Measuring the "impact" in impact investing

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This report was developed as part of an independent project through the Harvard Business School Social Enterprise Initiative in fall 2014, under the supervision of Alnoor Ebrahim. We welcome comments, feedback, and thoughts on this report. Please feel free to contact us: Ivy So (iso@mba2015.hbs.edu) and/or Alina Staskevicius (astaskevicius@mba2015.hbs.edu).

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Executive Summary

Introduction

The growth of impact investing has led to an unprecedented focus on impact measurement, with the aim of understanding both financial and social return on these investments. However, impact measurement is complex in practice, and varies in approach and rigor, with a number of methodologies and practices emerging from different organizations. This carries a risk for the emerging field of impact investing; if a certain level of rigor in impact measurement is not established across the industry, the label "impact investing" runs the risk of becoming diluted and used merely as a marketing tool for commercial investors.

The aim of this study was to deepen the understanding of the specific practices and methodologies that established impact investors are using to measure the social impact generated by their investments, and to analyze the conditions under which each measurement method is most relevant. The intended audience for our analysis is impact investors themselves, as well as social sector organizations, traditional funders, and evaluators.

As a part of our research, we conducted over 20 interviews with practitioners across a wide range of domestic and international organizations in the private, social, and public sectors. Recognizing that the nascent impact investing field may benefit from examining the practices used by more traditional funders, our interviews also included foundations, venture philanthropists, and other relevant organizations. A full list of our interviews can be found in Appendix A.

From these interviews and review of relevant reports and literature, we gathered information on the methods currently used by impact investors and other funders. We synthesized these findings to identify common objectives behind impact measurement and to develop categories of measurement methods. We analyzed the advantages and disadvantages of each category and developed recommendations for effective adoption as well as advancement for the sector. We also developed recommendations for two cross cutting themes – incentives and additionality. Finally, we recommend an integrated model of impact measurement that provides a comprehensive approach throughout the investment life cycle.

Findings and Analysis

Impact measurement efforts serve a number of different objectives throughout the investment cycle. We found that measurement efforts can be logically grouped into four key measurement objectives:

1. Estimating impact: Conducting due diligence pre-investment
2. Planning impact: Deriving metrics and data collection methods to monitor impact
3. Monitoring impact: Measuring and analyzing impact to ensure mission alignment and performance
4. Evaluating impact: Understanding post-investment social impact of an intervention or investment

These objectives feed into one another, as described below:

Figure 0.1 *Continuous Cycle of Measurement Objectives*

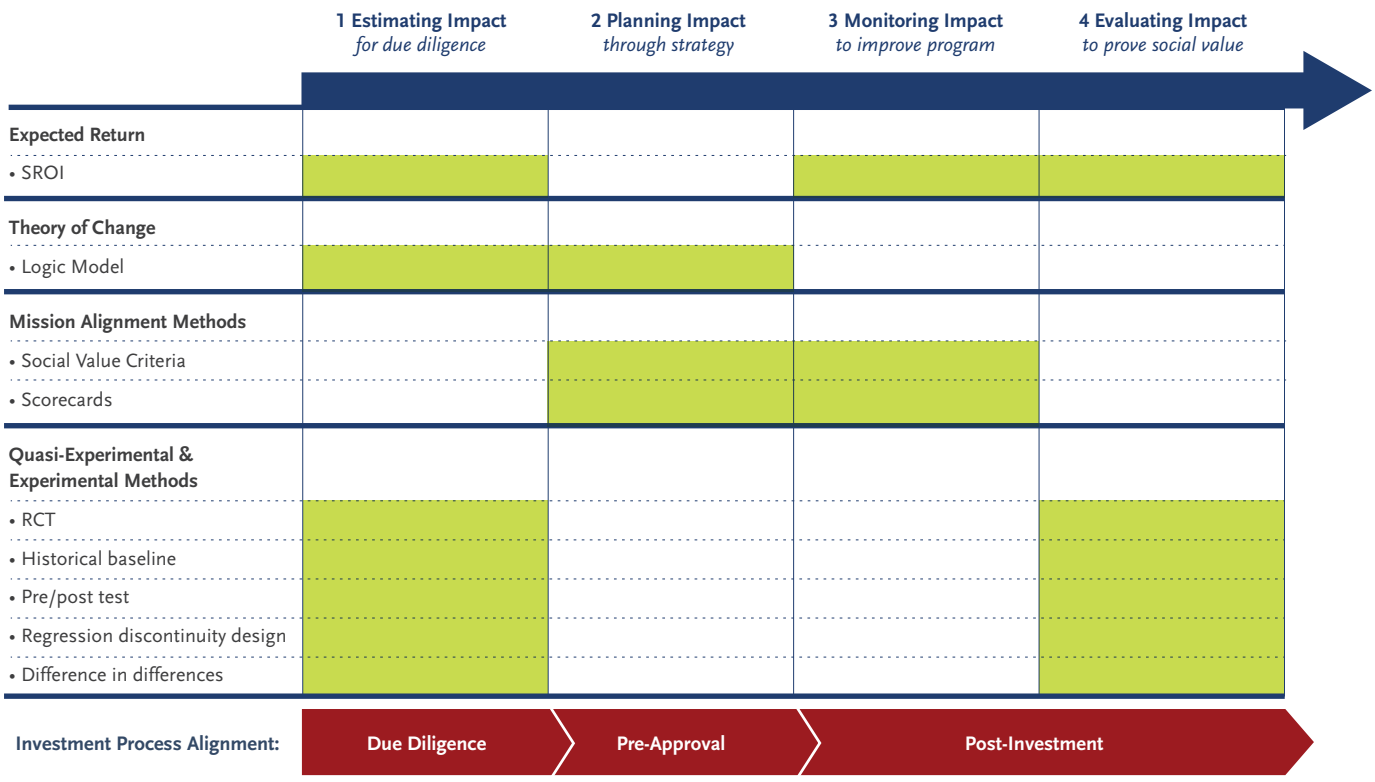
In addition to the four objectives mentioned above, impact measurement can also be used to report impact and communicate with various audiences.

Impact investors employ a number of methods to pursue the objectives outlined above. By identifying patterns that we found in our research, we have categorized four impact measurement methods:

1. Expected return takes into account the anticipated social benefits of an investment against its costs, discounted to the value of today's value. This expected return metric can take various forms; examples include Social Return on Investment (SROI), Benefit Cost Ratio (BCR), and Economic Rate of Return (ERR).
2. Theory of change and logic model explain the process of intended social impact. Specifically, logic model is a common tool used to map a theory of change of an organization, intervention, or program by outlining the linkage from input, to activities, to output, to outcomes, and ultimately to impact.
3. Mission alignment methods measure the execution of strategy against mission and end goals over time; examples include social value criteria and scorecards used to monitor and manage key performance metrics.
4. Experimental & quasi-experimental methods are after-the-fact evaluations that use a randomized control trial or other counterfactual to determine the impact of the intervention compared to the status quo.

Impact measurement methods generally serve specific objectives in the investment cycle. Mapping the methods against the objectives provides a view of how each of these methods can accomplish the different objectives. The following graphic illustrates how such methods have been applied to the various phases of impact measurement.

Figure 0.2 *Map of Measurement Methodologies to Measurement Objectives*



Each measurement method carries advantages and disadvantages. An overview of this analysis is included in the table below.

Figure 0.3 *Summary of Measurement Method Analysis*

Method	Common applications	Advantages	Disadvantages
Expected Return	• To estimate expected social return in assessing potential investments • To monitor and evaluate the social performance of investments	• Can provide a disciplined approach for decision making • Offers opportunity for organization to speak a common language • Similarity with return on investment can help gain private sector trust	• May unfairly penalize interventions working with the most challenging problems and populations • Can be perceived as inexact and constantly changing • Expected return calculations are only as strong as the data that feeds them • Risk of temptation in using expected return figure as standalone metric for funding decisions • Not applicable to interventions without quantifiable benefits • Does not take into account catalytic effects
Theory of change and logic model	• To understand path to intended impact as part of due diligence • To provide a framework for goal setting • To track and monitor progress of investment • To provide targets for incentive schemes • To provide a framework for illustrating impact logic in reporting	• Provides an easy to understand framework that is familiar in the social sector • Is a versatile tool that can serve multiple purposes • Allows investors to overlay dimensions that are important to mission • Allows investors to identify underlying impact assumptions for further review as necessary	• Identifying indicators to assess outcomes can be challenging • Lends itself to risk of reducing social change to a linear process
Mission alignment methods	• To monitor impact investor's portfolio against its mission • To monitor impact of investee against its mission	• Surveys and screens are inexpensive, straightforward ways to monitor mission alignment • Scorecards may resonate with investors due to familiarity with balanced scorecard in business	• Survey results or scorecards are only as meaningful as the data collection methods or KPI metrics that they capture • Scorecards may not allow for direct comparisons across different investments

Figure 0.3, continued *Summary of Measurement Method Analysis*

Method	Common applications	Advantages	Disadvantages
Experimental & quasi-experimental methods	• To assess outcome for payments in Social Impact Bonds and other impact investments • To test hypothesis of an investor's theory of change • To assess impact risk of a potential investment	• Experimental methods allow for robust cause-and-effect attribution • Quasi-experimental methods can provide some attribution evidence with more flexibility and lowest cost • Both of these methods can help to demonstrate additionality of impact	• Experimental methods can be expensive and resource intensive • Experimental methods not suitable in many situations, e.g. environments that cannot be controlled, interventions that are insufficient to drive outcomes on their own, situations where randomizing beneficiaries may be unethical • Quasi-experimental methods may be limited in their ability to rule out exogenous factors

Additional Findings

While impact measurement offers benefits for multiple stakeholders in an impact investment, there is a need for greater alignment for incentives to devote resources to measuring impact. Factors that contribute to low incentive to measure impact include:

- Perception of low value in impact measurement by entrepreneur
- Survey fatigue of beneficiaries
- Low fund investor appetite for robust measurement
- Limited incentive structures for delivery of social impact

We believe that addressing these factors are critical in making progress in measuring impact in this industry.

