: <https://eiti.org>.

problem likely goes beyond transparency. We must also ask whether royalties are actually being invested in projects that address mining communities' high-priority needs.

Our proposal seeks to create a four-pronged global strategy:

- *Channel the investment of mining royalties* into projects addressing the local communities' most pressing needs.
- *Designate an external agent of information and control* as a mediator between the local government and communities to ensure that civil society is both informed about and participates actively in the control of public spending. The agent would function to strengthen the relationship between local governments, civil society, and mining companies.
- *Establish a project incubator*, which would shape initiatives from mining communities into projects by providing planning, financing, implementation, monitoring, and evaluation expertise.
- *Implement a system to enforce sanctions* against authorities who have violated regulations or misappropriated funds designated for development projects in mining communities.

To date, we are unaware of a system or strategy that combines these four elements, given that initiatives have generally focused more on issues such as transparency in public expenditures or citizen participation in the budgeting process. There is still a need to strengthen the formulation, implementation, and monitoring of development projects financed by royalties and especially to effectively control the utilization of royalties.

Implementation Plan

Our strategy calls for the involvement of five key actors: the central government; local governments; companies extracting nonrenewable resources; national or international nongovernmental organizations (NGOs) and multilateral institutions with knowledge of monitoring and transparency; and civil society.

Our proposal consists of four stages roughly corresponding to the four strategic elements described above: identify mining communities' needs for investment, designate an external agent as mediator, establish a project incubator, and enforce control and accountability.

Stage 1: Identify and prioritize mining communities' needs for investment. The first stage borrows from the Economic Decisional Information System Administration (SIDEA) developed by Spain's Public Expenditure Observatory, which uses qualitative indicators to compare the performance of municipalities whose populations share similar socioeconomic profiles (Luque 2013).

To develop an accurate system of indicators for comparison, it is necessary to understand that each mining population has different potential opportunities and economic needs. At the same time, in spite of the diversity of contexts, we can group populations that share similar characteristics, yielding a baseline of what should be considered “normal” or “ideal.” From there, we can select indicators that will allow us to measure the degree of deviation of a given standard relative to a given threshold. **Use of such indicators helps to measure** of how effectively a municipality’s projects address its most important needs and assists in setting priorities to be addressed by future development projects.

To identify communities’ strengths and needs, we suggest a revision of the Municipal Development Plan advanced by the Institute for Peruvian Studies (IEP), which presents an integral diagnostic of municipalities.² As a complement, we suggest the use of the United Nations’ (UN) State Density Index, consisting of a basket of basic public services needed to achieve a satisfactory level of human development (UNDP 2009). Together, these sources provide a panorama of the socioeconomic development measurements we seek in prioritizing development projects.

It is important to consider both sources, given that data present in one source may be absent from the other, and vice versa. The indicators chosen become qualitative upon taking into consideration a variety of information that may not necessarily be numerical. The information must be systematized to determine whether use of indicators from the Municipal Development Plan and the UN’s State Density Index is enough or whether it is necessary to develop new ones.

In particular, we propose the use of indicators to measure the quantity and quality of government-provided education, health, sanitation, and electricity in mining communities. For example, according to the Pan American Health Organization–World Health Organization standard, there should be 10 physicians per 10,000 inhabitants (UNDP 2009). It is also important to invest in education so that local people have the opportunity to access mining positions that require technical knowledge. Furthermore, at a certain point, mining will no longer be the driver of economic growth. Consequently, we suggest using an indicator such as secondary school attendance for teenagers between 12 and 16 years old. The same rationale would apply to indicators for access to drinking water, drainage systems, and electricity. These indicators should be used to measure the degree to which a given municipality is “developed” with respect to other mining communities.

² See the “Plan de desarrollo municipal concertado” on the IEP website: http://www.municipioaldia.com/index.php?fp_cont=987#.VMu3hJ2G98N.

Notwithstanding, we suggest the use of indicators that do not require a significant incremental investment of time and money but rather those that can be adapted from information and data that already exist. In the case of countries that lack national indexes comparable to the UN State Density Index, it may be possible to use **similar** indexes and indicators such as the Global Multidimensional Poverty Index, the Human Development Index, or Unsatisfied Basic Needs data from the national census.³

All of the above—the collection, validation, and systematization of information as well as the selection and development of indicators—should be completed by an NGO knowledgeable in the areas of measurement and public administration. (The Stage 2 description discusses this agent in further detail.)

Once the baseline for a variety of human development indicators has been established, it will be easier to analyze the degree to which potential opportunities and needs have been addressed in a given mining community as well as how effectively the mining royalties have been spent. This analysis can be achieved by noting the deviation of a given indicator with respect to the threshold for the group to which a given community is being compared. If a community falls below the baseline for a specified indicator, it may warrant a focus on improving this indicator.

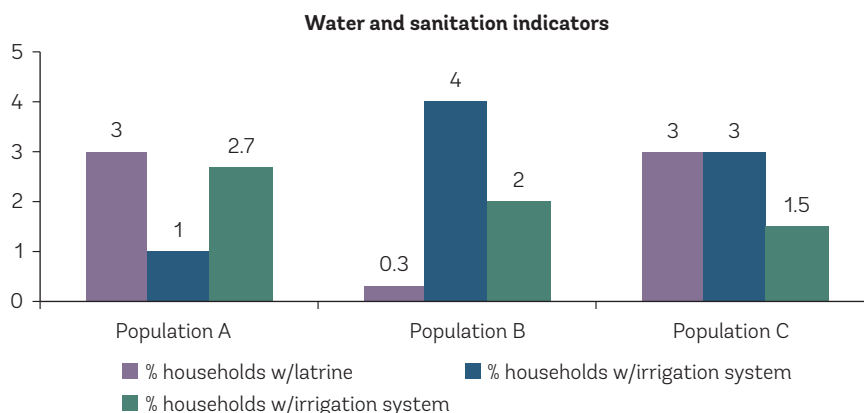
Figure 1 depicts how this comparison would work. In this example, a specific need (water and sanitation) has been selected, whose indicators have been designated as the percentages of households with a latrine, with access to drinkable water, and with an irrigation system. As the figure illustrates, each population should vary with respect to water and sanitation priorities. Therefore, this exercise is useful as each community begins to consider how to spend mining royalties and whether spending should go toward water and sanitation needs.

³ The Multidimensional Poverty Index (MPI) seeks to create an index that takes into account “several factors that constitute poor people’s experience of deprivation—such as poor health, lack of education, inadequate living standard, lack of income (as one of several factors considered), disempowerment, poor quality of work and threat from violence.” For more information, see <http://www.ophi.org.uk/policy/multidimensional-poverty-index/>.

The Human Development Index (HDI) is “a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living.” It is less comprehensive than the MPI; furthermore, information is more frequently available to calculate the HDI for a wider variety of countries than is available for calculating the MPI. For more information, see <http://hdr.undp.org/en/content/human-development-index-hdi>.

The Population and Housing Census (most recently implemented in 2007 in Peru) details the percentage of households in a given area with unsatisfied basic needs in the following areas: housing, household density, water, sanitation, education, electricity, and household consumption capacity. For more details, see <http://www.inei.gob.pe/>.

Figure 1 Sample Comparison of Community Needs



At the same time, it is important to take into account the community members' own perspectives regarding the projects that are most needed to improve quality of life. As a result, in the process of defining priority areas, we propose the use of a questionnaire, focus groups, and personal interviews to supplement the use of qualitative indicators. Frequently, information about mining communities is scarce. This process of rectifying qualitative indicators with what is learned from personal engagement with the population will serve to formulate a plan for the use of mining royalties that gives the community the projects it truly wants, thereby avoiding the imposition of projects it does not want.

We also adopt the recommendation of the nonprofit organization Ciudadanos al Día (Citizens Day) to require municipalities to prepare and deliver a baseline, an investment plan, and a strategic plan to access the portion of mining royalties due to them (Boza 2006).

Stage 2: Designate an external agent of information and monitoring. The second stage involves the participation of an external agent of information and monitoring that works full time in collaboration with local government authorities. This agent would represent a specified institution or NGO and would have access to all of the information related to local government expenditures and investment. One such institution, in the case of Peru, could be a nonprofit entity such as Ciudadanos al Día (CAD), which contributes “tools in the improvement of administration in the public sector”; acts as “a source of reliable information on topics of national interest”; “provides credible information to opinion makers”; and “facilitates access to relevant information for

public sector decision making.”⁴ If an organization of this type does not exist, a multilateral organization like the World Bank or the UN could help create such an organization, with the intention of giving it full autonomy after an agreed-upon period of time.

The selection of the NGO to train the external agent charged with forming a bridge between the communities and local authorities would entail the following process: First, the terms of reference would be drafted, describing the profile of the institution sought. Next, the selection process would begin, after which bids would be accepted from qualified institutions. The profile and experience of each institution would be evaluated, and the institution that best meets the requirements and suggests ways to improve the initial terms of reference would be selected.

The external agent’s work includes informing the population of how mining royalties are being spent, at all stages, in an easy-to-understand way and in the native language to ensure that authorities and community members understand clearly the projects to be developed. The agent will be trained in strategies to communicate with the population to gain its trust. This information will be reinforced through its diffusion in the media (such as radio, television, and newspapers), ensuring that it is accessible and easy to understand.

In the spirit of active participation on the part of the population, the external agent will involve community leaders and neighborhood groups in ways that enable them to participate in the dissemination of information on development projects. In the World Bank’s evaluation of projects that use a community-driven development strategy, empirically, facilitators play an important role in mobilizing communities and marginalized groups as well as in raising awareness and community participation in the development process (Wong 2012). At the same time, the intent is that—after a certain amount of time has passed and the communities have internalized the activities promoted by the external agent in the development, promotion, and supervision of projects—the external agent can gradually devolve responsibilities to the community. Similarly, we hope to empower leaders and the population as a whole.

The external agent will not respond to any private interest, either of the central government or of the mining companies. At the same time, with the backing and support of a team with expertise in the technical aspects of project formulation and implementation, if he or she identifies weaknesses in local government institutions on issues relating to management,

⁴ “Mission and Vision,” Ciudadanos Al Día (Citizens Day), accessed March 21, 2015, <http://www.ciudadanosaldia.org/sobre-cad/mision-y-vision.html>.

monitoring, transparency, and the like, the agent may provide technical training to municipal authorities.

Research for the **bachelor's** thesis by one of our team members found that, in Peru, the relationship between civil society and the mayor is frequently distant; consequently, monitoring of municipalities' work is often infrequent (Robles 2012). The relationship between community authorities and the mayor is one of subordination **such that constituents have little contact with or influence on their mayor**. Unsurprisingly, community authorities wield little power relative to the mayor's decisional authority. As a result, informal monitoring is uncommon in Peru, and the idea of registering a complaint is frequently perceived as disrespectful. In this sense, collaboration between the mayor and his or her constituency is rare, often leading the population to attribute all responsibilities to the mining companies rather than considering the mayor's role in how mining royalties are spent on development projects. It is this type of case in which the idea of an external agent becomes a strategic solution, being that he or she will serve as a bridge between the community and local authorities.

Stage 3: Establish a development-oriented project incubator. We believe that the main problem in Peru is the inability to manage and monitor how mining royalties are spent at the local level. In many municipalities, proposals are scarce and the population is not proactive. Consequently, funds are frequently wasted on projects irrelevant to the populations' needs. Furthermore, the drafting of project proposals is frequently outsourced—taking time, misusing valuable resources, and failing to consider the unique needs of mining communities.

Consequently, we propose that the resources derived from mining royalties that are currently spent on project management be redirected to the implementation of a project incubator. The incubator will consist of the external agent, representatives from the community, and the official responsible for economic development in the municipality. The incubator will benefit from the input of a group of advisors with expertise in the management of projects.

The project incubator aims to allow the project ideas determined during Stage 2 to be planned in detail, financed, implemented, monitored during implementation, and evaluated *ex post*. To that end, the incubator would focus on three principal activities:

- *Supporting the formulation, monitoring, and tracking of projects.* The external agent, together with the municipal official responsible for economic development as well as advisors, will support community leaders in the development of project proposals based on their

initiatives. In this way, both the feasibility and the administrative capacity of the proposal will be addressed directly with the municipality.

- *Training public administrators in the formulation and administration of projects.* Experts in the formulation of projects, with the help of the local NGO responsible for assigning the external agent to the community, will develop training workshops for municipal authorities on the drafting and administration of projects. In this way, we seek to strengthen both the technical abilities and the social commitment of administrators in their work on behalf of the community.
- *Providing continuing education for social leaders.* At the same time, we seek to empower and develop the ability of community leaders to act as agents of change within the community by way of continuing education workshops. This task will be charged to the external agent with the assistance of the related NGO.

These activities will result in a repository or bank of project profiles in which projects that have been both planned and implemented can be accessed by all municipalities, whether they are mining communities or not. In this way, we hope to avoid duplication of efforts by leveraging the experiences of municipalities with similar conditions or characteristics. We also hope that incubator activities will contribute to the formation of community leaders and committed, well-trained public administrators.

Currently, under Peruvian law, resources derived from mining royalties can be used to finance investments oriented toward the provision of public services of universal access (such as irrigation, sanitation, and electricity). We propose that municipalities be allowed to spend mining royalties not only on physical infrastructure projects but also on the development of skills necessary to take full advantage of the physical infrastructure built with mining royalties. For example, as part of its development intervention strategy, **the subsectoral irrigation program in Peru worked with a committee of users and beneficiary farmers to define best strategies for their development.**

Stage 4: Enforce measures for control and accountability. Stage 4 applies if civil society finds irregularities, acts of corruption, or misappropriation of funds by the local government or the mining companies. In these cases, community boards outside the realm of local government, whose members are the authorities of different communities, will take action. Community board authorities will constitute an oversight committee. Both the external agent and the community board will meet frequently throughout the year to examine the collected information in detail. If it finds an irregularity, the oversight committee will have the power to raise its complaint to the **Comptroller General's Office** or a similar body

concerned with transparency, so that a central government entity may investigate the civil or criminal liability of the offenders.

In the diagnostic of the problem, we realized that corruption within local government could potentially be rooted in the lack of an incentive to spend mining royalties on projects benefiting the community. Bearing this in mind, we propose something similar to the Performance Stimulus Fund (FED) of Peru's Ministry of Development and Social Inclusion. Resources received by way of the FED may be used to buy goods, services, and capital goods for early childhood development programs based on the level of compliance with previous commitments.⁵ We propose to reward the municipality with an increase in its portion of royalties to be applied to community projects if there is no incidence of corruption or waste on projects that do not contribute to local development. At the same time, in the case of corruption or waste, the municipality will lose access to funds from mining royalties until the situation is remedied. One way of achieving this is by way of sequential disbursements from the mining royalty fund conditional on good behavior (Boza 2006).

Another important issue related to corruption and accountability has to do with the prevention of fund misappropriation. For this, we recommend that the Comptroller General initiate an annual cycle of oversight committee training on this topic, so that committees have the knowledge necessary to **anticipate, identify, and prevent corruption cases regarding the use of their public resources.**

Expected Impact

In line with our proposal's overall objective, we expect that the approach outlined here will help to improve the quality of life of individuals living in rural mining communities by channeling the investment of mining royalties into projects that are sustainable and respond to the populations' most urgent needs.

