



CASE STUDY

Accelerating Measurement within Impact Investing: Five Critical Lessons

February 2018

■ Background and Challenge

Since its founding in 1959, the mission of the [Inter-American Development Bank](#) (IDB) has been to improve lives in Latin America and the Caribbean by addressing some of the world's most critical challenges, such as reducing poverty and social inequalities. Additional IDB goals include fostering development through the private sector and promoting regional cooperation and integration.ⁱ As part of these goals, IDB launched the [Multilateral Investment Fund](#) (MIF) in 1993. The MIF has effectively established itself as “the largest provider of technical assistance for private-sector development,”ⁱⁱ partnering with 39 member countries to fund more than 2,000 private sector development projects with total financial investments amounting to more than \$2 billion USD.

The IDB and MIF continue to look for new and improved ways to measure and track the impacts of their financial contributions. MIF investees—the enterprises who receive funding—also want to measure their impact in effective and resource-efficient ways. As one example, on which this case focuses, the MIF looked to improve and standardize the indicators they use to assess their inclusive distribution networks, which seek to generate business opportunities for micro-entrepreneurs in low- and middle-income economies. The MIF's lack of standardized indicators made it difficult to aggregate data, encourage learning across similar enterprises or demonstrate the collective benefit of financing these organizations to outside funders. However, these concerns are not unique to MIF or its investees. Other impact investors and their investees also face many of the same issues. This case provides key insights and solutions to address these challenges.

■ Proposed Solution

To address the challenge of standardizing indicators, MIF, in partnership with the Citi Foundation and Canada's International Development Research Centre, created the SCALA Inclusive Distribution Network (SCALA) in 2013 to promote economic growth in Base of the Pyramid communities in the region.ⁱⁱⁱ In addition to providing financing, SCALA promotes collaborative work through “laboratories” aimed at overcoming the common

Accelerating Measurement within Impact Investing: Five Critical Lessons

challenges that its inclusive distribution member organizations face while piloting and scaling. In 2015, SCALA formed the Metrics Lab—currently led by the William Davidson Institute (WDI) at the University of Michigan—to address the lack of existing mechanisms for measuring and comparing socio-economic and business impacts.

As part of this work, WDI reviewed and adapted six existing metrics frameworks and tools to develop the Inclusive Distribution Network Measurement Framework, a new indicator framework for boosting the impact of small inclusive businesses and their distribution networks.¹ WDI designed the framework to combine the strengths of these existing frameworks while simultaneously leveraging the many indicators that enterprises already collected and relied on regularly. Notable features of the framework are that it (a) consists of both socio-economic well-being and key business performance indicators, (b) organizes indicators by those that measure short-term and long-term impact, and (c) provides guidance for indicator selection based on the enterprise's stage of growth. Additionally, WDI mapped each framework indicator to its relevant Sustainable Development Goals (SDGs) so the pilot could provide MIF with a holistic understanding of poverty, which could track progress towards broader development goals.

Measurement enables investors and investees to be more deliberate in their use of data for course-correction and adaptive management.^{iv} For investors, creating a standardized set of indicators to be shared across enterprises is beneficial for aggregating data, using their resources efficiently and facilitating shared impact learnings across their network of investees. Standardized data can be collectively reviewed, providing a space to investors and their investees to speak using a shared language and reflect on lessons learned both within and across stakeholders. For investees, impact measurement can also expose vulnerabilities along the value chain that affect enterprise objectives^v and facilitate better management of common business challenges, such as turnover and client loyalty. Further, selecting indicators from a shared framework provides flexibility and learning opportunities to the organizations needing to select context-specific indicators.^{vi}

■ Methods

To assess the value and challenges of embedding the framework across the SCALA network, WDI pilot tested the framework with three SCALA social enterprises in Brazil, Nicaragua and Peru. From January 2016 to May 2017, WDI conducted the pilots using a six-phase research design (see **Figure 1**) that resulted in developing rigorous, context-specific surveys and data collection processes for each enterprise.² The methodology was tailored to each pilot and included several phases which were conducted remotely, including a pretest of two of the three pilot surveys. WDI selected this approach to give the organizations flexibility in how they would engage with WDI as a monitoring and evaluation (M&E) expert, while also allowing them to conserve limited financial resources. In some cases, however, the chosen methodology put more pressure on the organization to carry out certain activities where WDI's in-person expertise would have proven valuable. For instance, findings from the pilots revealed that the organization which elected to have WDI conduct the pretest resulted in more statistically valid survey measures (as demonstrated by Cronbach's alpha).³ Additionally, WDI provided diligent and detailed M&E education trainings through each phase to the enterprise's leadership and senior staff members.