Additionality is an important consideration in thinking about impact. Additionality refers to whether the target social outcomes would have occurred without the investment. *Investor-level additionality* is the additional impact the investor is creating on the enterprise; *enterprise level additionality* is the additional impact that the enterprise has on society. As additionality is an important concept in understanding the actual difference that an impact investment is making, it should be an important consideration that cuts across many of the methods mentioned above.

Recommendations

Our recommendations consist of three components: a proposed integrated model of impact measurement, recommendations for investors and/or the sector on each of the measurement methods, and recommendations related to the cross-cutting themes of incentives and additionality.

Putting it together: Integrated model of impact measurement

Recognizing that investors vary in their level of maturity and resources – and that their investees may also vary in level of impact measurement sophistication – we propose a framework that caters different integrated measurement models to each stage of investor and investee.

Our "best practices integrated model" is most appropriate for a mature impact investor who is working with a sophisticated investee. In this model, we envision that the **pre-investment process** involves a number of tools to screen candidates and conduct due diligence, including:

- Using an **SROI calculation** to compare the impact of potential investments
- Mapping out the potential investee's **theory of change** to understand how the investment will convert theory to action and to identify causal links

- Drawing upon **existing experimental or quasi-experimental studies** to test the hypothesis underlying the causal links

After due diligence, the investor works with the investee in:

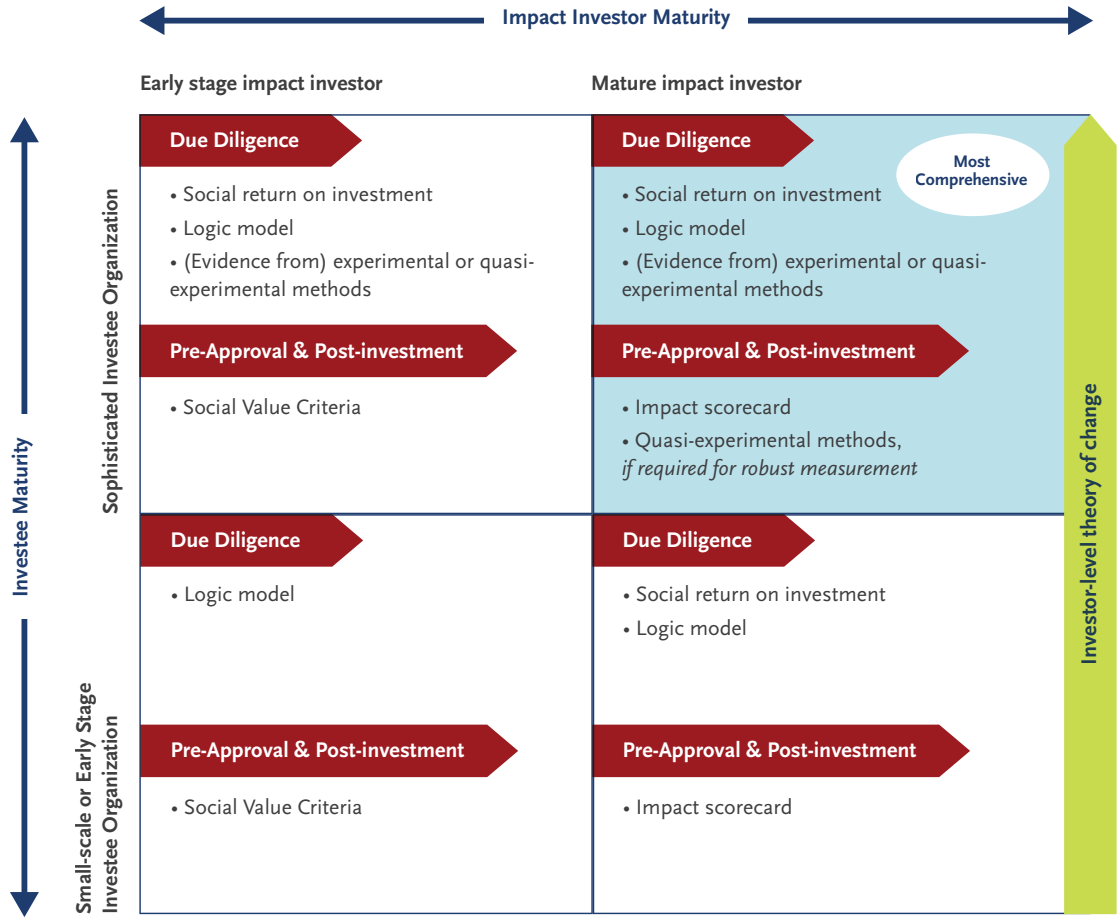
- Determining **key performance indicators (KPIs)** to track on the monitoring **scorecard**.
- Gathering and analyzing data on the KPIs post investment to monitor the social impact performance of the investee.
- If required, using a **quasi-experimental method evaluation in the evaluation stage**.

We encourage impact investors to **map their own theory of change** to understand how their investments translate into intended impact, and to conduct necessary research or evaluations to validate assumption.

The simpler adaptation

Our framework also proposes a simpler version for those that are just starting out. As a first step, we encourage investors to work with entrepreneurs to develop a **logic model** to map their venture's theory of change so the investor can understand and evaluate its path to impact. In the pre-approval stage, we suggest adopting **social value criteria** to rate investments, and to monitor the investee's progress post-investment.

Figure 0.4 *Integrated Model of Impact Measurement*



Note: Investee maturity should be determined by the impact investor based on the investee's size, reach, budget, or years in existence

Recommendations related to measurement methods

We have developed recommendations related to each of the measurement methods. While some recommendations are for investors, many are applicable at a sector level and concern what the impact investing field can do to advance the effective adoption of these methods.

Expected return

1. We believe that building a **clearinghouse of expected return figures and underlying assumptions** – or partnering with existing clearinghouses – would enable less established impact investors to gain access to data and evaluate their own ventures by comparison.

Theory of change and logic model

1. Similar to the standardization of output metrics, we believe that there is value in **knowledge sharing among organizations** to learn from each other's approaches and best practices on **leading indicators for outcomes.** There may also be opportunity to propose a common set of indicators for specific outcomes by funders or a collective of organizations.
2. Impact investors should consider applying the logic model to **map out their own theory of change** at the portfolio level to articulate their own path to driving impact and to identify its underlying assumptions.

Mission alignment methods

1. Impact investors can **adopt scorecards** that align with their theory of change to identify and track key performance metrics for their investments; this can also be aggregated into a portfolio view for high level analysis and reporting.
2. We believe that there is opportunity to increase the adoption of scorecards to effectively measure impact through forums and other educational events where established impact **investors showcase their scorecard templates and exchange ideas.**

Experimental and quasi-experimental methods

1. We believe that **drawing from and adding to "what works" databases** of evidence from previous experimental studies can add tremendous value to the community practices around a social issue.
2. Drawing from **principles of low cost RCT's** can reduce the cost and efforts related to conducting experimental and quasi-experimental evaluations.

Recommendations related to incentives to measure impact

Given the need for greater incentives to measure impact we recommend multiple angles:

1. **Take a survey respondent-centric approach**. A respondent-centric approach can mitigate some of the challenges related to both perception of limited value in impact measurement by the entrepreneur and survey fatigue of beneficiaries.
2. **Design innovative incentive structures**. Explore incentive structures such as a social impact carry, where portfolio managers are rewarded based on results related to measured social impact from investments under their management.
3. **Embed the impact measurement role.** Instead of assigning the work of impact measurement to a dedicated resource outside of the core investment process, impact investors should consider integrating their impact measurement work closely with their investment and portfolio management work.

Recommendations related to additionality considerations

Impact investors should encourage investees to **articulate and measure the additionality of impact** created by their ventures. Further, impact investors should actively incorporate the additionality of their investor-level impact in their measurement practices. More widespread communication about additionality by those impact investors who use it already will help LP's and other funders in the ecosystem understand the concept and push for it to be included in the impact reports that they receive.

1. Context

Since the coining of the term in 2007, impact investing has captured the interest and imagination of the business world, governments, and social sector organizations alike. In 2009, the Monitor Institute estimated the size of the impact investing market to be $500B over the next decade[1], with some analysts believing that this is a conservative estimate. Impact investing has taken on a global footprint and has gained the attention of governments around the world, as evidenced by the creation of the G8 Impact Investing taskforce and the White House's Social Innovation Fund.

This growth has produced an unprecedented focus on measuring the social impact resulting from these investments. Prominent literature and research has emerged in recent years on the topic of impact and performance measurement;[2] however, the impact measurement space is nascent and largely unstructured, with a number of methodologies and players emerging in a seemingly uncoordinated fashion. Our project builds upon the foundation laid by recent publications. It takes a more tactical approach to deepen understanding of specific practices and methodologies investors are using to measure the social impact generated by their investments.

As illustrated by Reeder & Colantonio in their 2013 paper[3], impact measurements can in theory fulfill a number of critical tasks benefiting different stakeholders:

- *Investors* can monitor progress and find out the extent to which their actions are helping or hindering social goals.
- *Portfolio managers* can use impact measurements to estimate and select their investments and benchmark the effectiveness of different investments.
- *Enterprises or Investees* can use metrics to determine progress and improve their impact.
- *Beneficiaries* can participate to help improve the effectiveness of social or environmental gains.