More specifically, this approach would advance the following objectives:

1. Promote transparency in mining royalty expenditures, involving the mining community population in the management of its resources by way of a new system of transparent management that leverages the participation and knowledge of all actors
2. Diagnose the needs of mining towns on the basis of qualitative indicators that take into consideration unique socioeconomic conditions, needs, and

⁵ "Creación Del FED" ("Creation of the Performance Stimulus Fund"), Ministry of Development and Social Inclusion, accessed March 21, 2015, <http://www.midis.gob.pe/index.php/es/fed-creacion>.

potential opportunities, attending most urgently to the most vulnerable populations within communities

3. Facilitate the access of mining populations to relevant information for decision making and enable their active participation in promotion of project initiatives by way of an external agent
4. Ensure the viability, planning, implementation, and monitoring of development projects while also providing capacity-building services to social leaders and public administrators

Comparable Examples

The first stage leverages the experience of Spain's Economic Decisional Information System Administration (SIDEA), which has its foundation in the idea that expenditures should be efficient, objective, prioritized, transparent, sustainable, and socially admissible. Based on a comparative analysis of government entities that have homogenous characteristics, the Spanish system establishes baselines for the indicators of its entities. A deviation of one indicator with respect to "normal" behavior equates to either efficient or inefficient management. The key advantage of this system is its ability to contribute to objective decision making (Luque 2013). In the case of Peru, we have decided to apply this concept to a set of social qualitative indicators to identify areas in which a given municipality is underperforming.

The second stage stems from Bolivia's experience under the 1994 Law of Popular Participation, which established territorial grassroots organizations (OTBs) and oversight committees to channel community participation in the formulation of the Annual Operating Plan (POA) as well as the Municipal Development Plan (PDM). In the Bolivian municipality of Vallegrande, an NGO mobilized 23 local organizations to implement the POA and PDM drafting processes in 2003/04. The NGO took responsibility for collecting information on community needs as well as on the projects they wanted through participatory workshops and an institutional fair. They used brief, easy-to-understand documents with the public, and local government officials made themselves available to answer questions from the public.

In Vallegrande, the trend in poverty reduction since 1994 appears to be correlated with higher rates of community involvement. Nevertheless, following the participative process for 2003/04, elites were able to manipulate the budget for their own benefit; **Subsequently**, the oversight committees overreached and alienated some municipal officials. Granted, it is difficult to prevent situations like this, but we believe that the control and

accountability measures described under Stage 4 will equip the population with a mechanism by which it can prevent the municipality from implementing projects that do not contribute to an improved quality of life.

Potential Challenges

1. *Perception of the external agent as a threat to local government and mining companies*

Approach: Clarify the presence of the external agent as not just an informant. Highlight his or her role of providing continuous support to the municipality via technical training for local government authorities related to the projects using mining royalty funds (particularly regarding elaboration and development of project profiles **for the incubator**). At the same time, make it clear that his or her presence is beneficial for mining companies given that the agent is there to relieve much of the burden that frequently falls on the private sector, avoiding the unrest that can lead to social conflict.

2. *Lack of trust in the external agent on the part of the population, leading to low participation in informational meetings*

Approach: Present the agent in all communities, explaining the agent's functions and the benefits of his or her presence. The agent should be present in assemblies and meetings with local authorities before starting to assume functions officially. If possible, the external agent should come from the community itself or at least have some sort of connection to it. At the same time, the external agent is not to be imposed on the community from the outside; his or her role is to collaborate with the community so that it may play a larger role in the management of the economic resources derived from mining royalties.

3. *Difficulty in creating profiles of projects for the incubator*

Approach: Create a committee of experts that carries out periodic and continuing training sessions for designated mining populations. Similarly, we propose the establishment of a repository for project profiles that all municipalities may access, whether they are mining communities or not.

4. *Incidence of irregularities, corruption, or misappropriation of the budget*

Approach: Create oversight committees to serve in a mediating role. Highlight the importance of proceeding with evidence and, with the help of the external agent, make the violation public through the media. Go to the **Comptroller General's Office** to enforce the penalty.

5. Local elite capture of the expenditure of mining royalties

Approach: The **oversight** committee will have an equitable representation of community members so that no one group has the power to appropriate mining royalty funds. By way of the external agent, community participation will be encouraged in all processes related to the spending of mining royalties so that the budgeting process is truly transparent.

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CHAPTER 4

Development Impact Bonds— The Power of Participatory Development in Creating Sustainable Market Demand: A Case Study of Open Fires and Inefficient Cookstoves

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Abstract

MILLIONS OF PEOPLE IN DEVELOPING COUNTRIES use open fires and inefficient cookstoves for meal preparation, resulting in the production of toxic smoke that kills over 4 million people per year. Access to clean cookstove technology for citizens at the bottom of the economic pyramid can be directly improved through a participatory model of Development Impact Bonds (DIBs). This proposed bond model enhances the current structure of DIBs financially, while also building in an innovative component that supports local training, education, and knowledge sharing.

The solution uses existing capital dedicated to the international development space by philanthropic institutions or nongovernmental organizations (NGOs) to secure and leverage additional investment from the private sector. With mitigated risk, investors seeking long-term holdings will see high rates of return on their unsecured capital commitment, funded by the savings and economic gains realized by governments and NGOs from the impacts of investment. Coupon payments—subject to the predetermined impact outcome being met—will occur at short- and medium-term time junctures, while a final coupon payment and principal repayment will occur at bond maturation. We propose 5-, 10-, and 15-year junctures for the realization of health, environmental, and economic impacts to be achieved from the increased access to clean cookstoves.

Unlike previous versions of DIBs, our model not only provides enhanced financial access to clean cookstove technology, but also furnishes the resources

to train local individuals on the maintenance, distribution, and sales of the cookstoves. This structure enables adoption to occur in a culturally sensitive, sustainable way that empowers citizen involvement and adoption. In addition, the model funds the training of local NGO workers on impact measurement to demonstrate to investors the impact of their investment.

Problem and Context: Open Fires and Inefficient Cookstoves

ACCESS TO QUALITY TECHNOLOGIES AND SERVICES in developing countries for people at the bottom of the economic pyramid is severely limited by lack of access to capital. Furthermore, historical instances of traditional aid show that the sustainability of investment and ownership from community members is often limited when communities are simply given technology or financing to resolve development issues (Smithers 2011). Although the issue of clean cookstoves has been on the development radar for some years now, a wide-scale, locally integrative model of sustainable access and adoption has not yet been achieved.

In many developing countries, millions of people lack access to power and basic technology, forcing the use of open fires and inefficient cookstoves for meal preparation. The primary detriment of these cooking methods is the toxic smoke produced, to which over 4 million deaths annually can be attributed—or one death every eight seconds.¹ Beyond the negative health externalities, these cookstoves are a significant contributor to climate change, because the burning of solid fuels releases toxic pollutants, adding to the growing amount of black carbon in our atmosphere. Residential solid-fuel burning currently makes up 25 percent of black carbon emissions internationally, with 84 percent of those emissions stemming from households in developing nations.²

Fortunately, clean technology exists to resolve this issue, in the form of fuel-efficient cookstoves. However, the affected populations largely lack the financial resources and distributional access to this life-changing technology. Furthermore, many families have an insufficient understanding of the health risks of current practices, limiting the implicit desire to change habits and tools. Combined, these two factors limit adoption and scalability of transformative clean technology in the developing world.

¹ Data from “Impact Areas: Environment,” Global Alliance for Clean Cookstoves, accessed Jan. 24, 2015, <http://cleancookstoves.org/impact-areas/>.

² Data from “Impact Areas: Health,” Global Alliance for Clean Cookstoves, accessed Jan. 24, 2015, <http://cleancookstoves.org/impact-areas/>.

Studies and past interventions have shown that free distribution of this type of technology does not yield sustainable or successful adoption practices in local populations because there is little pride of ownership, understanding of purpose, or knowledge of how to repair the technology in the event of breakdowns (Smithers 2011). Alternatively, market-based solutions that facilitate consumer access to clean technology and that integrate the needs of individualized, local contexts prove to be a much more viable, scalable option in enabling the widespread adoption of technology (Smithers 2011). Our participatory model of Development Impact Bonds (DIBs) has great potential to accelerate the expansion of market-based development and create scalable change.

Solution: Development Impact Bonds for Access Clean Cookstoves

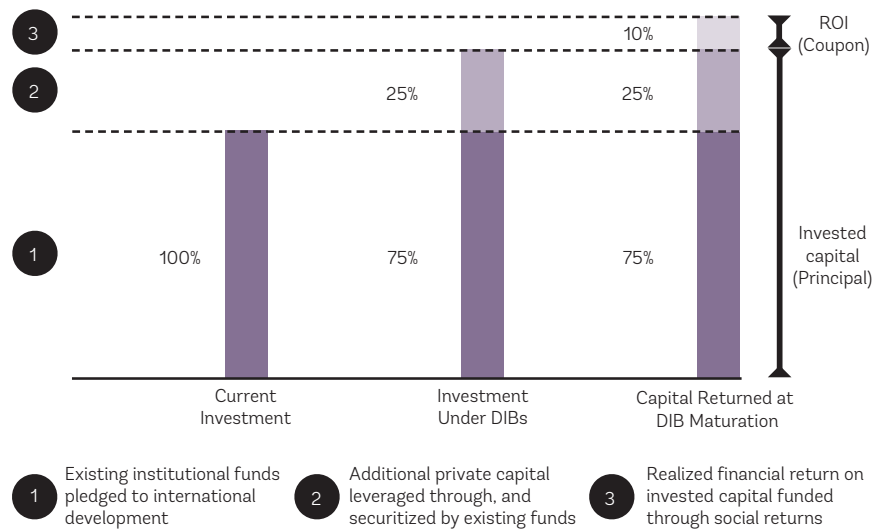
SIMILAR TO SOCIAL IMPACT BONDS (SIBs), DIBs use invested capital to fund improved social outcomes surrounding a particular development issue and use the government's (or NGO's) long-term savings to repay investors their principal and return. Although our proposed investment tool is applicable to a range of development issues, this proposal examines its application to the provision of clean cookstoves. Beginning with an overview of the proposed finance- and implementation-based innovations, the paper discusses in detail our model's application to the provision of clean cookstoves before concluding with the bond model's potential for use in other development contexts.

Innovation of Approach

The key financial innovation of the proposed DIB is the use of existing public funds committed to international development to leverage additional capital from the private markets that would otherwise not be invested in the space. As Figure 1 illustrates, funds committed from existing development, philanthropic, or governmental institutions will be used to secure 75 percent of the total bond issue. The remaining 25 percent of total investment capital will be the funds at risk from private investors and the amount on which they will base their returns. This leveraging method not only attracts new capital to the development space but also has the potential to provide high returns to private investors. As shown in figure 1, regardless of whether impact is achieved, investors will see 75 percent of the capital returned at bond maturation.

A major benefit of this tiered investment structure is that it incentivizes the private market to invest in long-term payouts or results, rather than

Figure 1 Leveraging New Capital through Development Impact Bonds



short-term deliverables, by offering higher and additional returns in the long term. Short-, medium-, and long-term time junctures (intervals dependent on specific investment) will be set for coupon payments and principal repayment to occur. Coupon payments will occur at all three junctures, contingent on the investment having achieved predetermined, contractual social outcome metrics (such as improved health or environmental outcomes). Principal repayment will occur at maturation at the third time interval.

Moreover—again variable to the investment—our DIB model stresses community participation, training, and education to ensure high success rates of desired social outcomes. As part of the clean cookstove investment, local residents would receive education on how to properly use, maintain, and repair clean cookstoves. Local understanding of how the technology works would enable further innovation and development of other locally oriented initiatives. Additionally, the provision of training on stove sales and distribution would allow local residents to fully integrate into the adoption process as market agents and ensure that the model is locally adapted. This structure of involvement promotes greater program sustainability, because local residents can build on preexisting distribution networks of other products to facilitate the spread of this new technology—a critical component given that a significant barrier has been lack of proper distribution channels.

Our DIB will also provide local residents, businesses, and governments with the resources and knowledge necessary to collect and use data, thus enabling the investors' money to be spent more efficiently. By working toward a structure of locally run impact measurement, this model promotes the development of local knowledge and information sharing across borders in order to promote a dialogue surrounding best practices. Without such training and resources, programs in the developing world cannot develop the metrics or measurement processes to determine whether goals are being met and to what scale.

Implementation Plan

Financing. As explained above, our DIB framework will use existing philanthropic, public, or foundation capital to leverage new, private capital from sources currently not investing in the international development space. These new firms, funds, or individuals entering the “impact investing” market will seek both financial and social returns, as well as a degree of risk mitigation in this new market. Drawing parallels to the SIB market in the United States, an existing donor or grantee will be sought to secure private investments. For example, the Goldman Sachs Urban Investment Group funded SIBs to combat recidivism among inmates released from the Rikers Island Correctional Facility in New York City. Bloomberg Philanthropies secured 75 percent of the total investment in case the anticipated results of the funded programming were not achieved, and thus no repayment was needed from the City of New York (Olsen and Phillips 2012).

Mirroring this case, our proposal envisions social impact-related investment funds that would target new capital investors, including major banks, pension funds, life insurance companies, and university endowments (Cohen and Bannick 2014). These targeted institutions hold long-term assets (duration matching) and are mandated or pressured to invest in a socially responsible manner. The organizations or public institutions providing financial security for private investment will be those that currently invest capital in the international development sphere, such as the Bill and Melinda Gates Foundation and the Rockefeller Foundation. Risk can be further mitigated for private funds by distributing bonds in tranches and eventually pooling bonds for investment, with geographical and investment diversification, once a market is established.

Our model also involves the creation of a three-tiered bond, incentivizing both social and financial returns over the short, medium, and long terms. With each bond issuance focused on a unique development goal,

the timeline will vary depending on the basis of the stipulated impact outcomes. In the case of clean cookstoves, proposed intervals are set at 5, 10, and 15 years to balance both realized outcomes and desired tenure of investment by investors. The repayment structure will be such that the principal and coupon will be repaid upon bond maturation in year 15, and returns (coupon payments) will be paid at the earlier valuation periods. Unique impact criteria will be set and evaluated at each juncture, enabling long-term impact and mitigating the risk in achieving impact by a single date. At each time interval, contractual payments based on achievement of predetermined impact metrics will originate from the governments' (and potentially the NGOs') long-term financial savings from either reduction of service needs (health care costs, environmental cleanup, and so on) or increased economic output related to the investment. Concurrently, if the impact metrics are achieved, the government or NGO will also place funds in the escrow account for principal repayment at maturation.

Applying this method to clean cookstoves, the savings from realized gains in improved health and environmental outcomes would be long term. Although a variety of metrics can be used, the initial 5-year coupon payment structure will be evaluated on the basis of achieving a benchmark of total stoves distributed and regularly used in targeted communities. The subsequent 10-year evaluation and 15-year maturation will evaluate the benefits from distribution through air quality improvement, reductions in chronic health conditions, and increases in economic productivity. See the "Expected Impact" section for more details on metrics and outcomes.