1 Frameworks and tools referenced: Base of the Pyramid Impact Assessment Framework; Clinton Foundation Survey, which includes the Poverty Probability Index (PPI); OPHI Multidimensional Poverty Index; Poverty Spotlight; Social Progress Index, and; BSD's 3Es Framework. Indicators in the framework also map to the Sustainable Development Goals.

2 Each of the six phases had a specific goal. The pilots began with co-selection of context-specific indicators with enterprise management and ended with a final report, which included recommendations for future impact measurement activities.

3 Cronbach's alpha measures internal consistency - It measures how well several different statements fit together to measure the same construct (e.g., the constructs of self-efficacy, or empowerment).

Accelerating Measurement within Impact Investing: Five Critical Lessons

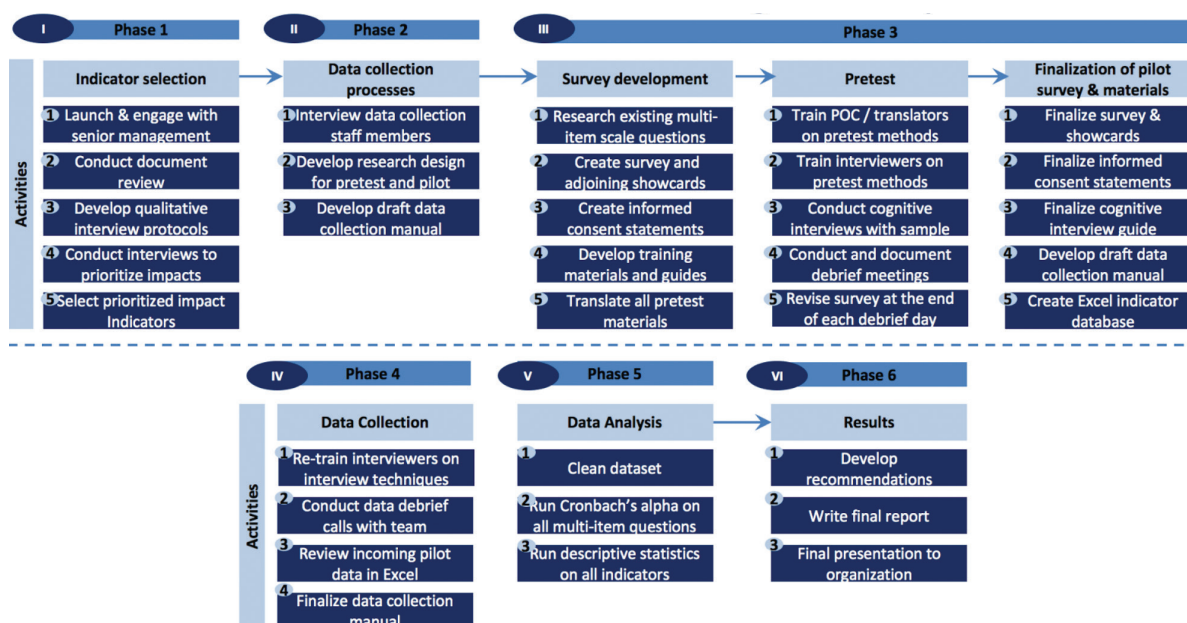


Figure 1: Activities conducted in the six phases of the pilots with each of the three organizations

The organizations that participated in the pilot were:

- **Chakipi Acceso Peru:** Chakipi was a last-mile distribution venture that first provided women with sales training and microcredit and then supplied them with products such as nutritious foods, personal care items, pharmaceuticals, and solar lamps that they sold in their communities. Launched by the Clinton Giustra Enterprise Partnership, Chakipi partnered with women's associations to recruit and train women across several rural and urban regions in Peru. This enterprise was closed in late 2017.
- **Kiteiras:** Kiteiras generates new income opportunities and empowers women in poor communities in Brazil through entrepreneurship training, healthy eating advice and life skills coaching. With support from a Danone Ecosystem Fund, Danone Brazil and Aliança Empreendedora, Kiteiras supports a micro-distribution network of door-to-door saleswomen and the "madrinhas," or godmothers, who support them.^{vii}
- **Supply Hope:** Supply Hope, a non-profit in Nicaragua, helps families earn income through micro-franchises such as Mercado Fresco, which means "Fresh Market." Supply Hope has more than 75 Mercado Fresco stores located in the homes of the women who own and operate them. Through these stores, women provide low-income communities with access to affordable and quality food. In addition to providing the necessary equipment and inventory, Supply Hope also trains operators on food handling, customer service, and money management.^{viii}

The pilots tested the following processes: indicator selection; data collection; survey development; and, data analysis. Additionally, by delivering in-person and remote trainings, WDI aimed to equip each enterprise with the knowledge, tools and processes necessary to collect data in a manner that reduced the burden of monitoring, evaluation and learning on their staff and stakeholders.

Accelerating Measurement within Impact Investing: Five Critical Lessons

Chakipi	Supply Hope	Kiteiras
Self-efficacy <ul style="list-style-type: none"> General Time management & planning Sales skills Communication 	Self-efficacy <ul style="list-style-type: none"> General Time management & planning Sales skills Financial skills 	Self-efficacy <ul style="list-style-type: none"> General Time management & planning Sales skills Financial skills
Empowerment at home <ul style="list-style-type: none"> Decision-making Influence on family 	Empowerment at home <ul style="list-style-type: none"> Decision-making Influence on family 	Empowerment at home <ul style="list-style-type: none"> Decision-making Influence on family
Quality of life of children <ul style="list-style-type: none"> Overall quality of life, health, and resources and support 	Quality of life of children <ul style="list-style-type: none"> Overall quality of life and health 	Use of mobile technology related to their Kiteiras activity
Nutrition for children	Nutrition for children	Support provided to children
Aspirations for children (qualitative question)	Aspirations for children (qualitative question)	Social network <ul style="list-style-type: none"> Personal Professional
Pride <ul style="list-style-type: none"> For organization 	Pride <ul style="list-style-type: none"> For organization For community 	Pride <ul style="list-style-type: none"> For organization
Poverty Probability Index (PPI)	Poverty Probability Index (PPI)	Poverty Probability Index (PPI)
Social support <ul style="list-style-type: none"> From Chakipi colleagues From Chakipi promoter 	Access to information, goods, and services <ul style="list-style-type: none"> Use and access to services Satisfaction of services in barrio 	Social Support <ul style="list-style-type: none"> From Kiteiras colleagues
Demographic and Other Indicators		
Gender; age; civil status; education level	Desire for registered (formal) business	Trainings received from other programs
Years of sales experience	Hours dedicated to enterprise (weekly)	Primary source of income; Other sources of income
Head of household (Yes/No)	Distribution channels used to make sales	Household size and composition (Children 0-5 years; 6-12 years; 13-18 years)
Household income earners	Ownership of solar products (at household level)	Prior income

Figure 2: Indicators selected across all three SCALA Metrics Lab pilot organizations

Findings

WDI found five valuable lessons from this work with the three pilot organizations.⁴ With these findings, we also offer relevant examples to highlight the intersectionality between this work and impact measurement in the field of impact investing. We believe that these findings are critical given the expressed need for increased capacity building among impact investors and investees, and funders and grantees more broadly.^{ix,x,xi,xii}

1. Use standard indicators, not standard measures

The pilot organizations were interested in measuring several of the same socio-economic impact indicators (see **Figure 2**), such as empowerment and self-efficacy.⁵ However, the original survey measures (i.e., the actual survey questions used to measure an indicator) needed to be adapted to the local context and were changed dramatically via pretesting for each organization. For example, all three pilot organizations wanted to collect Poverty Probability Index (PPI) data.⁶ WDI found that for the questions comprising the PPI, wording, definitions and even examples required edits. Had we not modified these measures, the survey questions would have failed to be properly and consistently understood by the interviewees, resulting in inaccurate data collection. Therefore, WDI developed the framework so the SCALA network

⁴ WDI recognizes the limitations of using a small sample size to produce this case study. The three organizations that participated in the pilot share many similarities in the types of products and trainings they offer, as well as the profile of the populations they engage with. WDI believes a case study approach is the most appropriate method for sharing the findings derived from the pilots.