In addition to our own learning, our intention is to be helpful to **impact investing practitioners** by examining how other impact investors measure the impact of their investments, which may be useful as they build upon their existing impact measurement methodologies. Further, it is our hope that the findings of this project will be useful for a few other stakeholders:

- **Social sector organizations** (e.g. nonprofit service delivery providers, social enterprises) interested in learning about how impact investors are currently thinking about measuring impact; this can help them in structuring their own monitoring and evaluation functions.
- **Traditional funders** (e.g., foundations, aid agencies) interested in various ways of impact measurement taken on by impact investors, and how they may learn from these methodologies as they look to measure the impact of their own work. This may also be particularly useful for foundations that are considering involvement with impact investing, as this helps increase their familiarity with emerging players and landscape. It may also shed light on potential areas to fund as they are looking to build an enabling ecosystem to tackle social challenges.
- **Evaluators** (e.g. impact measurement organizations) to increase the adoption of measurement and evaluation methodologies, and to look beyond their own work to identify potential areas for collaboration.

1 *Freireich, Jessica and Katherine Fulton. "Investing for Social & Environmental Impact." Monitor Institute. January 2009.*

2 *For example, the G8 Social Impact Investment Taskforce published a report on "Measuring Impact: a subject paper of the Impact Measurement Working Group" in 2014 In 2013, London School of Economics (LSE) Cities partnered with the Young Foundation to publish a series of reports on the topic, including "Measuring impact and non-financial returns in impact investing: A critical overview of concepts and practice." The European Venture Philanthropy Association Knowledge Centre also published "A Practical Guide to Impact Measurement" in November 2012.*

3 *Reeder, Neil and Andrea Colantonio. "Measuring Impact and Non-financial Returns in Impact Investing: A Critical Overview of Concepts and Practice" EIBURS Working Paper 2013/01. London School of Economics and Political Science. October 2013.*

2. Definitions and Scope

Recognizing the larger context of recent research and publications—much of the literature on this topic has focused on the general discussion of challenges and high-level recommendations for advancement—**we focus on understanding the existing approaches and methodologies of measuring social impact in the impact investing market**. Limited literature has thus far showcased a wide breadth of organizations and their approaches to measuring impact. Because much of the development is happening in an uncoordinated fashion our hope is that by mapping the landscape we can help practitioners understand the various methodologies available and facilitate collaborations that will strengthen the development of impact measurement.

For the purposes of this paper, we define impact as organizations (i.e. not individuals) that make financial investments with the intention of generating a social and environmental impact alongside a financial return. We look at investments in both domestic (US, Canada, and UK) markets and in developing countries. We define "impact" not as the furthest step of a logic model as is depicted in some literature, but in a broad sense often used by practitioners to describe the positive change generated by an investment. Overall, we define impact measurement as the activities the investor organization takes to evaluate and report on the social change generated.

The concept of evaluating the effectiveness of social programs is not new. Monitoring and evaluation has been a prominent consideration in international development for decades and long before "impact measurement" became a buzzword. As such, we have also studied funders such as government, aid agencies, foundations, and venture philanthropists and drawn upon their impact measurement practices for our analysis. Some of the "spotlights" featured in this paper will highlight practices from these organizations. Finally, our research also involved consultations with academics and market-building intermediaries such as the Global Impact Investing Network; these were informative in providing a systems-perspective to the analysis.

In addition to reviewing prominent literature on this topic we conducted 20+ interviews with employees across a wide range of domestic and international organizations in the private, social and public sectors. Interviewees included practitioners from large banks, for-profit and non-profit impact investors, venture philanthropists, foundations, social impact bond intermediaries, government agencies, market-building organizations, academic institutions, and other sector experts.

The following table outlines the organizations that we studied as part of this project.

Figure 2.1 *Organizations Interviewed*

Development Agencies & Foundations	Venture Philanthropists	Impact Investors	
• Social Innovation Fund	• New Profit	• RSF Social Finance	• LGT Venture Philanthropy
• Robin Hood Foundation	• Draper Richards Kaplan	• Bridges Ventures	• Omidyar Network
• REDF		• Grassroots Business Fund	• Bank of America Merrill Lynch
		• Acumen	• JP Morgan
		• Root Capital	• Goldman Sachs

Other interviewees	
Intermediaries and market builders	• Global Impact Investing Network • Social Finance US • Third Sector Capital Partners • Social Impact Bond Assistance Lab
Academia	• Researchers from Harvard Business School
Evaluators	• MDRC
Consultants	• FSG

We recognize that this is only a small sampling of a large and rapidly growing industry, and that our findings may not necessarily be representative of the entire field; however, our hope is that our study highlights some prominent methodologies and examples to encourage learning and discussion.

3. Objectives Behind Impact Measurement

Our findings indicate a variety of objectives that drive impact investors' measurement work. We have organized these objectives into four main groups:

- **Estimating impact**: Pre-investment or as a part of their due diligence process, impact investing organizations are interested in estimating the impact that a potential investment may create. This understanding helps the investor prioritize where to invest its resources to create its intended impact.
- **Planning impact:** During deal negotiation and/or shortly post-investment, impact investors use tools and methodologies to devise a plan to measure impact. For example, developing a data collection plan to monitor and evaluate impact during the life of the investment.
- **Monitoring impact:** Some impact measurement methodologies are used to monitor progress. This may supplement financial data to inform whether the investee's performance is on track, and may compare target vs. actuals on specified impact metrics. This may be done on a continuous cycle throughout the life of the investment.
- **Evaluating impact:** At the end of an investment cycle, investors may be interested in evaluating the impact created by the entire investment.

Similar to the continuous improvement cycle of plan – do – check – act, these objectives feed into one another, as depicted at right.

Figure 3.1 *Continuous Cycle of Measurement Objectives*

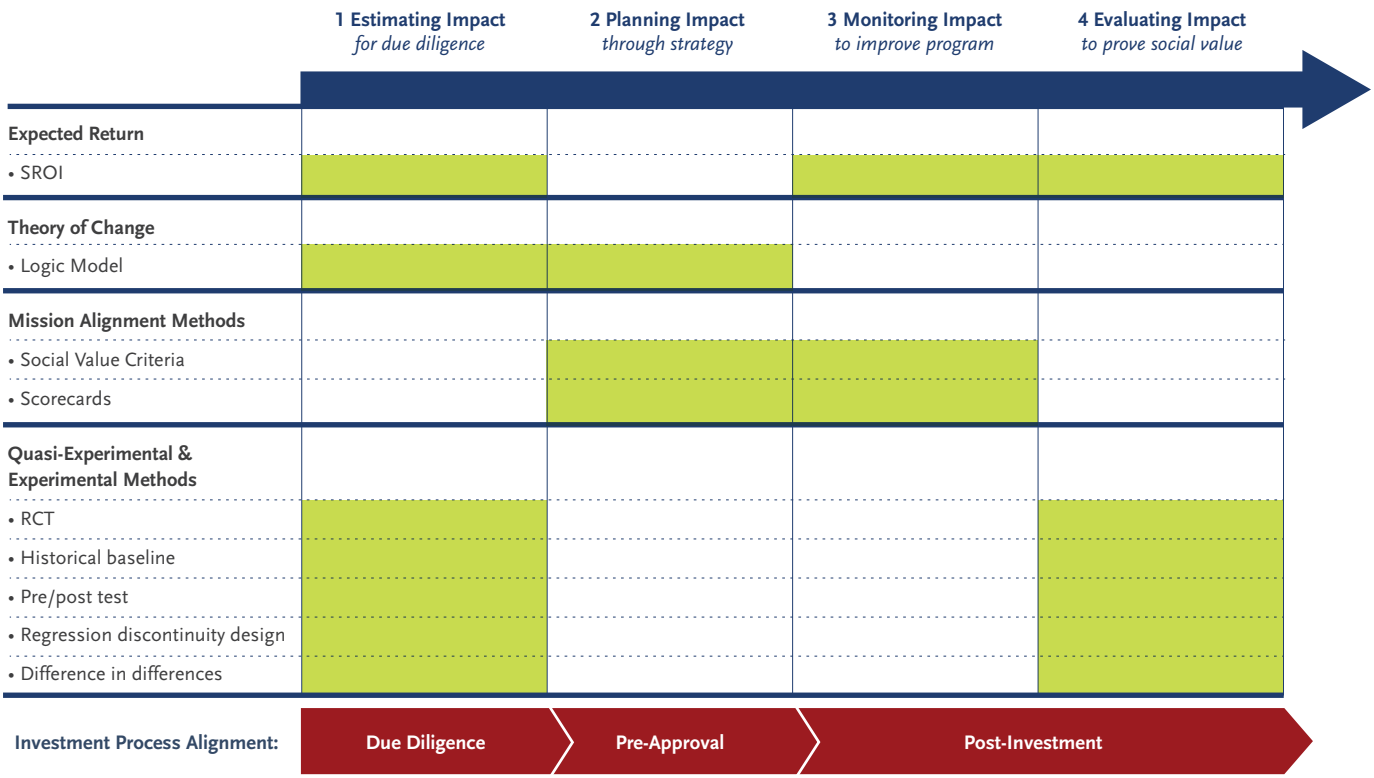
A fifth objective behind impact measurement that cannot go unmentioned is the **reporting impact**, which uses the measurement activities as a part of the four objectives noted above to communicate impact findings with various audiences; these include beneficiaries, service providers, or funders.

4. Understanding Current Methodologies

Multiple methodologies of impact measurement currently exist and are used by various impact investors. This section builds on the recent work by Alnoor Ebrahim and Kasturi Rangan[4] on "assessing social performance" and describes the methodologies we discovered to be most commonly used.

The following graphic lists these methodologies and how they have been applied to the various phases of impact measurement. The remainder of this section will explore each of the methodologies by discussing definitions, applications (including specific examples by impact investors), assessment, and recommendations.

Figure 4.2 *Map of Measurement Methodologies to Measurement Objectives*



4 Ebrahim, Alnoor, and V. Kasturi Rangan. "What Impact? A Framework for Measuring the Scale & Scope of Social Performance." California Management Review 56, no. 3 (Spring 2014): 118–141.