During the negotiation and formation of the DIB terms, the local governments and NGOs whose investments and expenses relate to the bond's impacts will contractually engage with the investors to establish principal and coupon payments, subject to impact performance. Payments would be based directly on the achievement of pre-determined impact benchmarks, rendering the engagement of the local population in data collection and result tracking essential to the independent impact evaluation process. See Box 1 for a hypothetical example.

Implementation of cookstove funding, distribution, and services.

The funds provided by private sector investors would directly subsidize clean cookstove technology that is currently out of financial reach for individuals at the bottom of the economic pyramid. Resources to buy the product would be channeled through NGOs, governmental organizations, or social enterprises depending on the country of implementation and any preexisting initiatives. For instance, in Haiti, India, Nepal, and Sudan, an organization called Prakti operates a business that designs, manufactures,

Box 1 A Theoretical Application of a Clean Cookstove DIB

Say the Bill and Melinda Gates Foundation were to pledge \$750,000 to increase access to clean cookstoves in India. As opposed to a direct investment, the foundation uses this sum to secure 75 percent of a \$1 million private investment otherwise not directed to the international development space. This secured sum of the principal—to be held in an escrow account and not returned to investors until the bonds have matured—leaves an investment of \$250,000 to the private fund, on which an impact-based return can be earned.

Under the tiered investment structure, the principal will be repaid at a maturation date of 10 years, while coupon payments (based on meeting predetermined impact targets) will be evaluated and granted at years 5, 10, and 15. These funds for the remaining 25 percent of the principal balance and the expected returns will be derived from contracts established with various levels of the Indian government, realizing both reduction of service costs and improved economic output as a result of impact achievement. Reductions of toxic smoke from cookstoves in the environment would also reduce rates of respiratory illness and premature death, thus both lowering health care costs and improving communities' economic output.

Upon meeting specific criteria set for each time interval, a portion of funds from the government will be paid directly to investors in the form of returns, while a remaining percentage will be placed in escrow for the remaining 25 percent principal repayment at maturation.

and distributes clean cookstoves. The enterprise builds on community knowledge and empowers the local economy by hiring local people to manufacture and distribute their product, propelling greater dissemination (Prakti, n.d.).

Many similar organizations in partnership with the umbrella group, the Global Alliance for Clean Cookstoves, already have similarly structured initiatives in place but need the funding, manpower, and knowledge sharing to properly implement, scale, and achieve their desired impact. Depending on the financial mechanisms in place and the partners in specific locations (an NGO, government body, or social enterprise), our model would either subsidize the initial cost of clean cookstoves to local consumers or support a discounted loan structure to promote bottom-of-pyramid access to this technology through existing organizations.

Our funding model would not only subsidize or support loans to give residents financial access to this technology, but would also fund education

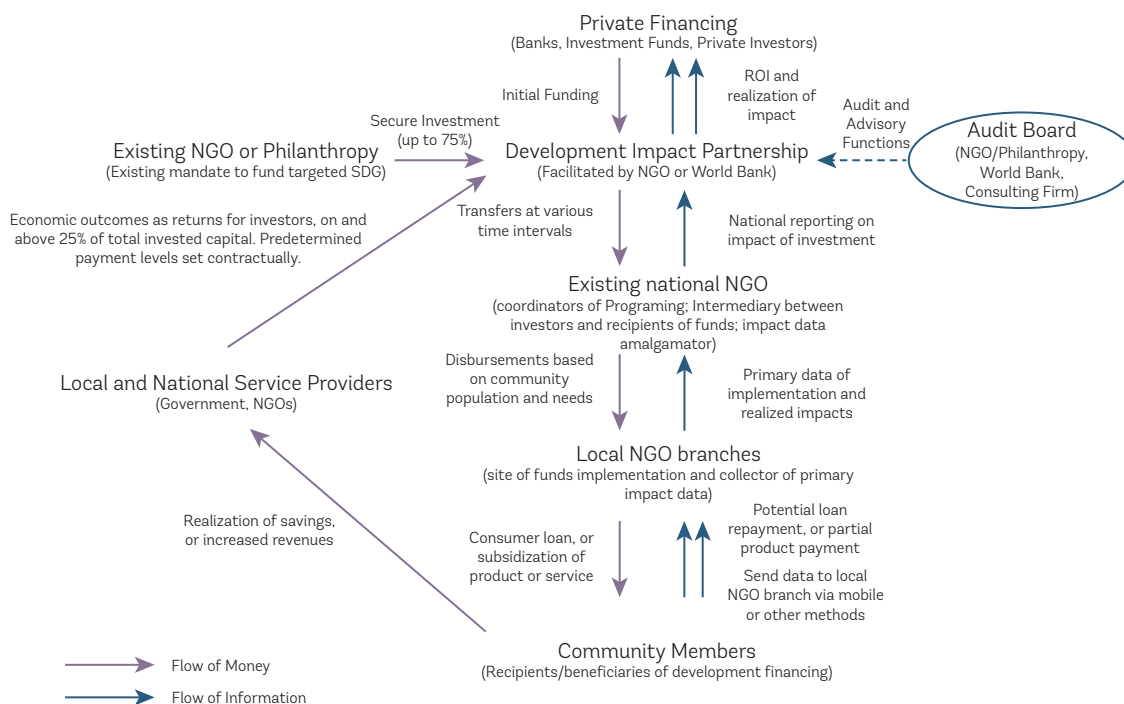
on maintenance, sales, and distribution of the product that would be led by the local enterprises, NGO branches, or government entities operating in specific locales. A set of local individuals who can maintain the technology in the event of breakdowns would allow its adoption to be more sustainable, mitigating the possibility of reversion to old cooking methods. In addition, organizations would provide training on the health benefits of clean cookstoves as well as on sales and distribution of the product to allow local actors to become agents of adoption and promotion within their own communities. This model would thereby cultivate a greater sense of investment and trust in this new technology by creating multiple areas of buy-in. Organizations that already work to employ and empower community members (especially women) could thus grow the scope of their operations and hire more workers, thereby expanding women's roles as market agents while also scaling up clean cookstove adoption.

Finally, these local organizations and enterprises would provide training on impact measurement. In the developing world, big data and impact measurement are still vastly underused because of constraints on local knowledge, time, and funding. Our bond model would fund impact measurement training via these regional organizations, which would educate their employees and community members on measurement practices and metrics. Empowerment of local organizations to quantify the impact of their efforts (a crucial component of a successful DIB) increases the efficacy of initiatives.

In return for the funding that supports this training, the organizations would be required to submit biannual reports of key insights, innovations, and learning to strengthen local knowledge and build a cross-cultural dialogue around best practices within the cookstove and impact financing sectors. In areas with less access to technology to generate reports and best practices, insights and learning could be shared through cell phone or other mobile technology given its increasing prevalence throughout the developing world (World Bank 2012). This mandatory component of shared knowledge will promote a more cohesive learning process across the world to generate a more rapid process of innovation. Figure 2 summarizes the flow of finances and information between the DIB financiers and the community members benefiting from the funds. The auditing process is further discussed below.

Target countries. This model's connection of positive externalities to realized savings requires certain threshold conditions regarding state structure. It would work best in middle-income countries (MICs) where the state has legitimate tax collection authority, real social services, and substantial spending. Our clean cookstove DIB model has the potential to

Figure 2 Capital and Information Flow of Development Impact Bonds



Source: CGD (Center for Global Development) and Social Finance Limited 2013.

Note: ROI = return on investment. SDG = Sustainable Development Goal.

generate significant savings for the state but requires that a state be spending substantial money in the first place to incentivize the government to recoup that money or to benefit from tax gains arising from increased productivity. For MICs, a DIB in clean cookstoves can generate real savings, most straightforwardly in the form of increased tax collection stemming from clean cookstoves' long-term ability to enhance economic productivity.

The nature of the state structure in MICs also makes them better equipped than low-income countries to be able to realize the savings generated by clean cookstoves, including improved health, heightened economic productivity, and reduced environmental degradation. Countries that fit these criteria include Brazil, Colombia, and India, among the wide swath of other MICs that have both sufficient government structures and broad sectors of the population in need of greater clean cookstove access. By implementing our solution in MICs (especially those with a high income inequality, as measured by the Gini coefficient), the numerous impacts of clean cookstoves can still reach the very poor,

but can do so within the context of a state able to secure the trust of investors and uphold a long-term, multiparty contract.³

Auditing process. Essential to the operation of this bond structure is the accurate measurement of impact to determine fiscal savings for governments and NGOs, as well as to ensure that coupon payments to investors occur at the evaluation junctures when criteria are met. Although a variety of auditing bodies could play this role once the tool is developed, the most suitable player would be the organization holding the deal's funds in escrow. The proposed body occupying this function would be the philanthropic organization contributing the principal's security. With their incentives aligned to ensure responsible spending and the accurate measurement of results, both the investors and the government or NGO payees would be ensured honest reporting. Furthermore, given the large operations of these organizations (such as the Bill and Melinda Gates Foundation), they carry the human capital and knowledge of the international development space required to effectively gather and evaluate the necessary data for these DIBs.

In the case of the initial DIB offering, the facilitator of the transaction would be the likely audit board and escrow holder. Assuming that the World Bank acts as the initial facilitator for bond trial, it would serve as the well-resourced, neutral party gathering and evaluating data. Alternative entities for this role would be private consulting firms or other NGOs in the international development space.

Expected Impact

Short- and Long-Term Results

In the short term, wider access to clean cookstoves would reduce air pollution, particularly from black carbon emissions. As a result, the air quality in regions with growing adoption rates of clean cookstoves would dramatically improve, leading to significant, cost-saving, long-term results including a drop in respiratory disease rates, deaths of children under five, and overall health care costs. A decline in these rates of disease would promote heightened economic productivity, in conjunction with greater economic empowerment of women as agential market participants. In addition, rates

³ The Gini coefficient (or Gini index), the most commonly used measure of inequality, is a measure of statistical dispersion representing the income distribution of a nation's residents. A Gini coefficient of zero expresses perfect equality (every resident has the same income), whereas a coefficient of one (or 100 percent) expresses maximal inequality (one person has all the income, and all others have none).

of deforestation, soil erosion, and biodiversity degradation would decline because stove users would require less fuel for cooking.

Big-Picture Benefits

In looking at the big picture, our model not only improves both the quality of health and the environment for local communities, but also builds an understanding of impact measurement and sector best practices. The resulting shared knowledge base can be applied to other social services within the region, making them more effective and efficient as well. Finally, this model helps to establish a sustainable market for clean technology. Our framework's support of a local distribution mechanism and maintenance network enables the developing world to become more investment-friendly by establishing preexisting avenues of product distribution and demand.

Group Adoption Advantages

To have a meaningful impact on health, productivity, and the environment there must be localized concentrations of clean cookstove adoption, training, and maintenance. Isolated use of clean cookstoves provides significant benefits for the user, but for this DIB model to realize actual savings, concentrated areas of usage must be created to generate measurable improvements in areas such as health and air quality. We could create an implementation model akin to the microfinance approach of getting groups of people to take on collective debt all at once; in this case, local groups would adopt clean cookstove technology and receive training and maintenance instruction in unison.

This group adoption model could be driven by marketing the stove as status item, through promotion via cultural and political leaders, or by building up a social norm around clean cookstoves. For example, an increase in women's agency in the household and society is a valuable cultural norm—and a priority area for domestic policy action (World Bank 2011)—that this model could strengthen and eventually apply to other initiatives. Although women in developing countries are often not in control of their household's financial decisions, they are both the primary users of cookstove technology and the primary bearers of the detrimental health consequences from using open fires or inefficient stoves. Consequently, group adoption approaches could target women as community agents of change, thereby appealing directly to primary users, as well as increasing women's economic agency.

Furthermore, a group adoption approach promises to be more sustainable than one-at-a-time, individual cookstove adoptions. A collective adoption strategy would help to prevent the backsliding that can result from

isolated cases of adoption or from lack of technical knowledge to repair the technology. A localized set of norms alongside an established market can also help to support maintenance and sustained use. Last, a group adoption approach enables a more comprehensive educational approach that will help users understand the health risks of “dirty” cookstoves; grasp the benefits of clean cookstoves in terms of health, time, and money; and therefore increase their willingness to invest in the technology.

Potential Challenges

Development of Reliable Metrics

As with many social sector interventions, the metrics of success needed to measure this initiative’s program impact remain somewhat underdeveloped. Quantifying the impact of this specific bond intervention will require the systematization of measurements that can determine the impact that wider access to clean technology has created.

To address this problem in measuring environmental impact, our model could build off of current parallel models that use carbon credits to offset the costs in “green” technology. Longer-term quantification and models of impact regarding disease rates and premature deaths could use averted disability-adjusted life years (DALYs) to track improvements in health. In addition, we could model our impact measurements based on CQuest Capital’s previous work in collaboration with the World Bank (CQuest Capital, n.d.) to better measure both health and environmental improvements.

Development of Multiple Stakeholder Contracts

Metrics also present an interesting hurdle in terms of the contract between funders and host governments that will be created. Our model is based on positive externalities that will need to be identified in advance of the contract’s drafting. The contract will be between the investors and either the state government or an NGO (if an NGO exists with a permanent presence in a set of locations and provides a version of government services that would realize savings from clean cookstoves’ positive spillovers).

An efficacious contractual agreement will require a comprehensive understanding of the causal mechanism of our approach, based on rigorous established data that back up contractual expectations. The positive externalities stipulated in the contract will need to be specific, detailing what percentage of the positive spillovers will be claimed by the host state government and what will be returned to investors. Despite the relatively nascent body of knowledge on the long-term impacts of clean cookstoves,

feasibility studies conducted in Brazil, India, and Uganda serve as valuable reference documents that can substantially guide the creation of impact metrics and timelines for contractual agreements (Global Alliance for Clean Cookstoves 2011a, 2013; iMC Worldwide 2014).

Adaptation to Local Contexts

An additional challenge is that clean cookstove models and technology will differ depending on the cultural context because of variation in availability of local fuels, cooking practices, and preexisting local organizations. The stove models being distributed will thus vary by context, but our framework takes this component into account by building off of preestablished organizations and enterprises in different regions that have created culturally specific product models.

This flexibility is a strength of our model because it enhances the work of current organizations, rather than creating an infrastructure from scratch, and enables a more sustainable, locally adapted process of implementation. In addition, our bond structure directly incorporates local actors into the repair, distribution, and innovation process, thereby ensuring that interventions are sensitive to the varying cultural needs and bases of knowledge present in different regions.

Future Outlook

THE SCOPE AND TIMING of our participatory DIB model provide it with a significant potential for impact given that it simultaneously addresses a wide array of the Sustainable Development Goals (SDGs), aligns with the World Bank's policy agendas, and builds upon the increasing momentum behind pay-for-success schemes. As actors in the development arena look ahead, it is clear that a multisector, mixed-method, participatory approach must be developed to best leverage the unique resources of both developed and developing countries to create scalable solutions. The SDGs provide a tangible motivation for greater collaboration between developed and developing countries with the recognition that meaningful progress requires an effort on both sides. Our model recognizes the ability of the SDGs to create and build transformative change across the developing world and aims to capitalize on this momentum by engaging a diverse set of actors and harnessing their unique bases of knowledge and skills. (See Annex 1 for a discussion of how our proposal aligns with specific SDGs.)