⁵ Self-efficacy is one's belief in one's ability to succeed in specific situations or accomplish a task. For the pilots, we included survey measures which asked about self-efficacy related to skills such as time-management, communication, sales and finances.

⁶ The Poverty Probability Index (PPI), previously the Progress out of Poverty Index, is an internationally recognized measurement tool which consists of 10 questions about a household's characteristics and assets and has been adapted for use across many countries. The PPI tracks micro-distributors' changing access to information, goods and services (such as access to a refrigerator, blender, flooring, etc) as a proxy for change in household poverty.

would have a set of common indicators but no standard measures; thus, allowing the enterprises to use a “common language” regarding their impacts but not the same questions.

2. Capacity building at the investee level is necessary, and in demand

WDI found that it was critical to address the lack of M&E trained staff at each pilot organization. *The State of Measurement Practice in the SGB Sector Report* (2017) highlighted the same issue: more than 50 percent of the organizations surveyed did not have any staff serving in a full-time measurement role.^{xiii} In only one of our three pilots did we work directly with someone in such a role. Therefore, WDI needed to carry out multiple formal educational trainings as well as a series of informal discussions in this area. The goal of these trainings was to build in-depth M&E competencies,⁷ in addition to general research and data collection capabilities, among the enterprises’ leadership and staff so they could collect data independently without further support from external M&E experts after the pilots ended (see **Figure 1**).⁸ The same need also has been said to exist in the impact investing sector, and in the space of small and growing businesses more generally.^{xiv,xv,xvi} We found that each enterprise came to the pilot with different backgrounds and levels of M&E, research and data collection expertise. They also had different sets of tools and processes already in place. Therefore, WDI provided the enterprises with individualized support and training material.

The three pilots requested knowledge, support and guidance related to:

- **Selection of indicators.** How do you select the *right* indicators?
- **Survey design.** How do you create survey questions that are accurate and meaningful, i.e., reliable and valid? How do you ensure that the questions asked to the interviewee are understood as the researcher intended? And, what survey tools can be used to help respondents with low-literacy rates answer questions effectively?
- **Training staff.** How do you train staff to collect data? How should staff input (new and existing) paper-based data into electronic systems?
- **Data collection.** How often should data be collected? Where should data be collected, and by whom? How many people should be surveyed? How do you establish a “baseline”?
- **Data analysis.** How do you analyze the PPI? How do you leverage social indicators to address business challenges? What are useful ways to visualize the data?

3. Develop a Theory of Change⁹ as an initial step to articulate impact and decide what to measure

Pilot organizations with a coherent Theory of Change (ToC) were effectively able to determine *what* to measure. They selected relevant indicators in less time, as compared to enterprises with a limited understanding of their ToC.¹⁰ Even if their ToC¹¹ was incomplete, those enterprises were better able to articulate the projected pathways through which they expected change. As a result, they were able to

7 M&E that is relevant, resource-efficient, rigorous, and provides trustworthy data that is collected in a respectful manner.

8 Guidance on measurement-related capacity building, included: Survey development, pretest, data collection, and analysis.

9 Theory of Change explains how activities, processes, and assumptions of an organization, enterprise, or program “contribute to a chain of results (short-term outputs, medium-term outcomes) that produce ultimate intended or actual impacts.” (BetterEvaluation)

10 Some of the pilot organizations had working theories of change, while others did not. In fact, most were incomplete or still developing. Their approach involved an in-depth document review and targeted conversations with key staff in order to (a) fill in gaps to the theory of change and (b) select which indicators would be most appropriate for each organization.