4.1 Expected Return

Definition

In the private sector, investors use expected return measures to compute the expected value of their financial investments. It is typically calculated as the weighted average of the likely profits (benefits minus costs) of portfolio assets, weighted by asset class, and brought back to present value as needed. A similar methodology can assess expected returns in a social context. Indeed, expected return—used by grant-makers and impact investors—measures the anticipated benefits of an investment against its costs, discounted to the value of today's currency. This expected return metric can take various forms; examples include Social Return on Investment (SROI), Benefit Cost Ratio (BCR), and Economic Rate of Return (ERR).

Social Return on Investment (SROI)
According to the SROI Network, SROI is "a framework based on social generally accepted accounting principles (SGAAP) that can be used to help manage and understand the social, economic and environmental outcomes."[5] SROI was developed from social accounting and cost benefit analysis. SROI puts a monetary value on social benefits, and compares public and private benefits to costs.

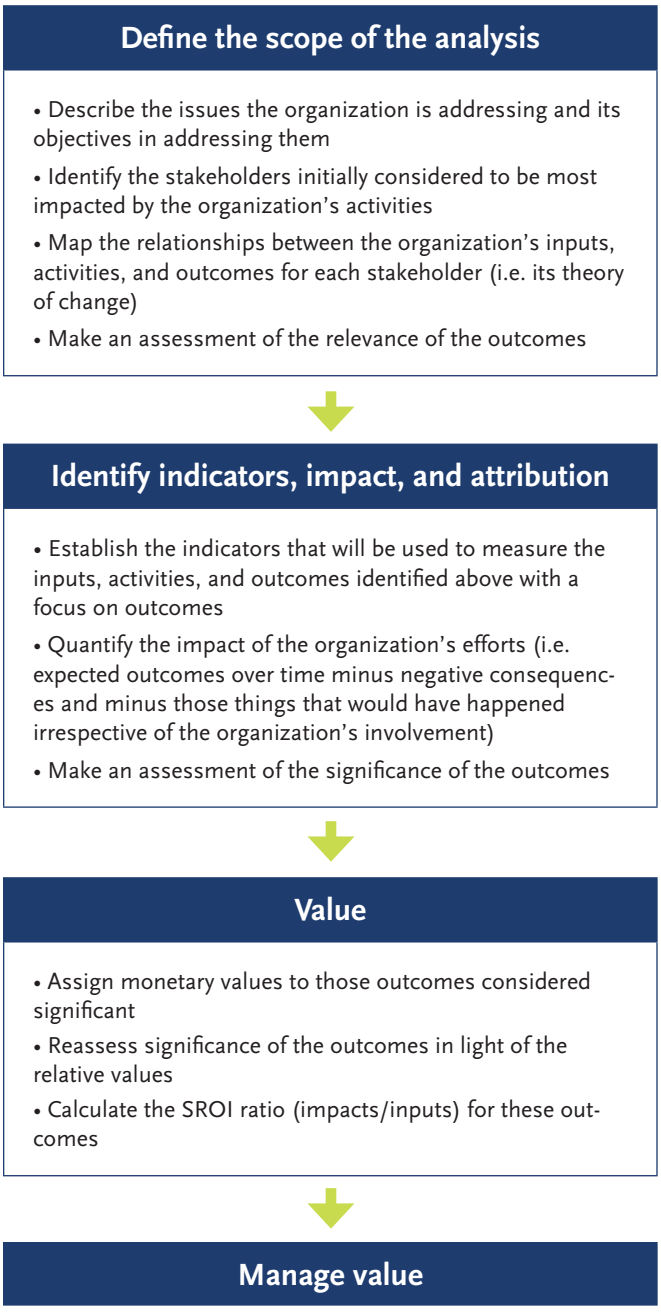
In its simplest form, the SROI ratio can be calculated by:
SROI ratio =
(Present Value of Impact) / (Value of Inputs)

It can take the form of a %ROI, a ratio, or a Net Present Value (NPV) number.

There are two types of SROI. The first is evaluative, which is conducted retrospectively and based on actual outcomes that have already taken place. The second is forecast, which predicts how much social value will be created if the activities meet their intended outcomes. This is especially useful in the planning stages of an activity, or if existing data does not enable you to compute an evaluative SROI.

The SROI method is a multi-step process. The diagram below from the SROI Network summarizes the steps in the SROI process.[6]

Figure 4.2 *Steps in SROI process*[6]



5 *Nicholls, Jeremy, Eilis Lawlor, Eva Neitzert, and Tim Godspeed. A Guide to Social Return on Investment January 2012.*

6 *GIIRS & SROI Network. "GIIRS and SROI: What is the relationship?" February 2013.*

In this methodology, the outcomes are ideally determined through a process that involves those experiencing the outcomes. Negative (including unintended ones) and positive outcomes should both be included.

Methodologies that apply a similar approach include Benefit Cost Ratio used by Robin Hood Foundation, and Economic Rate of Return as used by Grassroots Business Fund. These variations on expected return will be explored in more detail in Spotlights under the Application section below.

Application

Generally, we discovered that the expected return assessment is used as an anticipatory means of evaluating which investments the organization would like to fund rather than a retroactive measurement of outcomes and impact of investments already made. Specifically, funders use measures of expected returns to internally rank potential grant applicants, comparing the impact of similar and dissimilar programs in a common language, and to assess a potential investment's fit.

As in the private sector, expected return is certainly not a guaranteed rate of return. Nevertheless, it is useful in forecasting the future value of an investment or an entire portfolio, and provides a benchmark from which to compare.

Beyond its use in due diligence processes to make funding decisions, organizations use expected return for several other purposes[7]:

- **Monitoring and reporting**: Some investors continue to adjust expected return calculations as more information becomes available throughout the life of an investment. This can inform reports to stakeholders on how much social value has been generated over the life of an investment.
- **Vocabulary and communication**: By translating disparate output and outcome metrics into economic terms, expected return measurement enables grant-makers and investors to speak a common language and compare investments directly – both upfront and after the fact.
- **Transparency**: Expected return measurements allow grant-makers and investors to remove personal biases in investment decisions. While expected return calculations alone are certainly not the reason to make investment decisions, they enable everyone to see project financial implications of investments in a transparent way.
- **Baseline for investment**: The expected return calculations hold the impact investor responsible for a metric, incorporating into the social sector the accountability that the private sector enjoys.

Spotlight #1: REDF

REDF is a California-based nonprofit that leads a pioneering effort to create jobs and employment opportunities for people facing the greatest barriers to work.

REDF funds social enterprises that they believe (1) address this market failure in employment, and (2) have a sustainable, long-term business model long term. With SROI, REDF saw an opportunity to measure and bring together both of these missions by blending social cost savings and financial analyses. This resulted in "a snapshot that [REDF calls] the "blended value" – the financial and social return achieved by these social enterprises."[8]

When using SROI to make investment decisions, REDF computes the increase in *economic value* created as a result of the investment, as well as the increase in *socio-economic or social value* generated by the investment.

Economic Value + **Social Value** = **Blended Value SROI**
or Total Business and Social Benefits

7 Weinstein, Michael M. and Cynthia Esposito Lamy. "Measuring Success: How Robin Hood Estimates the Impact of Grants". Robin Hood. February 2009.

8 Javits, Carla I. "REDF's Current Approach to SROI." REDF. May 2008. Pg. 1.

For instance, if REDF wants to provide a down payment for purchasing a building that will house a social enterprise in San Francisco, they estimate first economic value over time: estimated net income of business performance attributed to investment. They then determine socio-economic or social value over time; in this case, these may include federal taxes from new jobs created by the enterprise, and government savings from food stamps and Temporary Assistance for Needy Families (TANF), *minus* the estimated social costs. Adding these together gives the total benefits, from with a net present value can be determined and an SROI estimated.

A 2000 REDF report[9] on SROI provides a simple illustration of two cash flows contributing to calculations of a Social Return Ratio and an SROI rate:

Figure 4.3 *Excerpt of SROI Calculations from REDF Report*

SROI Calculations ($000s)

Time Period											
0	1	2	3	4	5	6	7	8	9	10	Perp.
Business Cash Flow											
$3,182	250	380	420	510	620	750	840	950	1,170	1,290	1,400
Social Benefit Cash Flow											
$2,373	200	254	328	412	496	589	653	786	816	920	1,000
Net Present Value											
$5,555											

Present Value of the Benefits / Present Value of the "Costs"* → **Social Return Ratio**

(NPV Bus. Cash Flow + NPV Social Benefits) with IRR calculation provides: → **SROI Rate**

Net Business Income + **Net Social Benefit** = **Blended Value SROI** *or Total Business and Social Benefits*

Net Income of projected business performance *attributed to investment* + **Social Benefits** *(Taxes from new jobs, Government savings)* -(minus) **Social Costs** = **Blended Value SROI** *or Total Business and Social Benefits*

** = Present Value of the "costs" in this case is the grant equity contributed to the organzation by government and foundation sources*

9 *Emerson, Jed, Jay Wachowicz, and Suzi Chun. "Social Return on Investment: Exploring Aspects of Value Creation in the Nonprofit Sector." REDF Box Set Vol. 2 – SROI Paper. 2000. Pg. 132-145.*

SROI is much more than a single number. SROI builds on the social science data included in a typical cost benefit analysis and should be considered as an entire analysis, rather than as a stand- alone figure. SROI analysis is a way of reporting value creation over time. REDF prides itself in awarding funding in a "highly investment-like way" based on these calculations.

Changes in SROI Measurement at REDF

As with other organizations, REDF constantly seeks to improve its measurement practices. After receiving Social Innovation Fund (SIF) funding, in 2011, REDF embarked on a journey that has enabled them to refine their SROI calculation.