The *World Development Report 2010* estimated that developing countries will bear about 75 percent of the damage costs stemming from climate

change (World Bank 2010). Nonetheless, these nations are without the proper financial or technical resources to deal with the escalation of climate change. Our model directly addresses the constraints facing developing nations and provides a mechanism to finance their access to and development of clean technology that not only reduces carbon emissions but also helps reduce the rate of natural resource depletion. The impact of access to clean cookstoves however, reaches far beyond these significant environmental benefits. With widespread adoption of clean cookstoves, women and children can see dramatic reductions in chronic health conditions and childhood mortality as well as increases in economic productivity and economic empowerment. Thus, our model, in initially addressing the critical lack of access to clean technology in the developing world, results in a long-term web of significant, interconnected positive impacts.

Most importantly, our model's public-private structure, innovative payback mechanism, and use of preexisting organizations lends itself to application in a variety of interventions beyond cookstoves. The framework of our DIB model has the flexibility to be translated into a wide spectrum of development programs that, like cookstoves, harness the resources and insights of developed and developing countries to help the SDGs reach their impressive potential in the years ahead.

Comparable Examples

REGARDING DIBS AS A FEASIBLE investment mechanism, see the Rikers Island Social Impact Bonds developed by the Goldman Sachs Urban Investment Group and Bloomberg Philanthropies (Olsen and Phillips 2012).

Regarding the measurable financial results of a specific social impact investment in clean cookstoves, see the case studies of “Results-Based Financing for Clean Cookstoves in Uganda” (iMC Worldwide 2014) and “Creating a Salable Health Product from Clean Cookstoves” in the Lao People's Democratic Republic (CQuest Capital, n.d.).

Annex 1: Relevance to the Sustainable Development Goals

Energy Poverty

Over 1 billion individuals across the globe lack access to electricity, meaning that there is ample space for clean technology to be implemented and successfully scaled in the developing world. Our proposal directly works to

provide sustainable, affordable energy for all by facilitating the use of more energy-efficient technology and growing the proportion of the population with access to a clean, reliable energy source.

Health

The use of inefficient cookstoves and open flames for daily food preparation results in the emission of toxic chemicals whose levels far exceed the World Health Organization's (WHO) daily recommended limit of smoke exposure. These fumes have been directly linked to a large number of serious medical conditions including low birth weight, pneumonia in young children, chronic obstructive pulmonary disease (COPD), emphysema, cardiovascular disease, cataracts, and other ailments (Benac 2010). WHO estimates that the number of deaths for diseases linked to cookstove smoke will exceed those from Malaria, HIV/AIDS, and tuberculosis by 2030 (Global Alliance for Clean Cookstoves 2011b). Clean cookstoves would dramatically reduce exposure to particulate matter, driving down rates of respiratory disease and other serious conditions, as well as reducing premature mortality of children from noncommunicable diseases.

The Environment

Cookstoves' burning of biomass fuels generates pollutants including black carbon, methane, and carbon dioxide, which contribute to air pollution and accelerate climate change. It is estimated that residential sources (most of which are cookstoves) represent over a quarter of the global inventory of black carbon emissions (Global Alliance for Clean Cookstoves 2011b). Furthermore, given that around 3 billion individuals internationally use locally gathered fuel materials, the use of these stoves places significant pressure on natural resources, leading to dangerous processes such as deforestation, soil erosion, and declining biodiversity (Benac 2010). Wider access to clean cookstoves would therefore reduce rates of environmental degradation, diminish black carbon emission rates, and thus help to slow down the rate of climate change.

Inclusive Economic Growth and Gender Equality

Because our proposal involves the direct integration of local actors into the repair, maintenance, distribution, and impact measurement surrounding the adoption of clean cookstoves, it has the power to encourage gender equality and female economic empowerment. Efficient cookstoves would enable women and girls to reduce the amount of time spent collecting fuel,

allowing them to pursue opportunities such as education or routes of economic empowerment. With more time to devote to economic engagement and fewer health risks hindering their productivity, women and girls could become marketplace agents that sell, market, and distribute the technology within their communities.

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CHAPTER 5

Impact.PH: An Initiative to Enhance and Transform the Philippine Nonprofit Sector

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Abstract

IMPACT.PH SEEKS to drive strategic philanthropy and become the premiere source of trusted information on Philippine nonprofits. We seek to make data transparent and accessible. By analyzing each social sector issue and identifying the most effective initiatives that are solving such issues, we aim to drive philanthropy to the most effective organizations.

At the core of our initiative is a dynamic online database of registered non-profit organizations and social sector objectives. Our various products and services enhance and utilize this data source.

Traditionally, organizations compete for aid funding to operate individually. Instead, Impact.PH aims to identify key social sector objectives, such as Philippine Development Plan metrics or upcoming Sustainable Development Goals, and identify the most effective organizations that can help achieve these goals. This data-driven solution allows funding organizations to have clear, measurable impact metrics and encourages organizations to contribute to a broader mission rather than operate in silos. By increasing access to information, oversight, transparency, and accountability in the nonprofit sector and thereby enhancing nonprofits' impact, we can establish trust in the effectiveness of the nonprofit sector and grow charitable giving. Through this effort, we endeavor to enable intelligence for the social sector, enlighten donors and other stakeholders, build better nonprofits, and collectively solve social sector issues. Our initial target is to actively track at least 1,000 Securities and Exchange Commission (SEC)-registered nonprofit organizations and 20 social sector objectives in two years.

Problem and Context: A Lack of Trust, Information, Transparency, and Accountability in Philanthropy

DURING THE DECADES after martial law, the Philippines witnessed an inflow of international aid to rebuild the nation, which furthered the formation of a strong civil society. The collaborative nature between non-profits and the public sector was enhanced by the 1987 Constitution of the Philippines, which acknowledges civil society's role in development and affirms its right to participate in decision making (Anand 2014).

Today, the civil society in the Philippines is still strong, and the non-profit sector plays an important role in Philippine society. However, the funding environment has changed. Although the Philippine economy has grown, international aid has diminished, and the lack of transparency and accountability has allowed many nonprofits to become conduits for corruption, leading to a lack of trust. Of the estimated 100,000 nonprofit organizations¹, fewer than 350 have received Philippine Council for NGO Certification (PCNC), a requirement for accepting tax-deductible donations.² Many nonprofits are inefficient, ineffective or, worse, fictitious.

Without adequate data on transparency or impact, resources are wasted as donors and government agencies cannot funnel charitable donations and grants to the best-performing nonprofits. Impact.PH seeks to encourage strategic philanthropy by creating the premiere source of trusted, comprehensive, and up-to-date information on the Philippine nonprofit sector. Our mission is to transform the industry by creating intelligence for the social sector, thus enlightening donors, building better nonprofits, and collectively solving social sector issues.

To that end, we aim to provide key financial, operational, and impact information on registered nonprofit organizations as well as how their activities contribute to social sector objectives. We aim to establish a database of information that stakeholders trust and rely upon to make better philanthropic decisions. For the institutional donor with specific impact targets, we aim to be the go-to resource for diligence and identification of key partners.

¹ Estimate based on expert interviews.

² The PCNC is a private voluntary, nonstock, nonprofit corporation whose main function is to certify nonprofit organizations that meet established minimum criteria for financial management and accountability in the service to underprivileged Filipinos (<http://www.pcnc.com.ph/>).

Solution: A Dynamic Online Database Supporting Strategic Philanthropy

Goals, Objectives, and Strategy

What if donors, national and local government agencies, international development organizations, foundations, and corporations could more easily determine which nonprofit organizations were legitimate, efficient, and effective? They would be able to direct their giving to those impactful nonprofits that are most aligned with causes they support. This would encourage the building of better nonprofits and also increase the scrutiny of poorly performing organizations.

We envision Impact.PH as the definitive source of information on nonprofits and the nonprofit sector. By providing data on accountability and metrics on efficiency and effectiveness, we believe we can both increase financing sources from reluctant donors and drive strategic philanthropy toward collective social sector goals from traditional funders.

Our goal is to enhance and transform the Philippine nonprofit sector through information, creating big impact for beneficiaries. By this we mean increasing access to information, oversight, transparency, and accountability to enhance nonprofits' impact and grow charitable giving. Ultimately we seek to ensure that the “right” causes and organizations are supported, the best solutions prevail, and the beneficiaries are actually helped by the work that nonprofits do. To that end, we have four primary objectives:

- Enable intelligence for the social sector
- Enlighten donors and other stakeholders
- Build better nonprofits
- Solve social sector issues

Our comprehensive solution aims to strengthen the Philippine nonprofit sector through an information-based strategy that will enable stakeholders to better assess which nonprofits they can trust, which nonprofits best support their causes, and how nonprofits can ensure accountability and impact (table 1).

Products and Services

At the core of our initiative is a dynamic online database of nonprofit organizations. Our products and services enhance and utilize this data source (table 2).

Table 1 Components of Impact.PH Strategy

Strategy	Key Activities
1. <i>Increase stakeholders' access to the information on registered nonprofit organizations and social sector objectives that they trust and need to make better decisions</i>	<ul style="list-style-type: none"> • Generate a list of Philippine nonprofits that is comprehensive, organized (that is, classified by type, cause, beneficiary, location, and geographic coverage), and easily accessible • Provide online access to nonprofits' (a) public data (such as annual general information sheets [GIS], audited financial statements, and annual reports); and (b) relevant internal information (such as organization overviews, program information, and performance metrics) • Identify and monitor selected social sector objectives (for example, Philippine Development Plan metrics or Sustainable Development Goals) and link those objectives to contributing nonprofits • Codify information on nonprofits and the nonprofit sector, providing data in user-friendly formats
2. <i>Galvanize stakeholders—regulatory agencies, nonprofit networks, nonprofit organizations, and the donor community—to increase oversight, transparency, accountability, and impact</i>	<ul style="list-style-type: none"> • Establish partnerships with the SEC and other regulatory agencies, nonprofit networks, funders, nonprofits, and other mission-aligned institutions (local and international) • Provide partner organizations with the means to verify, update, and augment their organizational information and contributions to social sector objectives to which they are connected • Build a community of stakeholders to monitor and assess nonprofits and advance Impact.PH's objectives • Work with nonprofits, in collaboration with support organizations, to enhance and strengthen their strategies, operations, governance, and reporting
3. <i>Develop the tools needed to find, analyze, and support causes stakeholders care about</i>	<ul style="list-style-type: none"> • Develop an objective and transparent nonprofit rating system based on key metrics (impact, financials, transparency, legitimacy) and analyze, evaluate, and rate nonprofits • Develop an external review and feedback system for nonprofits • Synthesize collective data on nonprofits to generate up-to-date industrywide, subsector, and social sector objective reports • Develop a platform that enables stakeholders to make online donations to nonprofits and tracks the amount of online giving

Implementation Plan and Timeline

Market definition, research, and analysis. Our target market focuses on several categories of strategic local and international donors and stakeholders in the nonprofit sector:

- Filipino donors, including over 10 million living abroad
- Nonprofit leaders, researchers, and policy makers
- International aid agencies (for example, U.S. Agency for International Development and the World Bank)
- National and local government agencies
- Foundations, corporations, and other charitable organizations

Table 2 Impact.PH Products and Services

Service type	Products
<i>Search, research, and analysis</i>	<ul style="list-style-type: none"> • Online database of registered nonprofit organizations in the Philippines • Online database of social sector objectives • Nonprofit search (by type, cause, beneficiary, location, geographic coverage, and keyword) • Access to general information sheets (GIS), audited financial statements, annual reports, program information, performance metrics, and other relevant documents • Access to board, officer, and key employee information • Nonprofit profiles and ratings • Nonprofit lists and industry and social sector objective reports • Free and paid premium access to information
<i>User tools</i>	<ul style="list-style-type: none"> • Nonprofit organizational accounts and content management • External review and feedback system • Online donation or giving facility
<i>Nonprofit support</i>	<ul style="list-style-type: none"> • Nonprofit verification and performance evaluation • Nonprofit consulting and technical assistance
<i>Other services</i>	<ul style="list-style-type: none"> • "My Charities" tracking • Nonprofit benchmarking and comparison • Grant searching • Volunteer opportunities

The strategic planning to implement Impact.PH also takes into account the country-specific characteristics of the Filipino nonprofit and donor markets.

Nonprofit market. Nonprofit sector organizations in the Philippines have total estimated income of about ₱55 billion (\$1.22 billion) from various sources. However, this estimate is based on outdated information that has been extrapolated to the present year.³ The 10 largest nonprofits certified by the PCNC have an average budget of about ₱631 million (\$14.02 million) each, or ₱6.3 billion (\$0.14 billion) in total.⁴

Donor market. The Philippines' Commission on Population reported a population of about 100 million in 2014, up from about 80 million in 2002. The Charities Aid Foundation (CAF) estimates that about 25 percent of all Filipinos give to charity.⁵ Although the Philippines lacks

³ Based on web research.

⁴ Data is drawn from the most recent financial statements of the nonprofits available on their websites.

⁵ For updated information, see the Charities Aid Foundation website: <http://www.cafonline.org/>.

reliable data on total charitable giving, a 2002 report on “Giving and Volunteering among Filipinos” estimated total giving by households at about ₱32.1 billion, 42 percent of which went to organizations while 58 percent was given directly to persons in need (Fernan 2002). About 73 percent (or about ₱23.4 billion) of giving was directed toward churches, and about ₱8.7 billion went to all other organizations. Given the growth in population since the 2002 report, amounts are likely to have risen significantly.

Additionally, an estimated 10 million more Filipinos who are potential donors live abroad. A significant amount of charitable giving comes from international aid organizations. As of November 5, 2014, the Foreign Aid Transparency Hub (FAiTH) launched by the national government reported that the total amount of foreign aid pledged for typhoon Haiyan alone was ₱73 billion.⁶ Government funding also appears to be substantial: the “NPO Sector Assessment: Philippine Report” indicates that government grants and contracts to nonprofit organizations accounted for about 10 percent of organizational income in 1997 (Caucus of Development NGO Networks 2008).⁷

Performance metrics. We have set aggressive targets to actively monitor 3,000 nonprofit organizations and 100,000 registered users in five years (table 3).

Table 3 Impact.PH Performance Targets, by Year

	Year 1	Year 2	Year 3	Year 4	Year 5	CAGR
# of listed organizations	500	1,000	2,500	5,000	10,000	111%
# of orgs. actively monitored	500	1,000	1,500	2,250	3,000	57%
# of partner organizations	100	300	500	750	1,000	78%
# of registered users	5,000	10,000	20,000	50,000	100,000	111%
# of paid subscription users	250	500	1,000	2,500	5,000	111%
Online giving via Impact.PH (₱, millions)	0	5	25	50	100	na

Note: CAGR = compound annual growth rate. na = not applicable.