11 Some organizations find that using the words Theory of Change is too academic and cannot be digested by business-oriented leadership and investors; and hence they call the same document a vision map, strategy map, or some combination of program, strategy, vision, pathway and/or map.

Accelerating Measurement within Impact Investing: Five Critical Lessons

create more informed and meaningful survey measures because they were able to articulate the outcomes and impacts they wanted to create through their operations. The pilots demonstrated that they also were less likely to fall into the trap of collecting too much data.

Additionally, the organizations with a more robust ToC were able to streamline decisions on *how* and *when* to measure the selected indicators because the organization's chain of inputs, activities, assumptions and risks, processes and "touchpoints" with their micro-distributors and micro-franchise owners were mapped. The pilot organizations who were able to connect their indicators back to a ToC were able to help staff see the "big picture" of why collecting specific data (e.g., each survey question) was important and how this data connected back to their organizational vision. Notably, similar findings on the importance of the ToC also have been reported in the context of impact investing.^{xvii,xviii}

Negative aspects of not having a robust ToC were revealed during the three pilots, including:

- **Late addition of important indicators:** In one pilot, we added indicators after the survey had been drafted. The request to include two additional indicators¹² required review and reorganizing of the survey. We found that if that particular outcome been explicitly incorporated into the organization's ToC, these indicators would not have been overlooked during selection.
- **Selection of unnecessary or outdated indicators:** During the pilots, we found that one organization was operating with an outdated ToC. Certain activities described in their ToC had not taken place in several months due to lack of funding. Even still, the organization chose indicators related to these activities based on the assumption that they would resume. Operating under an outdated ToC meant that unnecessary survey questions were created and asked to the micro-distributors and needless data was collected.

Recent evidence shows that many enterprises and impact investors are embedding the ToC into their measurement practices, further highlighting the use of the ToC for results-based management.^{xix}

4. Explicitly identify opportunities for linking social outcomes with key business performance indicators (KPIs) to strengthen the enterprise's mission and ability to scale

We found that the pilot organizations struggled with how to draw connections between their data on social and business metrics. All three organizations requested guidance in this area. Unfortunately, WDI was unable to provide robust training on this topic due to resource and time constraints.¹³ Although not all enterprise managers are convinced that evaluation can be used to improve businesses because they see it more as a checkbox to provide accountability, our pilot organizations' leadership felt differently: *"As social businesses, we can't make excuses about why we can't monitor our metrics. How are we going to really address the big social issues of our time without caring deeply about what the data is telling us we need to do differently? The funding will come if we can demonstrate impact. We have all been at the place where we realized our programs were not making the impact we hoped. It takes a lot of courage to face the facts that we need to change our approach."*

Wherever possible, WDI relied heavily on the organizations' proposed theory of change to offer examples and solutions for how each could specifically track and link their socio-economic and business impacts.

¹² Indicators: 'quality of life of children' and 'nutrition for children.'

¹³ A certain amount of guidance on analyzing and reporting on the connections between social and impact indicators was provided by WDI such as examples on how to categorize the data.

Accelerating Measurement within Impact Investing: Five Critical Lessons

For example, enterprises generally understand that their ability to retain micro-distributors can be influenced by the impact on the health of the micro-distributors' children. In another study, we found that increasing employees' self-efficacy increased employee retention rates. In reality, however, the most frequently collected data are primarily outputs, not outcomes or impacts. Therefore, without a well-developed theory of change these efforts were mute.

5. Identify a senior-level staff member to serve as a champion to help facilitate embedding of data collection into existing business processes

WDI found that it was essential to identify a champion to facilitate embedding of monitoring, evaluation, research and learning (MERL) within each organization. This finding may seem obvious. Nevertheless, it is included here to highlight how invaluable a champion is to conducting M&E and implementing adaptive management practices in organizations. In the pilots, two of the three organizations effectively identified champions; these champions were critical to (a) determining data needs, (b) understanding the goals of the pilot, learning the M&E technical content and sharing it internally with other staff, (c) prioritizing measurement within the organization, (d) ensuring that roles and responsibilities were assigned to staff at various levels within the organization throughout the duration of the pilot activities, and (e) ensuring activities moved forward in as timely a manner as possible. In cases where business managers viewed the evaluation team as a burden on their time and resources, the champion was useful to resolve these issues. Further, the existence of this champion was associated with whether the organization began using the indicators and tools we co-developed for adaptive management *after* the conclusion of the pilot. While we acknowledge the value of champions, other factors necessary to embed MERL include shared value for measurement across the organization, and systems such as Management Information Systems to embed MERL behaviors and data quality controls.