> "REDF placed social enterprise (SE) employment at the heart of its five-year strategy to transform how people with many employment barriers transition into the workforce. At this time, REDF also committed to conducting an evaluation to support the success of the SE approach and selected Mathematica Policy Research to design and implement the evaluation. The evaluation, which is called the Mathematica Jobs Study (MJS), is structured to address the general research question, How do social enterprises serve individuals with multiple barriers to employment?"[10]

Through the MJS Study's January 2015 report "Economic Self-Sufficiency and Life Stability One Year After Starting a Social Enterprise Job," Mathematica introduces a slightly different way to calculate SROI worth noting.

Using both collected information on real dollars (e.g., income, cash assistance) and "fixed effect models" (generalization of the difference-in-difference approach to convert, say, healthcare outputs to measurable dollars), Mathematica conducted a Cost-Benefit analysis (CBA) to different groups of stakeholders. (Before this study, REDF would measure benefits accrued based on REDF's investment alone.) In this new study, while the general calculation of SROI is similar, "the CBA explores the value of the average dollar spent by the social enterprises funded by REDF from four perspectives: (1) society as a whole (the total benefits of the SE's expenditures), (2) SE workers (benefits to individuals served by the SE's social mission), (3) the SE itself (as a business venture), and (4) taxpayers not directly involved with SE (benefits to the community, excluding those directly benefiting from the SE)."[11] Only after each CBA is calculated does Mathematica bring together all costs and benefits to calculate an overall SROI.

10 *Rotz, Dana, Nan Maxwell and Adam Dunn. "Economic Self-Sufficiency and Life Stability One Year After Starting a Social Enterprise Job". Mathematica Policy Research Report. 2015. Pg xvii.*

11 *See 10, page 36.*

Spotlight #2: Grassroots Business Fund (GBF)

Grassroots Business Fund invests in businesses in emerging markets to drive economic development and improve local standards of living.

GBF uses an Economic Rate of Return (ERR) calculation to understand the main economic benefits generated by their portfolio companies and to distinguish the economic benefits accruing to low-income groups. They calculate the ERR originally during the due diligence phase of the investment, and then recalculate it throughout the investment life cycle.

GBF's ERR calculation expresses a return on the total capital needed to operate a portfolio company (not just GBF's investment), using 10 years of economic projections. To calculate this, GBF includes the main economic benefits generated for various stakeholder groups, expressed as an annualized social and economic return relative to the capital employed to produce that impact by applying an IRR calculation to the economic flows. From these projections, GBF observes the total value generated by the company, as well as the portion of those benefits that accrue to low-income stakeholders (suppliers and workers).

GBF revisits these projections on an annual basis, incorporating new information about client performance or refining driving assumptions through survey work with the client. When possible, GBF cross-checks client-reported data against the financial information they receive, supplemented by what they observe through work with clients. GBF has also conducted supplier-level surveys with select clients to gather demographic information about the suppliers and workers of their clients and to establish a baseline data set to track progress over time.

Spotlight #3: The Robin Hood Foundation (Robin Hood)

Robin Hood is New York's largest poverty-fighting organization, focused on finding, funding and creating programs and schools that generate meaningful results for families in New York's poorest neighborhoods.

Based on similar principles as the SROI, Robin Hood Foundation uses Benefit-Cost ratio to capture a "best estimate of the collective benefit to poor individuals that [their] grant creates per dollar cost to Robin Hood – a direct analog to commercial return."[12] At its core, the BCR relies on translating the outcomes and typical metrics of programs that can vary widely – from job training to pre-school to micro-lending – into monetized values that measure poverty fighting. The BCR is calculated as follows:

(Poverty-Fighting Benefits of a Program / Costs to Robin Hood) x Robin Hood Factor

The numerator reflects a dollar estimate of the poverty-fighting benefits of the program to be funded, often operationalized in terms of the private benefits that accrue to poor individuals over their lifetimes as a result; the BCR leverages the expertise of Robin Hood's program officers and social science literature to come up with quantitative translations for benefits. The denominator represents the cost to Robin Hood of the grant. The Robin Hood Factor is an estimate of the portion of the benefit that could reasonably be attributed to Robin Hood's funding. This takes into account the organization's capacity to tap into alternative funding sources, and the potential implications of Robin Hood not funding the organization. In effect, this considers the additionality in Robin Hood's role.

12 *Weinstein, Michael M. and Cynthia Esposito Lamy. "Measuring Success: How Robin Hood Estimates the Impact of Grants". February 2009. Pg 16.*

BCRs help an organization determine which grants will yield the higher impact. Each BCR helps the Robin Hood estimate the benefit of an investment "(measured in part by the projected boost in future earnings) that each grant creates per dollar cost to Robin Hood."[13] This approach allows the Foundation to shift funds from lower BCR programs to higher BCR programs, ensuring that the dollar can go as far as possible. As such, the BCR is useful not only in estimating impact upfront, but in monitoring impact as well. In fact, the Robin Hood computes the BCR on an ongoing basis and often doubles investments where the BCR is highest during the re-investment / re-granting process.

For instance, as described in their 2009 report on "Measuring Success," a BCR may help staff determine:

> "whether to invest in a high school that graduates 50 former dropouts or to invest the same amount of money in a training program that places an extra 75 workers in long-term jobs. The innovative methodology compares the poverty-fighting value of any two grants, no matter how different in purpose. In effect, we estimate benefit-cost ratios to compare the value of apples (graduating 50 more students from high school) with the value of oranges (training an extra 75 home health aides)." [14]

Our Assessment

Advantages of Expected Return Measurement

More than anything else, our research indicates that **the expected return methodology can provide a discipline for decision-making.** The analysis forces organizations to frame their argument to make a case for clear expected benefits and costs.

Additionally, because expected return is a quantitative measure, **it offers an opportunity for organizations to speak a common language** – at least internally – when estimating the impact of certain grants or investments. Concrete numbers allow one to at least partially remove personal biases from funding decisions.

Lastly, expected return analysis can help give clarity to how meaningful the work a social enterprise performs is by analyzing the components of its economic impact on society. By putting impact in economic terms, measures of expected return can be used to **gain further private sector trust**; this can help impact investors attract further private capital.

Concerns with Expected Return Measurement

While expected return measures allow a variety of different impacts to be boiled down to a quantitative figure to facilitate easy comparisons, this can lead to **the risk of making comparisons that unfairly penalize interventions that work with the most challenging problems and populations**. Social return is often context dependent, and may be easier to achieve in environments with better infrastructure or other enabling factors. For example, one can imagine the dangers of focusing on SROI and getting the most "bang for buck" when choosing between investing in education in two very different parts of the world (e.g. between a rural village in a developing country vs. urban city in developed country). While one may yield a lower SROI due to the challenges that are required to overcome to achieve education objectives, it does not necessarily mean that it is less worthwhile than the other. Investors should use expected return measures thoughtfully to avoid taking money away from investments that can be very impactful even if the numbers may not be available or indicate as such.

13 *Weinstein, Michael M. and Cynthia Esposito Lamy. "Measuring Success: How Robin Hood Estimates the Impact of Grants". Robin Hood Foundation. February 2009. Pg 5.*

14 *See 13.*

The expected return methodology can be perceived as inexact and constantly changing. Clearly, wide variability exists in ways to calculate expected return. Not only can expected return take on various forms, but the calculations themselves depend on what long-term societal savings are included in the calculations, for what period of time, and so on. For example, REDF's SROI measure has the tendency to focus attention upon cost savings to society, but does not adequately incorporate many of the ways that employment improved individual peoples' lives.

E**xpected return calculations are only as strong as the data that feed them.** Computation relies heavily on the detailed expertise of program officers and the social literature to which they have access. While this may be relatively accessible for benefits of decreasing recidivism rates in the United States, similar data may not be available in less developed countries.

Besides these disadvantages, measures of expected return also have three additional limitations:

- **Cannot serve as standalone metric for funding decisions.** Measures of expected return such as the BCR – while logical – are not the Holy Grail of grant-making or investment selection decisions. While there may be temptation to focus on the expected return numbers as it provides a simple, seemingly comparable metric, they are but one data point and must be complemented by elements such as organizational capacity to handle funding, issue area alignment with grant-maker mission.
- **Not applicable for all types of interventions.** Expected return can only be calculated for interventions in which there are tangible benefits. This is especially hard to do for policy advocacy or other systems change work.
- **Does not take into account human capital.** For the forecast estimates, expected return measures an investment's intent based on some sort of historical evidence – but this does not take into account how well the management team or entrepreneur may perform to enhance the expected return.
- **Does not capture catalytic effect of investments.** Some investments can create change at scale by demonstrating success of a disruptive model and inviting copycats to enter the market, thereby driving change at scale. This is not typically factored into an expected return calculation, and would also be challenging to estimate in this method.

Recommendation

(1) Many of the organizations that measure expected return effectively have had to pour resources into developing these methods and collecting these measures (BCR, SROI) in different contexts over time. While much of the "*How To*" information is now public, applying the methodologies to determine the cost-benefit ratio for specific interventions and investments continue to be a resource-intensive undertaking.

However, in our research, it became clear that several top organizations have accumulated a large amount of data to compare their investments internally. We believe that **building a clearinghouse of their expected return figures and underlying assumptions** – or simply considering **partnering with other clearinghouses** (e.g., International Initiative for Impact Evaluation (3ie)) that already offer information on "what works evidence" – would enable less established impact investors to get access to data and evaluate their own ventures by comparison. With access to this data, organizations could evaluate potential investments in a less resource-intensive way – and this would in turn accelerate the growth of the impact investing industry.