⁶ For updated information on foreign aid to the Philippines, see the FAiTH website: <http://www.gov.ph/faith/>.

⁷ NPO = nonprofit organization.

Implementation Phase 1: Startup and Development.

Table 4 Impact.PH Startup and Development Tasks

1. Develop online database, content management system (CMS), and website

- Activities:**
- Outline website structure, data and content architecture, functionality requirements, permissions, and use cases, drawing from international models and adjusting to local context
 - Secure website hosting and data backup plan
 - Develop website content
 - Build online database and CMS prototype (structure and functionality to be refined over time)
 - Build front-end user interface and design look and feel
- Deliverables:**
- Prototype online database, CMS, and website

2. Galvanize support among key players in nonprofit sector

- Activities:**
- Introduce Impact.PH to key players in nonprofit sector and secure buy-in
 - Establish partnerships with the SEC and other regulatory agencies, nonprofit networks, funders, nonprofits, and other mission-aligned institutions (local and international), particularly for data provision and funding support
 - Build community of advisors, advocates, evaluators, and external reviewers, drawing from nonprofit leaders and experts
- Deliverables:**
- Partnerships with key players in the field
 - Community of about 50 advisors, advocates, evaluators, and reviewers

3. Gather, verify, and report public data on selected nonprofits and augment with internal information

- Activities:**
- Generate comprehensive list of SEC-registered nonprofits (hold off on CDA-, HLURB-, and BLR-registered civil society organizations as well as churches)
 - Identify target list of nonprofits (about 500) to research further, prioritizing key players and highly regarded organizations (for example, PCNC-certified organizations)
 - Work with SEC, nonprofit networks, funders, and nonprofits to gather, verify, and upload public data and internal information on selected nonprofits
 - Enable free online access to organization overviews, general information sheets (GIS), audited financial statements, annual reports, program information, performance metrics, and other relevant documents
 - Provide nonprofit partners with tools and training to update their online information
- Deliverables:**
- Comprehensive list of SEC-registered nonprofits
 - Viewable public data and internal information on about 500 nonprofits

table continues next page

Table 4 Impact.PH Startup and Development Tasks (continued)

4. Codify information on nonprofits and the nonprofit sector

- Activities:**
- Develop robust nonprofit classification system, drawing from existing systems (for example, United Nations classification, Philippine laws)
 - Classify nonprofits by type, cause, beneficiary, location, geographic coverage, and keyword
 - Codify key nonprofit data (for example, revenue, expenses, and board and officer information) gathered from organizations on target list
 - Explore optical character recognition (OCR) software
- Deliverables:**
- Indexed map of the nonprofit sector
 - Codified and sortable data on about 500 nonprofits

5. Gather and report data on social sector objectives

- Activities:**
- Identify initial list of social sector objectives (about 10, such as number of classrooms built) to monitor, drawing from metrics of the Philippine Development Plan, national and local government agencies, and other lead organizations
 - Classify nonprofits by social sector objective
 - If needed, gather, verify, and upload public data and internal information on contributing nonprofits not previously researched
 - Provide coordinators with tools needed to monitor and analyze organizational and collective impact by objective
 - Provide nonprofits with means to update their contributions to the objectives to which they are connected
- Deliverables:**
- Viewable list of about 10 social sector objectives, indicators, overall targets, and actual results by contributing nonprofit organization

6. Analyze, evaluate, and rate nonprofits

- Activities:**
- Develop objective and transparent nonprofit rating system based on key metrics: impact, financials, transparency, and legitimacy
 - Establish industrywide and subsector standards, drawing from nonprofit experts, codified data, and international best practices (for example, U.S. nonprofit Charity Navigator)
 - Identify initial list of nonprofits (about 200) to be examined by designated evaluators
 - Evaluate and rate selected organizations
- Deliverables:**
- Nonprofit rating system
 - Ratings for about 200 nonprofits

7. Facilitate external reviews and feedback

- Activities:**
- Develop external review and feedback system for nonprofits
 - Identify an initial list of nonprofits (about 200) to be reviewed by designated reviewers
 - Write brief online reviews for selected organizations (at least one each)
- Deliverables:**
- Viewable external reviews for 200 nonprofits

8. Generate nonprofit sector and objective-specific reports

- Activities:**
- Identify set of lists (for example, 10 largest foundations) and longer reports that can be obtained from nonprofit data
 - Develop the tools needed to generate up-to-date industrywide, subsector, and objective-specific lists and reports
 - Synthesize collective data on nonprofits and generate selected lists and reports (about 10 lists and about two longer reports)
- Deliverables:**
- About 10 nonprofit lists and about two longer reports

table continues next page

Table 4 Impact.PH Startup and Development Tasks (continued)

9. Promote Impact.PH as the definitive source of information on nonprofits and the nonprofit sector

Activities:	<ul style="list-style-type: none"> • Partner with organizations that can help with marketing, communications, and growing user base • Facilitate brand promotion in nonprofits' websites (for example, "Impact.PH-rated") • Work with nonprofit networks and nonprofits to provide news feeds • Develop Impact.PH electronic newsletter • Conduct social media campaign
Deliverables:	<ul style="list-style-type: none"> • Impact.PH brand visible online and on nonprofits' websites • Impact.PH electronic newsletter distributed to registered users

Note: SEC = Securities and Exchange Commission. CDA = Cooperative Development Authority. HLURB = Housing and Land Use Regulatory Board. BLR = Bureau of Labor Relations. PCNC = Philippine Council for NGO Certification. NGO = nongovernmental organization.

Implementation Phase 2: Growth and Capacity Building.

Table 5 Impact.PH Growth and Capacity-Building Tasks

1. Establish Impact.PH as an independent nonprofit organization

Activities:	<ul style="list-style-type: none"> • Once sufficient traction is gained (in terms of both users and funding support), incorporate Impact.PH as independent nonprofit organization
Deliverables:	<ul style="list-style-type: none"> • Impact.PH becomes independent nonprofit organization

2. Expand scope of nonprofits and social sector objectives covered

Activities:	<ul style="list-style-type: none"> • Identify additional nonprofits (about 500) to research further, and evaluate, rate, and review about 200 additional nonprofits • Identify additional social sector objectives (about 10) to monitor • Gather, upload, and codify public data and internal information on nonprofits and social sector objectives
Deliverables:	<ul style="list-style-type: none"> • Public and internal information on about 500 additional nonprofits • Ratings and external reviews for about 200 additional nonprofits • List of about 10 additional social sector objectives, indicators, overall targets, and actual results

3. Enable and grow online giving

Activities:	<ul style="list-style-type: none"> • Establish entity as a conduit for online donations to listed nonprofits • Develop platform that enables donors to make online and, ideally, tax-deductible donations to chosen nonprofits • Develop tools to track online giving and hold nonprofits accountable • Promote online giving functionality to nonprofits and donors
Deliverables:	<ul style="list-style-type: none"> • An active online giving platform

4. Enhance organizational effectiveness and capacity

Activities:	<ul style="list-style-type: none"> • Work with pilot list of nonprofits (about 10) in collaboration with support organizations to enhance and strengthen their strategies, operations, governance, and reporting • Help interested nonprofits obtain PCNC certification
Deliverables:	<ul style="list-style-type: none"> • About 10 nonprofits have stronger accountability and transparency

Note: PCNC = Philippine Council for NGO certification. NGO = nongovernmental organization.

Approach. Impact.PH will be developed in two phases, as outlined in tables 4 and 5. The initiative is to be completed over a two-year period (figure 1), after which we expect it to operate as an independent nonprofit organization.

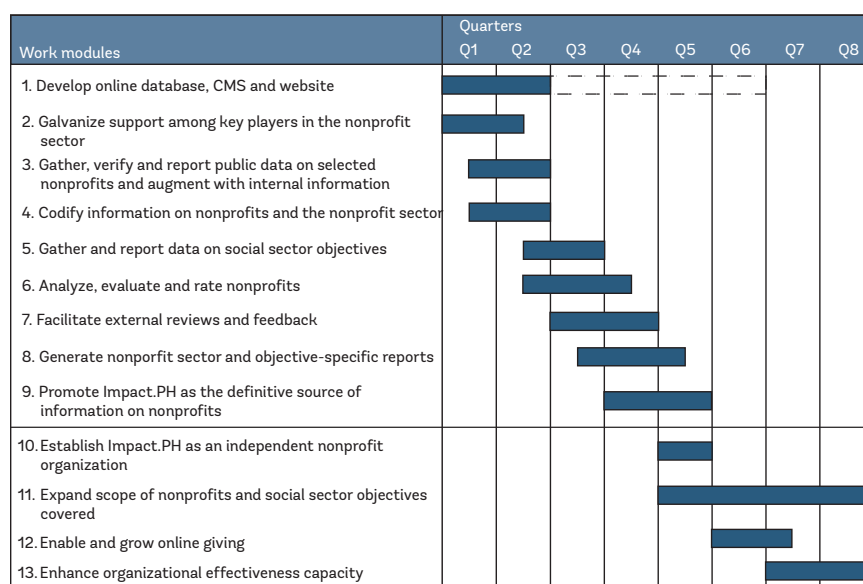
Financial Sustainability

The Impact.PH budget for the first year is an estimated ₱6.6 million (about \$145,000) and is projected to grow to about ₱14.6 million (\$325,000) by Year 5. Personnel expenses are expected to account for about 70 percent of total expenses, with staff growing from 6 full-time equivalents (FTEs) to about 17 FTEs plus volunteers during the five-year period. In-kind support and volunteer time may reduce financial requirements or expand coverage.

Funding to support our initiative will come from a broad mix of sources:

- *Membership program revenue* (for example, ₱5,000 per year) from partner organizations that are committed to transforming the nonprofit sector through information
- *Paid subscriptions* (for example, ₱1,200 per year) from stakeholders seeking in-depth and historical information on nonprofits and the nonprofit sector in general
- *Small percentage of online donations* (for example, 1 percent) made via our site to listed organizations

Figure 1 Impact.PH Development Timeline



Note: CMS = content management system.

- *Fee-for-service research and evaluation revenue* from international agencies, national and local government agencies, and private institutions seeking to vet, monitor, and evaluate organizations or conduct industry analysis
- *Fee-for-service consulting and technical assistance* to nonprofit organizations
- *Grants* from foundations, corporations, and other charitable institutions whose missions include increasing access to information, accountability, transparency, and impact
- *Charitable giving* from individuals who value a stronger nonprofit sector

During the first two years, we envision support primarily in the form of private and public grants and fee-for-service revenue from partner foundations, corporations, international aid agencies, and government agencies as the database of nonprofit organizations is developed and refined, partnerships are established, information is gathered and codified, and a community of stakeholders is galvanized. Over time, we expect to become financially sustainable as our revenue mix shifts toward earned-income and charitable giving from individuals in conjunction with growth in the numbers of nonprofit organizations actively monitored, registered users, and online donors.

Assuming 1,000 partner organizations each contributing ₱5,000 per year and 5,000 paid subscription users (5 percent of 100,000 registered users) at ₱1,200 per year by Year 5, revenue would reach ₱11 million. Processing fees for online donations are projected to generate at least ₱1 million, assuming ₱100 million in total giving through Impact.PH by Year 5—representing an average of ₱33,333 per actively monitored organization (from 3,000 actively monitored organizations). Additional earned income from research and evaluation, consulting, and technical assistance contracts are expected to fully cover their costs (note: these are not shown in the financials). We project the remaining funding gaps, if any, to be covered by charitable giving from committed individual donors. Table 6 shows the five-year financial projections.

Social Impact Team

Our core team currently consists of three highly qualified and capable individuals (table 7). We are augmented by nonprofit sector experts, technical consultants, and volunteers. Over the course of the project, our team will expand to cover the following functions: administration, business development, programs and partnerships, research and evaluation, consulting and technical assistance, and communications.

**Table 6 Five-Year Financial Projections for Impact.PH
(in thousands)**

	Year 1	Year 2	Year 3	Year 4	Year 5	CAGR
Revenue						
Private - Foundations & Corp.	₱5,000	₱5,000	₱5,000	₱3,000	₱0	na
Private - Individuals	₱0	₱500	₱1,000	₱2,000	₱3,000	na
Public	₱1,000	₱1,000	₱1,000	₱1,000	₱1,000	0%
Earned-income	₱800	₱2,150	₱3,950	₱7,250	₱12,000	97%
Total Revenue	₱6,800	₱8,650	₱10,950	₱13,250	₱16,000	24%
Expenses						
Personnel	₱4,283	₱6,389	₱8,498	₱10,277	₱10,864	26%
Contract Services	₱670	₱407	₱260	₱268	₱276	-20%
Other Direct	₱600	₱878	₱1,213	₱1,549	₱1,626	28%
Overhead	₱1,024	₱1,249	₱1,497	₱1,771	₱1,847	16%
Total Expenses	₱6,577	₱8,923	₱11,467	₱13,865	₱14,612	22%
Net Income (Loss)	₱223	₱(273)	₱(517)	₱(615)	₱1,388	58%
Net Assets, end of year	₱223	₱(49)	₱(566)	₱(1,181)	₱206	-2%

Note: CAGR = compound annual growth rate. na = not applicable.

Expected Impact

IN ALIGNMENT WITH THE GOALS, objectives, and strategies outlined above, we believe that Impact.PH will have a substantial, even transformational, impact on the quality and success of the nonprofit sector in the Philippines in three fundamental ways (table 8).

Comparable Examples

IN THE UNITED STATES, GUIDESTAR (<http://www.guidestar.org>) and Charity Navigator (<http://www.charitynavigator.org>) are the most prominent listings. In India, organizations like Dasra (<http://www.dasra.org>) provide information on funders along with detailed analysis of the social issue sectors.

In the Philippines, however, little data is publicly available on the nonprofit sector. There is no comprehensive, easily accessible, and searchable list of nonprofits online. Moreover, whatever information does exist on the Philippines' nonprofits and the nonprofit sector is dated. Publicly reported data such as current and historical general information sheet (GIS) forms

Table 7 Impact.PH Core Team Members

Team member	Experience and education
Michael Alimurung	<ul style="list-style-type: none"> • Ten years' experience in strategy consulting for the social sector, principal at Wellspring Consulting • Start-up experience • Bloomberg TV Philippines • Office of the President of the Philippines • Professor, Ateneo de Manila University • MBA from Stanford Graduate School of Business; BS from Ateneo de Manila University
Carissa Feria	<ul style="list-style-type: none"> • Seven years' experience in finance, director at UBS Investment Bank • Financial advisor and consultant to New York and Philippine-based social enterprises • Experience in social impact investing and volunteering with nonprofits • Philippine Senate • MBA from the Wharton School of University of Pennsylvania; BA from Yale University
Joan Cybil Yao	<ul style="list-style-type: none"> • Six years' experience in social impact investing, investment manager for Southeast Asia of LGT Venture Philanthropy • Evaluated over 500 nonprofits and social enterprises in Southeast Asia • Investment banking experience with UBS and Credit Suisse • BS in management engineering from Ateneo de Manila University

Table 8 Expected Effects of the Impact.PH Initiative

Area of impact	Means of impact
1. <i>Enable intelligence for the social sector</i>	<ul style="list-style-type: none"> • Increased, more easily accessible, and up-to-date information on nonprofits and their performance (more nonprofit leaders provide information) • Increased information on the nonprofit sector, enabling benchmarking and analytics • Increased trust in nonprofits and the nonprofit sector • Better-informed policy making and regulation (more policy makers and researchers use data and analysis)
2. <i>Enlighten donors and other stakeholders</i>	<ul style="list-style-type: none"> • Increased awareness and understanding of nonprofits, their missions, and impact • A better-informed giving environment (more donors use the online database) • More efficient flow of capital toward better-performing nonprofits and away from fictitious, ineffective, and inefficient ones • Increased giving to nonprofits and to the nonprofit sector
3. <i>Build better nonprofits</i>	<ul style="list-style-type: none"> • Increased monitoring, reporting, transparency, and accountability of nonprofits and the nonprofit sector • A more competitive nonprofit landscape • Improved performance and bigger impact; reduced corruption and fewer fictitious nonprofits • More support services strengthen nonprofit capacity and capability • More nonprofits receive PCNC certification
4. <i>Solve social sector issues</i>	<ul style="list-style-type: none"> • Improved understanding of how various outcomes are interrelated and how nonprofits are collectively solving social sector issues • Better understanding of gaps in nonprofit sector

Note: PCNC = Philippine Council for NGO Certification.

and audited financial statements are not readily available. Donors can obtain little information that enables them to evaluate the performance and impact of nonprofit organizations.