■ Moving Forward

We believe the learnings from this experience can, and should, be applied by impact investors as they seek to increase their capacity to measure impact. As such, we offer reflections on how impact investors and their investees—enterprises like Chakipi, Kiteiras, and Supply Hope—can address some of the obstacles we, and others, have observed related to capacity building for better impact measurement.

Impact investors can concentrate their measurement capacity building efforts with their investees toward creating M&E approaches that are efficiently embedded in operations. Without building M&E capacity of their investees, any socio-economic data that is collected may not be relevant or accurate. By using a theory of change and leveraging measurement champions among senior staff, investors can navigate the complex landscape of M&E challenges across their portfolios. Further, these champions can also share challenges and lessons learned more broadly. Our findings highlight that investors will get quality data only when the indicators and data collected are valuable to the enterprise. Impact investors should focus on creating an effective link between social impacts and key business performance indicators. Making these connections explicit will inform evidence-based decision-making for organizational sustainability and will increase the benefit to the clients served. One route forward would be to create a standardized set of social, economic and environmental indicators which investors can use as the foundation for working with their investees to select which indicators best measure their desired impacts.

Accelerating Measurement within Impact Investing: Five Critical Lessons

At the investee level, the focus should be on increasing staff capacity to collect data effectively. Organizations should conduct ongoing trainings with staff on how to administer surveys and input and analyze data. Enterprises need to begin envisioning how the data they collect directly relates to their theory of change so that they can more effectively decide what impacts to measure. Additionally, WDI would like to see business managers think about impacts in the short-, medium- and long-term. If they do, the business can act on output and near-term outcome data while keeping an eye on their contribution to longer-term outcome and impact goals. Honest and transparent communication about how the data will be used for decision-making should take place more frequently—both within the organization and with their investors. Building evaluation and measurement into program management should include identifying a “champion” who will explore the critical challenges and pain points that business managers face when collecting data. Importantly, when resources are tight, this means connecting with an expert—even if remotely, as we did for the majority of the pilots’ activities—to help guide the process of establishing monitoring and evaluation protocols within the organization.