4.2 Theory of Change and Logic Model

Definition

A theory of change explains the process of intended social change by an organization, intervention, or investment. A logic model, which originated in the United States Agency for International Development (USAID)'s evaluation practices starting in the 1960's, is a common form of outlining a theory of change. It lays out the linkages in a logic model according to input, activities, output, outcomes, and ultimately, impact. In the simplest form, a logic model for a theory of change has five components:

Figure 4.4 *Logic Model Framework*

	Inputs	Activities	Outputs	Outcomes	Impacts
Definition	Resources (capital, human) invested in the activity	Concrete actions of the investee	Tangible products from the activity	Changes resulting from the activity	Broader change occurring in communities or systems resulting from the activity
Application / example indicators	$, number of people, etc.	Development and implementation of programs, building new infrastructure, etc.	Measurable actions or conditions that assess progress against specific operational activities, e.g. Number of people reached, items sold	Measurable actions or conditions that demonstrate progress towards specific outcomes, e.g. increased access to education	Effects on broader target population, e.g. sustained drop in poverty, increase in literacy rates

Planned work (internal) → **Intended results (external)** →

We define "impact" more specifically in this context than we did for the overall purposes of the report as described in section 2.0. For our purposes in articulating the logic model, impact refers to change occurring in communities or systems.[15] This is not to be confused with the European Venture Philanthropy Association definition, which describes the "impact" of a logic model as "outcomes adjusted for what would have happened anyway, actions of others & unintended consequences."[16] Demonstrating additionality seems to be key to EVPA's definition of impact. EVPA refers to impact as "a technical and often academic discussion,"[17] and encourages impact investors to focus their efforts on outcomes.

15 *"Logic Model Development Guide", W.K. Kellogg Foundation. January 2004.*

16 *Hehenberger, L., Harling, A., Scholten, P. "Practical guide to measuring and managing impact." European Venture Philanthropy Association. November 2012. Pg. 17*

17 *See 16 above. Pg. 10.*

This difference in definition can lead to confusion for entrepreneurs who are building logic models with or for multiple funders; we use Kellogg's definition and encourage investors to clearly define what they refer to as Impacts when they are using the logic model framework, especially when communicating with external stakeholders.

Application

A logic model can be a simple and useful framework to establish an investee's path towards creating social impact. The tool is often used in conjunction with other methodologies mentioned in this paper. Uses may emphasize measurement of indicators at various parts of the logic model.

- **Conducting due diligence and selecting investments:** The logic model provides impact investors a framework to communicate with the entrepreneur to understand their path to intended impact, underlying assumptions in their theory of change, and potential roadmaps on the path to driving impact. Investors can use this tool to assess whether or not they agree with the underlying assumptions of impact, and can also identify areas where further due diligence on impact should be undertaken. The logic model can also reveal points where causality is less proven, and investors can use this tool to identify areas where they want to stress-test the model by seeking previous studies or implementations that can demonstrate outcome or impact.
- **Goal setting:** The logic model clearly illustrates the path from resources to outcomes. The investor can use this framework to sit down with the entrepreneur or social enterprise executive to discuss and establish targets for outputs and outcomes. This can also help identify other constraints in resources, which the investor and entrepreneur can work together to address as appropriate.
- **Tracking and monitoring progress of the investment:** The logic model can be very helpful in identifying the data to be collected and the key performance indicators (KPIs) to be monitored as part of the impact measurement process. Output measures can provide a pulse on the operational aspects of the investee, and can be useful as a management tool for day-to-day monitoring.
- **Aligning incentives***:* The resulting map of outputs and outcomes from the logic model can be used to identify targets upon which incentives systems can be designed. This can be done to design incentive schemes for portfolio managers based on social impact achieved (more on incentives in section 5.1); it can also be used with the investee management to set funding milestones based on social impact objectives achieved as per targets based on the logic model.
- **Reporting externally***:* The logic model framework is a straightforward, simple way of illustrating an investee's path to creating social impact, even with audiences that may not be familiar with sophisticated impact measurement methodologies. This can be used as a tool to communicate to external stakeholders about the theory of change and progress.

Determining which level of logic model to measure

Ebrahim and Rangan, in their working paper "The Limits of Nonprofit Impact: A Contingency Framework for Measuring Social Performance"[18] suggest a useful framework to identify which level on the logic model may be most appropriate to measure for the specific social investment.

The framework categorizes results by two dimensions. One is the complexity of the investment / intervention's theory of change, as defined by clarity of cause-effect and the degree to which multiple factors are at play. For example, emergency and basic services that get shelter, food, and water to improve the conditions or people facing a disaster have a more focused theory of change than policy advocacy efforts where it's challenging to attribute a policy change to the work of a specific organization.

The second dimension is the complexity of operational strategy. A focused operational strategy involves a highly specific intervention (e.g. ambulance service) and a more complex operational strategy involves a number of related tasks that expands the theory of change process (e.g. a job training program that also creates its own job placement pipeline with employers).

18 Ebrahim, Alnoor and V. Kasturi Rangan. "The Limits of Nonprofit Impact: A Contingency Framework for Measuring Social Performance." Working Paper. Harvard Business School. May 2010.

Mapping the two dimensions against one another, Ebrahim and Rangan's framework provides four quadrants. Assessing an investment using this framework can be very useful in determining what level of the logic model would be most appropriate to measure.

- **Institutional results,** where the organization has a focused task (focused operational strategy) but impact is often achieved by networks rather than one organization alone (complex theory of change); measuring outputs and intermediate outcomes are most appropriate here.
- **Ecosystem results,** where the organization is aiming for systemic changes (complex operational strategy) and impacts are likely created through partnerships or a wide reaching breadth of services (complex theory of change); outcomes and impacts are appropriate levels of measurement.
- **Niche results,** where outputs may be very tangible but longer term impact is often beyond the control and role of the specific organization (focused theory of change, focused operational strategy); measurement should be focused on inputs, activities, and outputs.
- **Integrated results,** where the organization occupies several niches in the causal chain (complex operational strategy) and has a good level of control over both outputs and outcomes (focused theory of change); appropriate levels of measurement may include aggregate outputs, outcomes, and sometimes impacts.

While the framework was developed with non-profit impact in mind, it can also be very helpful in determining which level of the logic model an investor should focus on when measuring an investee's impact.

Spotlight #1: Acumen

Acumen is a non-profit global venture fund that uses entrepreneurial approaches to solve the problems of poverty. The aim is to help build financially sustainable organizations that deliver affordable goods and services that improve the lives of the poor.

Mapping out theory of change is core to how Acumen understands the depth dimension of their impact, which Acumen describes as addressing the question of "how much and in what way has someone's life changed?" Acumen does this by employing their version of a logic model framework to map out an investee's theory of change. It is a core tool in thinking and communicating about their work's depth of social impact.

Mapping the theory of change helps Acumen in identifying and predicting to what degree of the work by investee impacts the lives of their target customers. In addition, Acumen highlights three other purposes of using their theory of change framework:

- **Identify assumptions:** By digging deeper into the theory of change, Acumen is able to identify key assumptions required to get to the outcomes on the logic model. It uncovers the beliefs that the investment team would have to hold to believe in the investee's projected impact.
- **Identify areas in need of further evidence review:** Uncovering these key assumptions allows Acumen to identify areas that are in need of a further evidence review, and key data that they would like to collect over time to verify that the theory of change holds. The Acumen team begins to answer this by looking at existing literature on the topic, and may combine it with primary research about the specific case in question if possible to form an educated opinion.
- **Consider impact risk:** Acumen refers to impact risk as factors that could jeopardize the expected social impact of an intervention, often found in the assumptions between "output" and "outcome", and in the assumptions between "outcome" and "impact". For each of their investments, the Acumen team outlines what they think are the biggest impact risks, then come up with risk mitigation strategies to monitor and manage any

potential challenges. Understanding impact risk is seen as vital to measuring and ensuring long term impact, and the up-front analysis allows the team to be better prepared.

The Acumen team has adopted their own version of a logic model that best suits their types of investments, and also developed guidelines to identify common assumptions. This model is illustrated below:

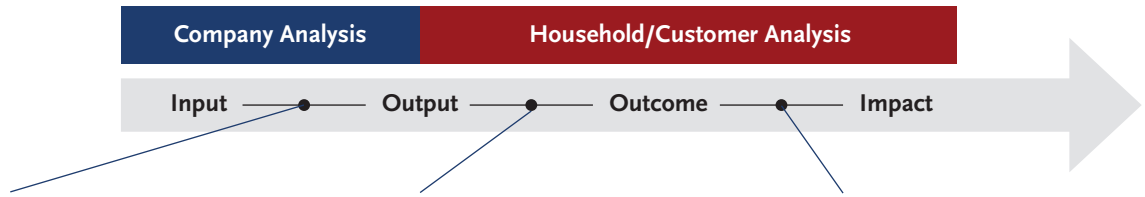
Figure 4.6 *Acumen's Theory of Change Model*[19]

Input: The primary product(s)/service(s) offered by the organization/ initiative

Output: The product(s)/ service(s) being consumed at the household or customer level (Measurable metrics)

Outcome: The result of adopting the product/ service expressed as the monetary and non-monetary well-being of the target customers (Measurable metrics)

Impact: The longer-term effects on the target customers' household well-being that can be attributed to the good or service. Impact will be (Measurable metrics when possible)



Assumptions:
- Product or service characteristics that generate impact.
- Activities that the organization must undertake to ensure that its "input" achieves the desired "output" (e.g. is it reaching and being used effectively by target customers?)

Assumptions:
- How is the household using the product or service?
- Variables that affect optimal product use
- What has to be true about your "output" in order for those "outcomes" to occur?

Assumptions:
- Customer actions leading to long-term improvement in well-being
- What variables could intervene to prevent "outcomes" from translating to the impacts listed?