In particular, no organization or website is viewed as the definitive source of information on nonprofit organizations in the Philippines. Instead, information is often scattered across various sources, making it difficult to research trends or perform social sector analytics (for example, average giving amount, size of the largest nonprofits, number of nonprofits focused in education, which nonprofits operate in Cebu, and so forth). The existing nonprofit or nongovernmental organization (NGO) networks (such as the Caucus of Development NGO Networks and the Philippine Business for Social Progress) represent less than 2,000 organizations.⁸ Few nonprofits can receive online donations; fewer still can receive tax-deductible donations. In addition, the regulatory agencies that can oversee nonprofits are significantly underresourced.

Potential Challenges

WE BELIEVE THAT we can transform the current state of giving in the Philippines. In doing so, we need to address two major challenges: (a) changing the Philippines' model of donation based on relationships to one based on data, and (b) overcoming entrenched corruption.

Theory of change. Our theory includes changing the mindset of donors from one of simply giving to nonprofits based on relationships to one of empowerment to use data on the transparency, impact, and effectiveness of donations. We intend to meet this challenge by building a trusted brand and partnering with well-respected organizations that support our mission. Our theory requires the public to recognize that data-driven decision making can have more impact, as we intend to become the trusted source of information on nonprofits.

Corrupt nonprofits. A national scandal exposed the corruption of government officials in Congress funneling taxpayer money to fictitious nonprofits that had passed the government's PCNC accreditation. This stigmatized donations in the Philippines and cast a shadow on Congress, the SEC, and the PCNC. Although this scandal serves as an impetus to launch Impact. PH, we recognize that in identifying ineffective and corrupt nonprofits,

⁸ The Caucus of Development NGO Networks, which represents more than 1,600 development NGOs, is the Philippines' biggest coalition of social development NGOs (<http://code-ngo.org>). Philippine Business for Social Progress, which has about 250 member companies, promotes "inclusive business practices that encourage new enterprises, greater access to capital, greater synergies leading to self-reliance and transparency" (<http://www.pbsp.org.ph>).

we may encounter obstacles from unethical political and influential individuals. We believe that we will be able to firmly stand our ground, ideally with the support of international agencies.

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CHAPTER 6

Introducing Internet-Based Funding Mechanisms for World Bank Operations

Team Rolling Stones

Joulan Abdul Khalek
Till Cordes
Zhenbo Hou
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Abstract

REALIZING NEW MODALITIES for funding development interventions is a crucial step in sustaining the post-2015 development agenda. One possible area for new sources of development finance is the crowdfunding marketplace that is estimated to raise \$15 billion in 2015 and reach \$93 billion by 2025. This proposal outlines how the World Bank can test new funding mechanisms using Internet-based donation platforms. To meet this objective, the proposal explores the adaptation of existing instruments in the World Bank's funding toolkit, making them "crowdfunding-friendly." Specifically, we focus on externally financed outputs with crowdfunding organizations and trust funds that can be replenished by online funding campaigns. Our findings show that the former option has low transaction costs and lends itself to certain types of World Bank grant-based financing operations. The latter involves substantially higher administrative and transaction costs but may be used for larger thematic engagements. The proposal also puts forward a three-year implementation plan to develop and pilot such instruments. The overarching objective is to enable development task teams to supplement their activities with funds gathered directly over the Internet for certain types of technical assistance projects, grant-based financing, or supervision activities. The proposal also discusses the enabling role of the Sustainable Development Goals (SDGs) community in supporting this initiative by introducing tax deductions for online donations and by possibly matching funds raised online. We believe that implementing such instruments can help lay the groundwork for a new era of international development finance.

Problem and Context: Financing the Post-2015 SDGs

FINANCING THE ORIGINAL MILLENNIUM DEVELOPMENT GOALS (MDGs) focused mostly on an implicit assumption that when countries were unable to mobilize sufficient domestic resources to finance progress toward the MDGs, the gap should be filled with either official development assistance (ODA) or debt cancellation (Devarajan, Miller, and Swanson 2002; UN Millennium Project 2005). However, in the past 15 years, the development finance landscape has drastically changed. Many developing countries get better access to private sources of investment to finance their development needs. Moreover, over the 2015–30 period 28 developing countries with a total population of 2 billion people are projected to graduate from the low-income-country ODA eligibility threshold (Sedemund 2014).

On the other hand, an increasing amount of development assistance is being conducted outside the realm of international organizations. For example, an increasing number of developing countries are disengaging from all kinds of international investment agreements in Africa, Asia, and Latin America (UNCTAD 2014). The partial privatization and regionalization of development finance reinforces the danger of noncompliance with the post-2015 development framework. In such a global investment climate, international financial institutions (IFIs) are likely to gradually lose their relevance in the international sphere unless action is taken to substantially redefine their business models.

One key aspect of IFI business model transformation includes the development of new funding modalities to take advantage of new sources of funding. A recent report published by the Overseas Development Institute estimates that until 2030 there will be a total annual shortage of \$150 billion in meeting SDGs in the areas of education; health; water and sanitation; and food security, nutrition, and agriculture, in addition to an annual shortage of \$400 billion to \$900 billion in renewable energy investment (Greenhill and Ali 2013). In light of this anticipated funding shortage to meet the MDG-successor Sustainable Development Goals (SDGs), we propose developing a financial instrument that allows international organizations to integrate crowdfunding platforms into their institutional financial models.

Solution: A Crowdfunding Marketplace for Development Aid

SPECIFICALLY, WE PROPOSE to provide World Bank task teams with institutionalized access to online donations using crowdfunding websites.

Crowdfunding is simply the process of getting a large number of people to finance small and medium-size projects using the Internet. About 80 percent of crowdfunded projects range between \$10,000 and \$250,000, but some successful ones have raised as much as \$1 million (Massolution 2013). Websites such as kickstarter.com and indiegogo.com are good examples.

The idea behind crowdfunding is not new. But with more and more people connected online, the Internet is becoming a new platform for these activities. In 2013, crowdfunding websites raised \$5.1 billion around the world and are expected to raise approximately \$93 billion by 2025 (*infoDev/World Bank* 2014). Although crowd-based funding is not a new concept, thanks to the Internet, it is now emerging as a viable and scalable alternative to public and private finance. As of 2013 there were at least 672 investment-based crowdfunding websites around the world (table 1). In the United States, the Securities and Exchange Commission, along with other financial sector and political stakeholders, are working on issuing the first executive regulations to better organize lending- and equity-based crowdfunding efforts.

Table 1 Number of Crowdfund Investing Platforms, Selected Economies, 2013

Country	# of CFI Platforms	Country	# of CFI Platforms
United States	344	Brazil	17
France	53	Canada	34
Italy	15	Australia	12
United Kingdom	87	South Africa	4
Spain	27	India	10
Netherlands	34	Russian Federation	4
Germany	26	Belgium	1
		Hong Kong SAR, China	1
		China	1
		United Arab Emirates	1
		Estonia	1

Source: *infoDev/World Bank* 2013.

Note: CFI = crowdfund investing.

Four distinct forms of crowdfunding campaigns have developed so far:

- *Donation based:* Contributions go toward a charitable cause. Example: A youngster raised \$6,000 to support a local food charity in California through CrowdRise (<http://www.crowdwise.com>).
- *Reward based:* Contributors receive a tangible item or service in return for their funds. Example: More than \$557,000 in donations were raised in a single month through Indiegogo (<http://www.indiegogo.com>) for Kite Patch, an innovative clothing patch that repels mosquitoes. Contributors received 20 free samples as a token of appreciation.
- *Lending based:* Investors are repaid for their investment over a period of time. Example: A Canadian director raised \$1.9 million through the Canada Media Fund (<http://crowdfunding.cmf-fmc.ca>) to produce his first feature film. Contributors will be reimbursed with an extra margin if the movie proves to be profitable.
- *Equity based:* Investors receive a stake in the company. Example: Leap Transit in San Francisco raised \$2 million in equity through AngelList (<https://angel.co>) to establish the first smartphone-powered bus network. If this company succeeds, contributors will be rewarded substantially as the value of their equity increases.

Relevance of Internet-Based Funding to Development Finance

The following 11 reasons justify the importance of introducing crowdfunding as a standard practice in international development finance:

1. The world is becoming increasingly connected over the Internet. Citizens of donor countries now have the opportunity to contribute directly to official development efforts around the world if they so desire.
2. The future of effective development finance in light of the evolving global investment climate does not lie in multilateralism, regionalism, or bilateralism but rather in internationalism.
3. Allowing international organizations to access crowdfunding platforms can help democratize access to development financing around the world, thereby strengthening the post-2015 development agenda.
4. Crowdfunding projects can raise awareness around the world about development needs. They provide a direct link between individual donors and development projects.
5. The total cost of meeting the MDGs has run between \$75 and \$150 per person per year over the MDG period (UN Millennium Project 2007). Similar amounts could be easily donated online.

6. ODA commitments for 2013 fell short at around \$135 billion—less than half of the longstanding target of 0.7 percent gross national income (GNI) of donor countries, which would equal about \$315 billion (MDG Gap Task Force 2013).
7. Many World Bank projects lend themselves to the types of activities usually funded under crowdfunding campaigns. Good examples include supplies of malaria medication, construction of a community school, repair of sanitation facilities in poor areas, installation of solar panels for rural electrification, and so on.
8. World Bank projects offer the necessary scale to make a difference with small contributions. They give individual donors the opportunity to contribute to achieving the post-2015 development goals.
9. Some conventional Bank instruments can be used to administer crowdfunded financial sources, with minor modifications. These instruments include externally funded outputs (EFOs) and trust funds.
10. The crowdfunding of development funds helps to mitigate a serious principal-agent problem between taxpayers and their governments.
11. Crowdfunding can help create hybrid programs in which developing-country entrepreneurs receive crowdfunding coupled with capacity building and training from international organizations.

Design Considerations

This proposal looks at new applications for existing World Bank instruments and financial vehicles that can be used to channel crowdfunding proceeds at minimal institutional cost. The proposal focuses mainly on two options for delivering crowdfunding: externally financed outputs (EFOs) and trust funds (TFs).

Externally financed outputs. Since their inception, EFOs have gained good traction at the World Bank because of their flexible terms in raising funds for Bank projects. Specifically, EFOs allow Bank teams to receive funds from external organizations including private sector companies, development agencies, and governments. An EFO agreement contains the scope of work, including key deliverables of a Bank project, in addition to a committed sum of money that is transferred upon signature to the World Bank. The following elements describe an EFO from an operational perspective (World Bank 2015):

- EFOs can be used to help support either a single Bank activity or output, or a set of activities or outputs.
- An EFO is financed by a contributor who is not receiving the EFO as a service.

- EFOs must be for less than \$1 million, covering both the original contribution plus any subsequent increments.

To date, the World Bank has developed three versions of EFO agreements, named Templates A, B, and C. Template A is the standard preferred EFO agreement. Template B is specifically for contributors that require alternative language to accommodate their national legal framework (in countries such as Australia, Canada, and the United Kingdom). Template C was developed for U.S. government agencies (such as the U.S. Agency for International Development and the Department of State) to accommodate their specific requirements.

We propose developing a fourth template for EFO agreements that allows Bank task teams to receive funding from crowdfunding corporations. Under such an agreement, the registered contributor would be a specific crowdfunding company (vetted according to similar internal procedures), and the scope of work would be the program described under the crowdfunding campaign. We believe that the contractual nature of EFOs serves well as a financial instrument for the administration of proceeds gathered via crowdfunding campaigns. This is because of low transaction costs or minor adjustments to the existing framework from a transactional perspective. In total, we may identify only two transactional elements that would need to be revised:

- Alternative legal language for the fund transfer process that allows crowdfunding companies to transfer full or incremental amounts of campaigns after a specified amount of time
- An additional set of vetting guidelines for registered contributors if they are crowdfunding companies

Trust funds. According to *The World Bank Operational Manual*, a trust fund (TF) is a financing arrangement set up with contributions from one or more donors (World Bank 2015). The Bank establishes and administers TFs as a complement to International Development Association (IDA) and International Bank for Reconstruction and Development (IBRD) financing to promote development and aid effectiveness by leveraging its capacity and development knowledge. The main drawback of using TFs as a financial vehicle that can administer crowdfunding proceeds is that they may involve a certain degree of legal disputability and would require substantial institutional commitment. Under World Bank guidelines, TF contributions can only come from “sovereign and nonsovereign donors.” To date, the World Bank has not accepted TF contributions from individual donors.

Under the crowdfunding model, it could be argued that TF proceeds are in fact being contributed by the individuals who donate and not by the

companies that administer the crowdfunding campaigns. As a result, using TFs for the administration of funds generated from a global crowdfunding campaign may be legally controversial. However, three reasons argue for the creation of an institutional TF that is financed via crowdfunding:

- The United Nations (UN) accepts money from individuals, and the World Bank is technically a UN organization.
- Although proceeds are donated by individuals, they are actually transferred to the Bank by crowdfunding companies that are registered legal entities. When a government or private company transfers money, we would not argue that it is in fact taxpayers or shareholders who are contributing to a TF.
- The IBRD Articles of Agreement define a clear institutional mandate for the efficient and economical utilization of Bank resources. As Internet-based funding is proving to be a promising future global trend, the incorporation of institutional mechanisms that allow the Bank to benefit from crowdfunded proceeds falls directly under this legal mandate.

After resolving any legal disputes, developing a new World Bank TF that is financed by a major crowdfunding effort would require an institutional commitment to define the scope of work and to delegate the necessary institutional resources and supervisory staff for the administration of the TF. The main benefit of using TFs as a financial vehicle for crowdfunding campaigns is potential realization of economies of scale. Under this option, one major global crowdfunding effort could be organized—for example, in a specific area and under a specific theme. The institutional funding generated from crowdfunded proceeds could then be used to finance a number of Bank activities under the umbrella of the TF. The feasibility of this option remains an area that requires further exploration.