Accelerating Measurement within Impact Investing: Five Critical Lessons

References

- i Inter-American Development Bank. (2018). About us. Retrieved from: <http://www.iadb.org/en/about-us/about-the-inter-american-development-bank,5995.html>
- ii Multilateral Investment Fund. (2018). Who we are. Retrieved from: <http://www.fomin.org/en-us/Home/about.aspx>
- iii SCALA Annual Meeting. (2016). Mexico City, Mexico.
- iv Mudaliar, A., Pineiro, A., Bass, R., Dithrich, H. (2017) The State of Impact Measurement and Management Practice. Global Impact Investing Network (GIIN). Retrieved from: https://thegiin.org/assets/2017_GIIN_IMM%20Survey_Web_Final.pdf
- v SCALA Annual Meeting. (2016). Mexico City, Mexico.
- vi MIT D-Lab Practical Impact Alliance. (2017) The Metrics Café: A Guide to Bring Funders and Grantees to the Table. Retrieved from: https://drive.google.com/file/d/1Pet_3eP54LN1x29eZEO8jjwMOxGwST4U/view
- vii Kiteiras Project of Danone Ecosystem Fund. (2016). Retrieved from: <https://medium.com/@Danone/kiteiras-project-of-danone-ecosystem-fund-4a73ffc26280>; <https://sharedvalue.org/groups/kiteiras---empowering-way-change-womens-lives-throughout-d2d-model>
- viii Supply Hope. (2018). Retrieved from: <http://www.supplyhope.org>
- ix Reisman, J., and Olazabal, V. (2016). Situating the Next Generation of Impact Measurement and Evaluation for Impact Investing. Rockefeller Foundation. <https://assets.rockefellerfoundation.org/app/uploads/20161207192251/Impact-Measurement-Landscape-Paper-Dec-2016.pdf>
- x Pineiro, A. and Bass, R. (2017). Beyond Investment: The power of Capacity-building support. Global Impact Investing Network (GIIN). Retrieved from: <https://thegiin.org/research/publication/capacity-building>
- xi Losoya-Evora, B. and Edens, G. (2017). State of Measurement Practice in the SGB Sector Report. Aspen Network of Development Entrepreneurs (ANDE). Accessed via http://c.ymcdn.com/sites/www.andeglobal.org/resource/resmgr/Files/The_State_of_Measurement_Pra.pdf
- xii MIT D-Lab Practical Impact Alliance. (2017) The Metrics Café: A Guide to Bring Funders and Grantees to the Table. Retrieved from: https://drive.google.com/file/d/1Pet_3eP54LN1x29eZEO8jjwMOxGwST4U/view
- xiii Losoya-Evora, B. and Edens, G. (2017). State of Measurement Practice in the SGB Sector Report. Aspen Network of Development Entrepreneurs (ANDE). Retrieved via http://c.ymcdn.com/sites/www.andeglobal.org/resource/resmgr/Files/The_State_of_Measurement_Pra.pdf
- xiv Reisman, J., and Olazabal, V. (2016). Situating the Next Generation of Impact Measurement and Evaluation for Impact Investing. Rockefeller Foundation. <https://assets.rockefellerfoundation.org/app/uploads/20161207192251/Impact-Measurement-Landscape-Paper-Dec-2016.pdf>
- xv Edward T. Jackson. (2013). Interrogating the theory of change: evaluating impact investing where it matters most, Journal of Sustainable Finance & Investment, 3:2, 95-110, DOI: 10.1080/20430795.2013.776257
- xvi Pineiro, A. and Bass, R. (2017). Beyond Investment: The power of Capacity-building support. Global Impact Investing Network (GIIN). Retrieved from: <https://thegiin.org/research/publication/capacity-building>
- xvii Edward T. Jackson. (2013). Interrogating the theory of change: evaluating impact investing where it matters most, Journal of Sustainable Finance & Investment, 3:2, 95-110, DOI: 10.1080/20430795.2013.776257
- xviii Adams, T. (2018). Social Impact Analysis: How to know if your work is making an impact. Acumen Online Course. Retrieved via: <https://www.plusacumen.org/courses/social-impact-analysis>
- xix Reisman, J., and Olazabal, V. (2016). Situating the Next Generation of Impact Measurement and Evaluation for Impact Investing. Rockefeller Foundation. <https://assets.rockefellerfoundation.org/app/uploads/20161207192251/Impact-Measurement-Landscape-Paper-Dec-2016.pdf>

ABOUT WDI

Established at the University of Michigan in 1992, the William Davidson Institute (WDI) is an independent, non-profit research and educational organization focused on developing market-based approaches in low- and middle-income countries. WDI's mission is to develop knowledge and capability that helps improve the effectiveness of firms and social welfare in emerging economies. We accomplish this through research and fieldwork in healthcare, education, finance and energy, and by helping multinational businesses, social entrepreneurs, and NGOs measure their impact and increase scale. WDI disseminates its research and findings through journal articles, business case studies produced and published by WDI Case Publishing, and on NextBillion.net, a leading online forum and platform for sharing ideas that improve the lives of the world's poor.



WILLIAM DAVIDSON INSTITUTE AT THE UNIVERSITY OF MICHIGAN

The William Davidson Institute at the University of Michigan
724 E. University Ave., Wyly Hall, 1st Floor, Ann Arbor MI 48109-1234 USA

TEL: 734-763-5020

FAX: 734-763-5850

wdi.umich.edu

✉ wdi@umich.edu [@WDI_michigan](https://twitter.com/WDI_michigan) [in](https://www.linkedin.com/company/william-davidson-institute) William Davidson Institute [YouTube](https://www.youtube.com/channel/UCWdIUmich) [William Davidson Institute](https://www.youtube.com/channel/UCWdIUmich)