19 *"Module 2, Making Sense of Social Impact" Acumen. +Acumen Courses. 2014.Pg. 5.*

Spotlight #2: LGT Venture Philanthropy (LGTVP)

LGT Venture Philanthropy is an impact investor that support organizations in their growth and expansion phase towards implementing an effective solution to a social or environmental problem

LGT Venture Philanthropy uses the logic model as depicted in the Kellogg Foundation Logic Model Development Guide as a methodology. LGT combines this with the definition of Quality of Life of the UN Millennium Ecosystem Assessment, and categorizes the outcomes of their investees using the five constituents of Quality of Life: material well-being, physical well-being, social well-being, security, and freedom of choice.

Example: Drawing upon the European Venture Philanthropy Association, the table below illustrates the logic model that LGT venture philanthropy developed for their investment in MFK, a ready to use food (known as "RUF") producer in Haiti. MFK produces fortified peanut based foods sold to institutional clients who distribute them for free to malnourished children in Haiti. LGT Venture Philanthropy used the logic model to understand MFK's objectives, map their theory of change, and identify specific metrics for measurement. The outcomes are overlaid with the five dimensions of quality of life, as consistent with LGTVP's overall methodology as mentioned above.

Figure 4.7 *LGTVP's Logic Model for MFK investment[20] (adapted for length)*

Planned work → **Intended results**

Inputs	Activities	Outputs	Outcomes	Impacts
Equipment: peanuts processing factory, transportation vehicles **Supplies:** peanuts / peanut paste, vitamins & mineral mix **Staff:** personnel with expertise on the ground in Haiti, labour force to run factory, international support team **Partners:** institutional programs / demand for RUFs **Funding:** philanthropic support	**Production of medicines known as RUFs:** MFK produces 75mt of fortified peanut based foods (RUFs) per annum **MFK Agricultural development:** MFK conducts 3-5 workshops to teach subsistence peanut growers how to increase yield and quality of harvests, MFK manages 5 demonstration plots and sources 40% of its peanuts locally	**Products:** Metric tons of RUFs produced per annum: 75 (2011), 800 (2015e) # of products: 2 (2011), 5 (2015e) Metric tons of local peanuts purchased per annum.: 40mt (2011), 400mt (2015e) **Services:** # of farmers trained in agricultural skills and provided with a stable market at fair prices: 100 (2011), 1000 (2015e)	**Improve physical well-being: Very strong impact** In 6-8 weeks, a child treated with RUF has 80% likelihood of recovery. Once severe malnutrition has been treated the child can survive on a local diet. Children cured of severe malnutrition before age 5 perform better at school and develop to be healthier and stronger. # patients treated per annum.: 80,000 # patients treated against severe acute malnutrition: 20,000 Children saved from becoming malnourished: 60,000 **Improve social well-being: Strong impact** Preventing a child's illness and eventual death leads to avoiding negative impacts, severe trauma and emotional shock for the family circle **Improve material well-being: Low impact** Parents of malnourished children treated with RUFs can go on with their lives normally as the medicine does not require medical supervision, cooking or cooling. Farmers supported by MFK's agricultural operations are provided with technical support and access to a stable market **Improve security: N/A, no impact** **Improve freedom: N/A, no Impact**	**Eradicate malnutrition in Haiti** **Build food security in Haiti**

20 *See 16, pg. 39.*

Our Assessment

Advantages of Logic Model Use

There are many benefits of applying a logic model as part of the impact measurement process. The logic model provides an **easy to understand**, strong grounding framework for impact measurement. It provides a clear roadmap that helps stakeholder visualize and understand how investments can contribute to achieving intended impacts. It is a **familiar tool** that is already being included in many business plans of social ventures.

Also, as discussed above, it is a **versatile tool** that can serve multiple purposes, including conducting due diligence and selecting investments; identifying causation points to pressure-test and potential barriers; goal setting; monitoring and reporting; aligning incentives. Its broad framework also allows investors to **overlay dimensions** that are important to their own mission in their own analysis of investees' logic models, as illustrated by the LGT Venture Philanthropy example above.

Finally, by mapping an investee's theory of change on a logic model, investors can more **easily identify hypothesis of causation** that may require further scrutiny and review. This was illustrated in the Acumen spotlight above, where the theory of change tool is used to help pressure test the causal links in an investment's logic model.

Concerns with Logic Model Use

A challenge with the logic model is **identifying indicators** to assess the level of outcome achievement. For example, in the LGTVP example above, the most difficult part in defining their impact measurement process was finding a rating method for the organization's contribution to the improvement of quality of life. In the example, MFK improves the health of children. On average, families of healthy children save money from spending less on medicine and healthcare, and have more money than those of sick children. As such, MFK contributes to the material well-being of families of the healed children. However, answering the question of how large MFK's contribution is towards the improvement of families' quality of life remains a challenge. [21]

While the tool's simplicity is a strength, it also **risks reducing social change to a linear process**. Although some investments may have a clear path to impact, social change work is often messy and nonlinear. As a result, a logic model can convey a false confidence in how an organization's activities and outputs lead to outcomes.

A note on standardized metrics

In the last few years there has been an emergence of standardized metrics to measure social impact, such as the Impact Reporting and Investment Standards (IRIS) and the Global Impact Investing Rating System (GIIRS). Many of these metrics center around the "output" level of the logic model framework. While the debate on the specific approaches to standardized metrics is outside the scope of our paper, we recognize that standardization of output indicators serves a number of purposes, including:

- Ensuring that investor and investee are aligned on the specifics of the indicator: the common definitions in standardized metrics help ensure that investor and investee are on the same page when they are communicating about outputs.
- Reducing the burden on the investee: Social entrepreneurs likely have multiple sources of funding and multiple funders to report to. Using common metrics with all investors can reduce the burden on the entrepreneur.

In addition, standardized metrics can provide investors a starting point to think about what types of metrics to include for a new investment. Communities of practice around standardized metrics can also allow investors to learn about how others measure impact in similar types of investments, which ones others have found useful, and share best practices.

Recommendation

(1) As mentioned above, one of the challenges lies in the selection of appropriate indicators that can assess the achievement of outcomes. Indicators should generate data that are needed and useful and avoid consuming extensive resources to generate data with little value. Similarly, with the standardization of output

21 *See 16.*

metrics as discussed above, in scenarios where multiple funders and entrepreneurs are working to identify and select indicators to assess outcomes, we believe there is value in **knowledge sharing among organizations to learn from each other's approaches and best practices on leading indicators**. For outcomes that are measured across many organizations, there may be the potential to **adopt a common set of indicators**. This can help lower the burden of measurement, and avoid reinventing the wheel. Common indicators may be put forward by funders, or by a collective of organizations in the same industry.

For example, Grameen Foundation's Progress Out of Poverty Index (PPI)[22] is used by some organizations and businesses with a mission to serve the poor. It can be used to measure poverty-related outcomes; specifically, poverty outreach, performance of an intervention among the poor, and track poverty levels over time. The PPI uses 10 simple indicators that field workers can quickly collect and verify. The answers to 10 questions about a household's characteristics and asset ownership are scored to compute the likelihood that the household is living below the poverty line. The PPI is country specific, and indicators are derived from the most recent national household income or expenditure survey or the country-specific World Bank Living Standards Measurement Survey.[23] The 400-1000 indicators from the original surveyed were narrowed down; statistics and expert judgment constructed a 10 indicator scorecard that are linked to the probabilities of rising above or falling below the poverty lines. **We believe that there is potential in developing similar types of indicator sets for measurement of other common target social outcomes.**

The United Nations Millennium Development Goals[24] illustrate another example of a high level desired impact translated into specific indicators to demonstrate progress toward those goals. For instance, goal 1, to eradicate extreme poverty and hunger has three specific outcomes, including to halve the proportion of people in the world who suffer from hunger. For each outcome, a number of indicators were identified; e.g., the prevalence of underweight children under five years of age and the proportion of a population below the minimum level of dietary energy consumption.

(2) Aside from applying a theory of change to assess the impact of an investee, the methodology may also have **application for impact investor funds themselves to use at a portfolio level**. In other words, this tool can be used to answer the question: what is the impact investor's own theory of change? This can help the impact investing organization identify the hypotheses underlying its investment thesis, and conduct deep dives to investigate such hypotheses to validate its own theory of change. As argued by Ebrahim and Rangan[25], impacts are rarely achieved by individual organizations alone, but rather by a number of interventions and actors that strive toward a common goal. An impact investor is uniquely situated to see how the work of its portfolio organizations might link a series of outputs and outcomes that collectively lead to impact. Funders should consider articulating their own theory of change and assessing their own performance because it is at the level of the funder that systemic impact can be observed.

For example, Root Capital's theory of change is that investments in farming associations and private businesses can help build sustainable livelihoods for smallholder farmers[26]. As explained in Section 4.3, Root Capital conducts studies to examine the assumptions underlying this hypothesis. Acumen also articulates a theory of change for each of their investment sectors. For instance, their theory of change for the health sector help to demonstrate how investment capital, sector expertise, and industry linkages from Acumen can lead to desired outputs, outcomes, and ultimately the target impact of improved health and reduced disparities in healthcare delivery between rich and poor. This exercise can be helpful in identifying or confirming key sub-sectors of investments, and can also be a useful communication tool for external funders who are interested in understanding Acumen's approach to creating impact in health.

22 *"About the PPI: A Poverty Measurement Tool." Progress out of Poverty Index, Grameen Foundation. progressoutofpoverty.org*

23 *"About LSMS." World Bank Development Research, Living Standards Development Study. Econ.worldbank.org*

24 *United Nations Development Group. "Indicators for Monitoring the Millennium Development Goals." United Nations. 2003.*

25 *See 4 above.*

26 *"A Roadmap to Impact." Root Capital. 2012*

Omidyar Network (ON) offers an example of an impact investor that designed its impact measurement approach to reflect its own theory of change as an investor. ON's impact measurement operates at two levels: firm level impact (common for many impact investors), and sector level impact. Sector level impact is a core part of ON's theory of change; in the organization's 2012 "Priming the Pump"[27] report, it argued that social impact at scale requires not just investing in innovative firms, but also fostering an ecosystem of multiple actors, including regulators and infrastructure providers. In addition to tracking firm-level success, the ON team plans to use publicly available information to assess progress of a sector in the regions in which they operate – for example; a decrease in the number of unbanked individuals – and also monitors intermediate milestones such as unlocking of regulatory barriers. This allows the investment team to further understand the sector in which they are operating and explore additional variables or nuances to add to their theory of change. "On Innovators and Pinballs"[28] published in the Stanford Social Innovation Review offers more information on Omidyar's approach on measuring sector systems change and indirect impact described here.