Implementation Plan

Based on the above two options (EFOs and TFs), we propose a road map for implementation that spans an initial three-year period for product launch, followed by a three-year monitoring period (table 2).

The team stresses the following points for the successful implementation of this proposal:

- A decision needs to be made at the highest level to champion the idea of allowing Bank teams to access crowdfunding platforms.
- A specialized task force needs to be appointed with the responsibility of developing a concise Concept Note package that clearly articulates the different institutional, legal, and financial considerations

Table 2 Implementation Road Map for World Bank Crowdfunding Campaigns

Who?	What?	How?	When?
World Bank senior management	Endorsement	Form a task force to develop a concept note package	Phase 1 (2 months)
World Bank task force (including legal, comptrollers, integrity, Operations Policy and Country Services, and change management teams)	Develop formal Concept Note package	Consult with relevant institutional and industry stakeholders	Phase 2 (6 months)
World Bank staff, international development community, and crowdfunding industry stakeholders	Evaluate Concept Note package	Provide <ul style="list-style-type: none"> • written feedback; • multilateral consultations; • workshops; and • other support 	Phase 3 (6 months)
World Bank senior management	Decision review meeting	Make formal decision regarding Concept Note package	Phase 4 (1 month)
World Bank Board of Executive Directors	Submission for Board approval	Discuss final details of new or modified instruments	Phase 4 (1 month)
World Bank Operations Policy and Country Services Vice Presidency	Creation of new or modified instruments	Introduce and enforce amendments to existing Operational Policy and Bank Procedures (OP/BP) statements, legal agreements, management information systems, and guidance and training materials for staff	Phase 5 (6 months)
World Bank task teams	Pilot projects	Undertake a number of limited pilot projects under close institutional supervision	Phase 6 (1 year)
World Bank Group	Provisional launch of new EFO or TF instruments	Mainstream instruments for use by World Bank Group organizational units	Phase 7 (3 years)

associated with introducing new Bank instruments that enable access to crowdfunding campaigns.

- The task force should include representatives from World Bank corporate departments including legal, comptrollers, integrity, and change management teams.
- The Concept Note package should be openly shared and discussed with Bank staff, the international development community, and crowdfunding sector stakeholders.

- A decision review meeting chaired by relevant World Bank senior management should entail an institutional mandate to begin implementation.
- A pilot phase should be rolled out to test and record the performance of various instruments for a period of one year.
- After official launch, a three-year provisional period can be used to assess the viability of continuing with such instruments or canceling them.

Expected Impact

Preliminary Feasibility Exercise

Is it worth investing the time and resources to develop a new template for EFOs or TFs? Table 3 summarizes the impact of introducing such institutional innovations. The impact is assessed assuming zero transaction risk and is elaborated in the following subsections. Risk mitigation and challenges are also addressed in the “Potential Challenges” section.

With limited resources, the team conducted a preliminary feasibility study depending mainly on interviews, publicly available data, and desk research. The following is a summary of our main observations:

- Online donations are growing year-on-year and in the next decade will likely become a major source of funding for philanthropic and non-profit organizations around the world.
- Increasing shares of online donations are being channeled through crowdfunding websites worldwide because of the ubiquitous nature of web 2.0/3.0, social media, and so forth.
- At their current levels, crowdfunding proceeds demonstrate a viable source for additional or supplementary financing for certain types of World Bank grant-based activities.

Table 3 Preliminary Feasibility Assessment of Using World Bank EFOs or TFs for Crowdfunding Campaigns

Instrument	Transaction cost	Administrative costs	Expected revenue	Expected impact
Option 1: modified EFO	Low	Low (in place)	High	High
Option 2: TF replenished via massive, recurrent crowdfunding campaign	High	High	Moderate	Further assessment needed

Note: EFO = externally financed output. TF = trust fund.

- The early adoption of simple institutional measures that can encourage the Bank’s task team leaders to engage in online fundraising campaigns can be seen as the first step toward gearing the organization to leverage online donation campaigns worldwide.

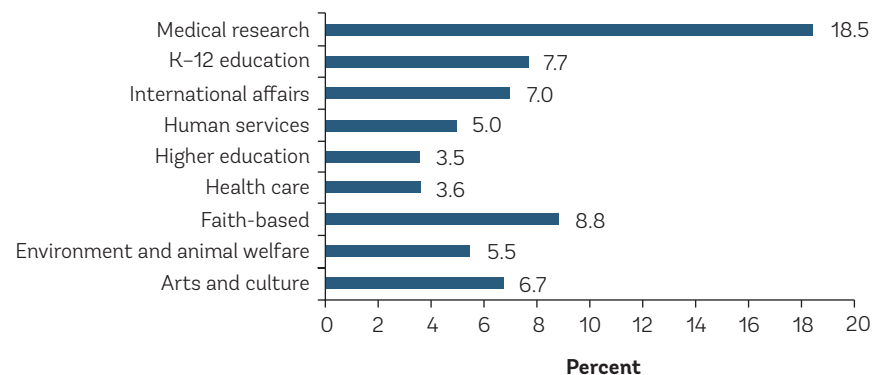
Based on these observations we believe that the financial feasibility is favorable for *Option 1: “Modified EFO.”* Further assessment is needed to elaborate the financial feasibility of *Option 2: “TF replenished via crowdfunding.”* The assessment below discusses these options in further detail.

Market Size

In the past decade, the Internet has increased its position as a medium for philanthropic contribution in the United States and much of the developed world. Online donations in the United States amounted to \$2 billion in 2014 (Blackbaud 2014). Such donations have exhibited a cyclical growth trend, with large influxes of funds seen after episodic events such as international disaster relief efforts. However, despite aberrant growth levels, the general trend is positive and outperforms the growth of conventional (offline) donations in the same sectors.

Figure 1 shows the percentage of total fundraising in the United States originating from online sources. An astounding 18.5 percent of total medical research funding comes from Internet-based donations. These donations are usually tied to charitable campaigns shared across social

Figure 1 Percentage of Total U.S. Fundraising from Online Donations, by Field, 2014



Source: Blackbaud 2014.

media and other interactive Internet platforms. Paypal alone processed \$212 million in such donations in December 2014.¹

The recent rise in online donations exhibits a strong and arguably robust generational dimension. “The Next Generation of American Giving,” a report published by Blackbaud (a nonprofit technology provider), states that 60 percent of millennials in the United States give an average of \$481 to charitable causes annually (Rovner 2013). This finding positions such age groups as a direct market for development finance that remains unexplored to date.

Demographic factors have also contributed to the general increase in online donations. In the United States, about 70 percent of national donations for the year 2015 will come from households or individuals compared with 15 percent from foundations, 9 percent from estates, and 5 percent from corporations (Indiana University Lilly Family School of Philanthropy 2015). This raises another question regarding the overall funding structure of international development finance. The World Bank has been successful in leveraging corporate and estate-based donations but has still been unable to tap into household and individual sources of funding, which in reality represent the bulk of philanthropic contributions worldwide.

Conventional Sources of World Bank Finance

Out of the \$22.2 billion IDA commitment for the FY15–FY17 period, about \$2.8 billion are grant based. This averages roughly \$1 billion per year of additional IDA grant-based financing between FY15 and FY17. With global crowdfunding proceeds estimated to reach \$15 billion for 2015, such a market lends itself in volume and geographic diversity to the grant-based needs of IDA countries in meeting post-2015 development objectives (Tabb Group 2014).

According to the World Bank Treasury, the Bank raised \$51 billion in IBRD funds for FY14 by issuing bonds in 22 currencies. New lending commitments by IBRD were \$18.6 billion in FY14 for a total of 95 new operations. Other alternative sources of financing include World Bank Green Bonds, which raised an average of \$1 billion per year since 2008.² Also it is worth noting that out of the total IDA allotment, \$18.5 billion were in credits and \$937 million in guarantees.³

¹ See “Giving Tuesday 2014,” Paypal Giving Fund, https://www.paypalgivingfund.org/whats-new/articles/us_giving-tuesday-2014.html.

² See “About World Bank Green Bonds,” <http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html>.

³ See World Bank Treasury reports at <http://treasury.worldbank.org>.

That is to say that the diversification of development finance modalities would strengthen the overall fiscal resilience of the post-2015 development agenda. From this perspective, allowing Bank task teams institutional access to online donations can help generate a new and promising source of development funding that can have far-reaching implications on the future structure of international development.

In light of these facts, international organizations such as the World Bank need to adopt disruptive financing mechanisms that are more in line with the way their donor countries' citizens are communicating, doing business, and conducting transactions.

Case Study of a Crowdfunded World Bank Operation

We can envisage a number of mechanisms in which crowdfunding can support current World Bank operations. Following is one hypothetical example among many different possible formulations:

- *Project type:* Investment Project Financing
- *Project title:* Mother and Child Health Services Administration
- *Loan recipient:* Republic of Chad
- *Loan amount:* \$15.79 million
- *Approval date:* May 29, 2014
- *Project description:* The main component of this project includes “Performance-Based Grants to Healthcare Facilities,” amounting to \$13.3 million of IDA funds. This project focuses on supporting government grants to health centers in poor areas of Chad to cover things such as prenatal care, child immunization, female contraception, preventive nutritional services, and critical medications.

A task team leader (TTL) who desires to link his or her project with a crowdfunding campaign can choose to raise a fraction of the main component online. Funds could be matched with the initial IDA-allotted envelope. In so doing, a TTL would need to decide or act as follows:

1. *Choose a target contribution:* for example, 5 percent of project funding to be raised over the Internet
2. *Choose a crowdfunding platform:* for example, select GoFundMe because it has a high rate of funding for medical services
3. *Initiate contractual agreement:* for example, sign new type of EFO with GoFundMe
4. *Run campaign:* seek media support from digital media specialists in World Bank External and Corporate Relations

5. *Receive funds*: update project documents accordingly
6. *Implementation and results reporting*: update crowdfunding page using inputs from Implementation Status and Results (ISR) report, which can be linked to the campaign page with media, pictures, videos, soundbites, and so on

Comparable Examples

Program-for-Results

In February 2011, the World Bank Operations Policy and Country Services Vice Presidency introduced a new financial instrument called “Program-for-Results” (P4R) in response to the changing development needs and demand from borrowing countries. Under conventional lending agreements (using the Investment Lending Instrument), loan disbursements are mainly tied to the successful procurement and fiscal management of a project. However, under P4R, bank loan disbursements are made on the basis of project results or how close the project is to fulfilling its development objectives.⁴

The design and implementation of P4R operations required detailed assessments of technical design of instrument, systems of fiduciary and environmental and social issues, risk and management review, and the role of supervising units (World Bank 2011). Following the design phase, open consultation sessions were conducted with Bank staff, the Board of Executive Directors, client countries, partners, donors, other multilateral development banks, and civil society organizations. Both these phases were completed over an 18-month period and the instrument was approved in January 2012.

After just two years, 20 P4R operations were active, totaling \$3.3 billion of financing and supporting a total of \$7 billion of government programs (World Bank 2014). Another 15 operations are currently under preparation for an additional \$3.1 billion of Bank financing. Experience with P4R demonstrates that the Bank is capable of successfully developing and rolling out new financial instruments and that the Bank’s Board of Executive Directors and client countries are supportive of new initiatives that can help increase developing country access to new and innovative sources of finance.

⁴ For more information about P4R, see <http://go.worldbank.org/5XN35BS9C0>.

Crowdfunding-for-Development Initiatives

We have also surveyed leading crowdfunding-for-development initiatives in recent years. Donors and development organizations have acknowledged the role that crowdfunding platforms can play in improving access to finance around the world. Most institutional engagements with the crowdfunding industry have been to encourage local entrepreneurs to access such platforms by providing the necessary training and capacity building to run successful campaigns.

A recent study funded by the U.K. Department for International Development (DFID) concluded that more cooperation is needed between the development community and specific crowdfunding platforms to help finance strategies aligned with global development goals (Gajda and Walton 2013). Allowing the World Bank to access such platforms using its traditional set of financing tools would help to achieve this goal.

Potential Challenges

Several important risks and challenges need to be mitigated when designing and implementing new financial instruments related to crowdfunding:

- *Financial management risks*, particularly the risks of fraud, corruption, and money laundering
- *Organizational integrity risks*, such as the potential of funding from sources not representative of World Bank values
- *Additionality*, that is, whether the crowdfunded projects actually create net additional funding or instead cause donor governments to reduce their financing commitments
- *Implementation risks* if the Bank cannot commit sufficient human resources, training, and time to mount a successful crowdfunding campaign

Financial Management Risks

Financing World Bank operations through crowdfunding platforms may run the risk of fraud, corruption, and money laundering. Such risks are also associated with other traditional financial instruments at the Bank, which has set in place the relevant organizational units and procedures designed to minimize these risks.

In addressing such risks, it is important that the relevant vetting requirements for accepting crowdfunding companies as contributors to

Bank operations are in place. These requirements must be stringent and exhaustive. Under U.S. Securities and Exchange Commission regulations, for example, crowdfunding websites are registered as financial institutions that follow strict transparency and anti-money-laundering rules. A similar vetting process is in place for conventional EFO activities.

A second option would be to avoid the risk by limiting individual contributions via crowdfunding to a maximum ceiling. A third option would be to require automated registration and an online credit check for every contributor to a Bank crowdfunding campaign.

Integrity Risks

From an organizational integrity perspective, engaging with crowdfunding platforms runs the possibility of receiving funds from sources that are not representative of World Bank values. However, it could also be argued that such a risk exists with other sovereign and private sector donors that do not necessarily share the Bank's value system.

This risk area would call for further consultations and discussion with Bank client countries and the overall development community. One possible mitigating measure would be to require the electronic endorsement of a special World Bank disclaimer before proceeding to the payment screen on a crowdfunding website. Moreover, the World Bank selects the project proposals suitable for crowdfunding and thus ensures that all of the projects are in line with the World Bank's goals.

Additionality

Crowdfunding can become an important financing vehicle for the World Bank and for achieving the post-2015 development goals. But it could also create a risk that donor governments would cut back their own financing commitments. The World Bank has to ensure that crowdfunded projects will be additional to member states' contributions. Additionality is also central to convincing individual donors that they can make a difference. As a mitigating measure, individual contributions should not be counted as part of a country's ODA contributions.

Implementation Risk

Crowdfunding is not an easy task. It requires a whole team to run a successful campaign, and statistics show that 80 percent of funds are usually gathered from the project owner's personal networks. In addition, by institutionalizing access to crowdfunding platforms, it will not be

individuals running a campaign but rather an organization doing so. An organization as large as the World Bank may face difficulties in implementing successful campaigns for lack of the necessary human resources that can see campaigns to fruition. Campaigners need to be able to tap into their networks, pitch the idea, plan and execute a 360-degree marketing campaign, and keep the efforts up for at least a month. In this respect, assembling a “crowdfunding unit” or designating junior-level staff with crowdfunding responsibilities along with the necessary training could help mitigate the risk of arbitrary or unsuccessful implementation.

Role of the SDG Community

The successful implementation of this Idea for Action requires the active participation and commitment of the Sustainable Development Goals community. We believe that the proposal to create a crowdfunding-based financing instrument at the World Bank is a necessary and important step toward creating a more transparent and sustainable post-2015 development finance environment.

For their part, SDG-member countries—in light of their important role in ensuring the post-2015 agenda’s success—could support a crowdfunding campaign in two significant ways: (a) pledge tax deductions for any funds donated online to finance international development operations, and (b) commit to matched funding whereby every funder’s dollar is matched by another. NGOs, development organizations, and big donors can also commit to match funds before campaigns of specific interest to them are launched. This will help to drastically improve the incentives for people to contribute to crowdfunded development operations. Based on our experience, funders tend to be much more willing to donate when they know that their donation will be matched, let alone be tax-deductible.

We believe that the successful implementation of this proposal would help pave the way for a new paradigm of international development finance in which citizens can contribute directly to projects over the Internet. Ultimately, it would help cultivate more global awareness, understanding, and ownership of the much-needed SDGs.

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APPENDIX A

Honorable Mentions: Abstracts

THE APPENDIX PRESENTS ABSTRACTS OF the 12 submissions among the 18 finalists that received honorable mentions. They appear below in alphabetical order of proposal title.

Biodiversity Ambassadors: Strategies for Better Governance of Biodiversity through the Participation of Children and Youth with the Expansion of Ecoexperiencias in Mesoamerica

Team Ecoexperiencias

Brenda López Miramontes, Damián Chan K'in Miranda, Héctor Luis Albores León, Héctor Sandoval Vargas, and Adolfo Argüello Vives

Our proposal was first sent to the contest of the Organization of the American States: the TIC Americas Eco-Challenge. While analyzing the rules of the Ideas for Action competition, we asked ourselves, “Is the future of the next generations to admire mechanical animals? Admire plants that are designed in 3D?” Through our Ecoexperiencias “duality” framework, we discovered and redesigned the needs and feasibility of our current business activities in the Mexican southern state of Chiapas. We believe that this grassroots development framework can be applied to different development interventions, ranging from a local approach to a global one. We have applied it to different activities such as the consolidation of our operations’ technological platform, which has allowed us to expand globally, creating a win-win scenario: our local, national, and international customers get immersed in our culture and biodiversity universe, and the Lacandon indigenous group and other local stakeholders benefit from the different touristic services that Ecoexperiencias offers. Based in our framework, we explain how the possibility of materializing in Chiapas the “ECODREAMS Biodiversity Guide” in the short term, and in Mesoamerica the “Eco-Modules” in the medium term, can potentialize our kids and youth “Biodiversity Ambassadors” strategy for better governance of biodiversity globally.

Development Impact Bonds: Financing the Treatment of Neglected Tropical Diseases in Sub-Saharan Africa

Team Catalyst

Arnav Kapur, Will Glennerster, Anand Sharma, Tom Rutter, and Henrik Sachs

We propose the application of Development Impact Bonds (DIBs) to finance projects that aim to alleviate the incidence of neglected tropical diseases (NTDs). Under DIBs, private investors provide the initial financing for a service provider that then implements a development project. These investors get a return on their investment depending on the success of the project from the donor. We explain why there is scope to improve the current funding mechanisms used to finance the treatment of NTDs and how DIBs could both improve the effectiveness of available funds and increase the financing available for such projects. We would achieve this through our modifications to the existing model, which include encouraging competition between investors and creating a Bonus Committee to help align the incentives of these three key agents. Having demonstrated this specifically with our illustrative example—applying DIBs to finance projects treating schistosomiasis in Ondo State, Nigeria—we also argue more generally that DIBs may be a suitable method of financing a variety of different development projects and could play an important role in financing the post-2015 development agenda.

Diaspora Bonds for Small-Business Promotion: Integrating Return Migrants in Developing Countries

Team Migrants for Development

Victoria Finn and Paul P. Maeser

We identify return migrants as an optimal group of potential contributors to the financing of future development. They hold an interest and stake in the future of their home countries and have already been sending remittances that are often invested to foster development. Return and circular migrants possess unique skills gained abroad and continue to return home in increasing numbers. We discuss the challenges regarding return

migrants' integration into their home countries' labor markets and suggest that, through the creation of new small and medium enterprises (SMEs), return migrants can contribute to the economy through a more productive use of their skill sets. Successful SMEs represent an efficient and market-based, bottom-up development approach. Our solution to improve SME promotion is through expanding the use of diaspora bonds as an additional mechanism for funding young enterprises. We argue that development finance in a world of return migration requires creative collaborations between individuals, the private sector, partnerships, and nongovernmental organizations (NGOs) instead of the maintenance of deep, clear-cut lines between remittances, official development assistance (ODA), and foreign direct investment (FDI).

Ensuring Effective Implementation of Domestic Resource Mobilization for Successful Delivery of the Post-2015 Development Agenda in Africa

Team Africa Prosperity

Landry Signé and Matthieu Ostrander

The post-2015 development agenda will be adopted during the United Nations Summit in September this year, replacing the Millennium Development Goals (MDGs). Although substantial progresses have been made, most African countries have not reached most of the MDGs (1990–2015), partly because of the failure to secure the \$64 billion needed per year. Why did Africa fail to secure enough financial resources to meet the MDG targets, and what can be learned to remedy the situation and successfully mobilize resources for effective delivery of the post-2015 development agenda on the continent? Given the contingent nature of external resources, this note considers domestic resource mobilization (DRM) to be the key to effective delivery of the post-2015 development agenda. Literature broadly supports the use of DRM across the continent, but little research has examined the circumstances under which DRM is most successful. This note innovates by proposing a comprehensive, cross-sector, systematic analytical and predictive model that explains the key factors leading to failure or success, providing policy makers with contextual and operational policy options to help successfully implement DRM for effective delivery of the post-2015 agenda.

Group Captive Power Plants in Small and Medium-Scale Industrial Clusters in India

Team Y&R

Yugank Goyal and Ranjan Ghosh

Industrial energy provision from the power grid remains highly unreliable in developing countries, severely affecting small and medium enterprises (SMEs) in manufacturing. SMEs are the backbone of the Indian economy, employing 40 percent of the workforce and contributing to 45 percent of manufacturing output. Power outages affect their competitiveness, reducing economic growth and employment rates. As a way out, some firms set up their own backyard captive power plants (CPPs), although most cannot do so because of firm-level financial and infrastructural constraints. The popular residual option is inefficient, environmentally harmful diesel generators and individual CPPs.

We propose an alternative by setting up pooled group-CPPs (G-CPPs) in SME clusters of firms that face capital and land constraints. We assess and identify the differentiating motivators, costs, and constraints for a G-CPP. In our model, a special purpose vehicle (SPV) is set up through investment (equity or cofinanced debt) in a pool of assets by cluster firms. The SPV monitors credit quality deterioration and is administered independently. Electricity charges are proportional among member firms per their consumption, and surplus electricity is traded, generating additional revenues. Substitution of individual CPPs leads to huge carbon offsetting, which is used to purchase and trade carbon emission reduction (CER) certificates.

A Hybrid Financing Model for Orphan Diseases

Team Foster Capital

David Berdugo and Roma Poberejsky

Roughly 10 percent of all research and development funds (R&D) spent worldwide are devoted to needs in developing countries, where 90 percent of the world's population lives. Not surprisingly, then, only 16 of the 1,400 new medicines (or about 1 percent) developed between 1975 and 1999 were for “orphan diseases”—rare diseases that are nonetheless widespread in the developing world, affecting mostly the poorer population. We review

and describe several possible reasons for this lack of development and progress before covering existing attempts to solve this financial problem of underinvestment. However, these attempted solutions suffer from structural weaknesses resulting in asymmetric information and moral hazard, redundancy, and suboptimal capital allocation. Finally, we review the drug development process as well as the common framework of interaction between venture capital investors and R&D firms, after which we consider a model that exploits that structure to align incentives and solve the aforementioned problems. We illustrate how our solution overcomes the current market difficulties and conclude with a discussion of its feasibility and potential implementation as a governmental program.

Improving China's Health System: Using Internet Finance to Broaden Access and Affordability

Team Internet Health Lending

Fuming Guo, Finlay Mungall, and Tingting Guo

Our vision: We believe that people are born equal—and that they should be equal when facing disease, death, or other serious medical situations, no matter their financial circumstances. Chinese poor people today have a serious problem accessing health and medical treatment. Because the health care system is set up such that up-front payment for medical services is required regardless of any refunds received at a later date, lower-income peasants are often effectively shut out of care.

We want to build an Internet finance platform to help resolve this problem.

The timing is right because of two recent areas of reform in Chinese government policies: (1) rural land rights, registration, and certification work; and (2) rural land circulation. Together, these reforms provide peasants with high-quality, semiliquid collateral for which the property right had not been established before, opening up the possibility of pledging these assets against small loans to fund the up-front costs of medical treatment.

Internet finance has become a new, rapidly growing industry in China after taking its cue from popular U.S. models, but most such efforts in China to date have focused narrowly on consumer finance. We propose to apply this concept to the health care sector to provide convenient and efficient finance access for those in need.

The International Remittance Foundation: An Innovative Way to Mobilize Remittances for Economic Development and Bring the Most Basic Services to the Poor

Team Development Daredevils

Aanchal Anand and Colin Sollitt

Global remittances exceed the size of global development aid by almost three times. Yet, they are a largely untapped source of financing development. This proposal showcases a new, elegant method of funding international development projects using remittances. The idea is to establish the International Remittance Foundation (IRF), an innovative and independent organization designed to leverage remittance flows to fulfill the Sustainable Development Goals (SDGs) and bring the most basic services to the poor. By serving as a nonprofit provider of money transfer services, the IRF would apply revenues not used for money transfer operations toward a series of development initiatives aimed at assisting the communities that receive remittances through the IRF. As a sustainable solution for funding economic development, the proposed agency will allow a country's diaspora to drive their home country's economic development and the home country's civil society to design interventions without funding from political institutions. With a total of \$350 billion remitted each year around the globe, the IRF offers a unique, scalable solution to financing development. The IRF would offer tailored fee structures and withdrawal venues that would appeal to citizens, while the IRF's nonprofit status would allow for tax exemption and for a significant cost advantage over competitors.

Shark Tank Africa: Inspiring Innovators and Ecosystems through Aspirational Media

Team Shark Tank

Laura Baker, Caroline Gezou, Kate McNabb, Sania Salmon, and Josh Talbot

Efforts to support innovation and entrepreneurship in Sub-Saharan Africa have increased enthusiasm for start-ups but have not addressed

persistent mental models that hinder innovation. Depending on the country, mental models may include a romanticized view of entrepreneurship, mistrust of investors, low risk tolerance, and preference for traditional careers. The “Shark Tank Africa” television show concept aims to change the mental models of entrepreneurs, investors, and the broader viewership in select African markets. The show will do this by demonstrating the qualities of successful businesses and entrepreneurs, the best practices in investing, and the value of innovation and entrepreneurship to society. Much like its American counterpart, the reality-style program will follow several different entrepreneurs each week in their quest to secure investment. However, unlike the U.S. version of the show, “Shark Tank Africa” will highlight innovations in socially oriented industries (such as health care, agriculture, and energy). Backstories of the entrepreneurs will demonstrate the real “entrepreneurial journey,” and investor pitches and negotiations will illustrate how the investor-entrepreneur relationship can be one of trust and transparency. Investments on the show will encourage viewers who are investors to take risks and become more involved in their local communities. Episodes will prompt viewers to get involved in entrepreneurship through spotlights on incubators, accelerators, and other initiatives in the region. Contestants on the show can also advertise crowdfunding campaigns for their start-ups, which will drive traffic to new crowdfunding platforms and to other listed companies seeking funding. “Shark Tank Africa” will stimulate domestic investment for promising social enterprises that are tackling major development challenges.

Surya: A Public-Private Partnership Model for Agricultural Development in India

Team Synergy

Abhimanyu Roy, Sanjula Bhaumik, Alok Kumar, Rajiv Krishna, and Chinalee Garg

Surya addresses the prevalence of diesel-powered pumps in Indian agriculture. These devices burden farmers with high operational costs, which in turn decrease their yield and lead to lower revenue and profits. The Indian government has, in the past, provided subsidies to facilitate the adoption of electric pumps. This does not work because the required supporting infrastructure is not available in many parts of the country.

Surya tackles this problem through a concerted effort by all stakeholders in three distinct phases: First, the diesel systems are replaced by

solar-powered pumps provided through a proposed association between the government, pump manufacturers, and credit institutions. Second, a financial ecosystem is developed to facilitate loan repayment by creating a dynamic marketplace through a partnership between the government and agricultural exporters, using information technology solutions to eliminate a number of inefficiencies in the existing grain distribution system. Third, the farmers receive consultancy services that enable them to use their solar-powered system efficiently to create a sustainable impact.

We propose Madhya Pradesh as the region for a pilot version of Surya and identify possible partner institutions in the state. The proposal ends by summarizing all the costs that would be incurred and the benefits that would accrue to the farming population of the state.

Tit for Tatting: Empowering Community End Users in Determining Resource Use and Allocation for Domestic Resource Mobilization and Improved Efficiency in Public Spending

Team Bottom-liners

Leslie Ngwa and Kingsley Monde

There is a growing despair syndrome in Africa evidenced by a growing credibility deficit between the governed and those who govern. This credibility deficit has its roots in catastrophic governance, weak institutions, cosmetic democracy, and corruption, making it difficult to efficiently allocate and use resources. Our solution approaches this reality from the bottom, by focusing on what communities can do to increase community-level participation in resource governance. We posit that participative governance, participative democracy, and people-based approaches that integrate community voices in local community resource use and allocation are key tools in achieving more-efficient resource allocation and use in local communities. We emphasize the need to integrate structured community participation into the life cycle of community projects to guarantee greater efficiency in the stewardship of both influence and affluence. Our proposal is based on the understanding that the problem is not really about acquiring new resources, but about ensuring that existing resources are properly managed.

Vote for Ideas, Not Politicians

Team Politicuz

Luis Javier Rodríguez Parada, Juan Manuel Alvarado Nivia, Juanita de la Hoz, and Sheila Burkhardt

The project involves the consolidation of a multiplatform application (for iOS, Android, and web) to allow any citizen with a mobile device connected to the Internet to propose and vote for the uses of state resource allocations to his or her city or region (based public expenditure per capita). Powered by social networks, the platform may work as a massive tool to divulge and promote the Sustainable Development Goals (SDGs), since these are action-oriented, concise, and easy to communicate, bringing the conversation to the masses, especially the youngest.

The platform may also work as an effective way to focus and integrate government and civil society attention on specific issues, based on the Rio+20 main resolution to establish an inclusive, democratic, and transparent interinstitutional process that is open to all stakeholders with a view of sustainable development. In this way, democratic participation is promoted in an innovative and effective fashion, while also battling the vices of vote selling and cronyism (corruption). Most important, citizens would be able to feel real empathy for and participation in political issues as the process becomes more transparent and open to all participants within the platform.