A theory of change mindset can also be useful for emerging impact investors to think through how they will drive impact through their investments and the evidence that they may wish to gather. For example, JP Morgan's Social Finance organization is currently working to build a knowledge base around social financial innovation. JP Morgan is measuring social impact of its early impact investments to enable them to gain expertise and a solid knowledge base to be able to later identify the best opportunities for their clients. For example, JP Morgan has launched a Social Finance unit which has focused on deploying proprietary capital to market-based solutions that can improve the livelihoods of low-income and underserved populations globally. By measuring the social impact of these investments, Social Finance is gaining a direct and detailed understanding of what type of investments are delivering the best results towards its theory of change, and the learnings will inform future allocations for JP Morgan and their clients.

27 *Bannick, Matt and Paula Goldman. "Priming the Pump: the Case for a Sector Based Approach to Impact Investing." Omidyar Network, September 2012.*

28 *Kubzansky, Mike and Paul Breloff. On Innovators and Pinballs. Stanford Social Innovation Review. September 2014.*

4.3 Mission Alignment Methods

Definition

To monitor impact over a period of time, impact investing firms often seek a way to measure the execution of their strategy against their mission and end goals. Mission alignment measurement is a term that we use to describe some of the practices used for this purpose. Measurement of mission alignment varies from the very light; e.g., a quick assessment of a portfolio's mission against the impact investor's, to the more robust; e.g., a logic model that drives the identification of KPIs into an effective scorecard.

Mission alignment methods typically include (1) screens for ensuring fit with the investor's mission; and (2) scorecards for each investee that may all be aggregated for the investor.

Screens, sometimes called "**social value criteria**," are criteria against which impact investors rate all investees over time by conducting informal surveys, often incorporating beneficiary feedback. Screens are a way to evaluate an investee's performance along a number of mission criteria – e.g., ecological impact, social change, or financial sustainability.

The second component of mission alignment measurement is a **scorecard** that monitors KPIs for each investment. A fund-level scorecard that aggregates data from multiple investments can also be used to monitor impact at a portfolio level. If the framework of the scorecard is designed effectively to reflect the fund's investment thesis it can help ensure mission alignment between investments and the investor's mandate. Metrics recorded in a scorecard may include indicators of operational performance, organizational effectiveness, finances, and social value. Meaningful analysis often compares current KPIs to a historical baseline, to original forecast, or to those of industry peers.

Numerous methods exist to identify the framework and related KPIs for the scorecard. In more established organizations, KPIs are the result of either strategy maps – communication tools used to tell a story of how value is created for the organization – or logic models of investees, as discussed in Section 4.2. However, organizations may also determine KPIs based on their own strategy, industry standards, or organizational experience. **Consistent dimensions on scorecards across all investments of one funder can help ensure that the elements critical to a funder's mission are monitored throughout the life of the investment, thus enhancing mission alignment.**

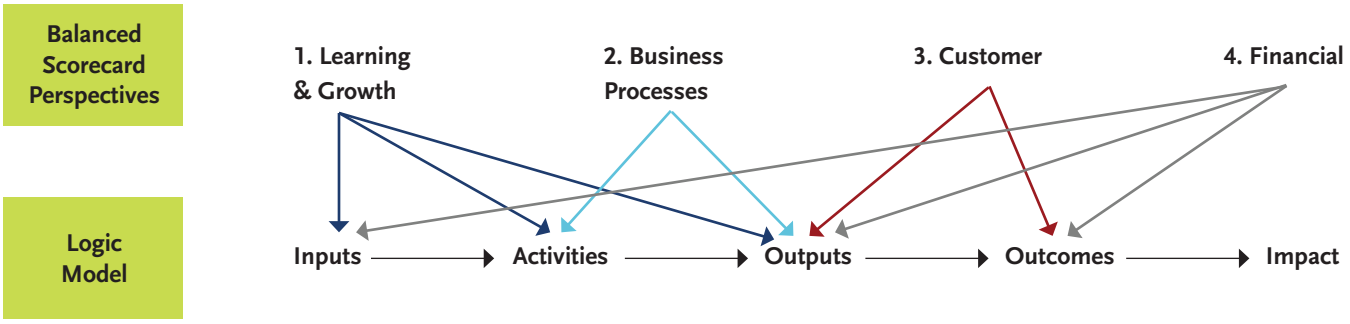
A note on traditional balanced scorecards

As Robert Kaplan and others have illustrated,[29] scorecards from traditional for-profit businesses are inadequate for use in the social sector primarily because traditional scorecards miss the link between output and impact. The traditional scorecard**,** commonly dubbed in the private sector as the "balanced scorecard" – is designed around four "perspectives:" financial, customer, business processes, and learning and growth. Each perspective is designed to prompt the identification of a small number of measures and targets to enable business planning, feedback, and learning, and to link vision to financial performance. The standardization of these four categories across balanced scorecards has provided the common framework from which many companies manage a balanced business.

While this traditional scorecard is not commonly used in the social sector, our research has shown that there are other similar examples of frameworks that are generally accepted and used. One example is an organization's theory of change and logic model. As discussed in section 4.2, an organization's theory of change drives the development of a logic model, which in turn can help an organization generate KPIs to monitor. Upon further analysis, we realized that the perspectives of a traditional, balanced scorecard are actually analogous to a logic model. By juxtaposing the two frameworks, we can see that the four perspectives of the balanced scorecard can be considered and captured in application of the logic model framework, as illustrated below:

***29** Kaplan, Robert S. 'Conceptual Foundations of the Balanced Scorecard". 2010.*

Figure 4.8 *Link Between Balanced Scorecard and Logic Model*



Learning & Growth (L&G) Perspective

The L&G perspective tends to describe how "people, technology, and the organizational climate"[30] (including cultural attitudes) combine to support strategy and its execution. In a logic model, this is similar to how one would think about inputs (people, technology, funding), and how they combine to support activities of the organization. Tracking outputs related to people, technology, and the organization can also help to inform effectiveness of learning and growth efforts.

Business Processes Perspective

The business processes perspective "allows the managers to know how well their business is running, and whether its products and services conform to customer requirements."[31] In a logic model, this corresponds to thinking about how the activities of the organization are supporting desired outputs.

Customer Perspective

A traditional scorecard uses the customer perspective to measure customer-related objectives (e.g., customer acquisition, satisfaction, retention, profitability). These objectives match metrics available as outputs or outcomes in a logic model. It is important to note that social enterprises must think about two different sets of customers: beneficiaries (downward accountability), and investors (upward accountability).

Financial Perspective

The financial perspective includes financial data used to assess performance. As discussed in section 4.1, financial ratios can also be leveraged in the social sector to estimate and later determine performance. (e.g., SROI). Using a logic model framework, financial performance is assessed starting from inputs, and then evaluated against both outputs and estimated outcomes when possible.

As a result of this analysis, we see how the logic model can be leveraged to build a scorecard analogous to the one used by traditional business. In addition to the perspectives included in the traditional balanced scorecard, the logic model framework also offers an additional important link between outputs and impact. A potential design is suggested in the "Recommendation" section.

30 *Corporate Life Centre International Inc. "4. Learning & Growth Perspective" http://www.theclci.com/products_PMMS-BSC04.htm. 2015.*

31 *Balanced Scorecard Institute. "Balanced Scorecard Basics" http://balancedscorecard.org/Resources/About-the-Balanced-Scorecard. 2015.*

Applications

As mentioned previously, mission alignment methods are useful in measuring execution against mission and end goals. Specifically, mission alignment methods are used to 1) help ensure fit with the investor's mission during due diligence and investment selection (e.g. RSF SF, New Profit), and 2) evaluate and monitor KPIs that track alignment with the investee's mission and/or the investor's investment thesis and mandate (e.g. New Profit, Acumen, Bridges Ventures).

Spotlight #1: RSF Social Finance (RSF SF)

RSF Social Finance is a nonprofit financial services organization dedicated to transforming the way the world works with money; offering investing, lending, and giving services to individuals and enterprises committed to improving society and the environment.

RSF Social Finance utilizes various forms and surveys to capture an organization's estimated impact. While one use of these metrics is to inform loan disbursement decisions, the primary use for the data is to monitor RSF SF itself – the lender – and benchmark the progress of its portfolio against the mission.

Specifically, for a first time applicant, RSF Social Finance begins its assessments with a list of "Social Enterprise Mission Alignment Criteria" that both the organization requesting a loan and RSF SF complete about the applicant. This is an example of a screen for ensuring mission alignment. The criteria include quantitative questions around financial sustainability and public social/ environmental benefits of the program, as well as more qualitative questions. RSF SF proceeds to evaluate the organization, by complementing the form with other research, before presenting to a larger internal team who determines the amount and duration of the loan. The criteria are primarily used to compare a potential loan disbursement to their current portfolio and ensure its mission alignment.

When deciding whether to extend or renew existing loans, RSF Social Finance requests that organizations complete a "Portfolio Audit Survey" that they administer, as well as complete the B Impact Assessment. Again, RSF Social Finance uses answers to these survey questions primarily as a way to monitor themselves, and a way to benchmark their progress in supporting the organization.

(Note: The B Impact Assessment is a free, confidential tool powered by the nonprofit B Lab. The B Impact Assessment enables organizations to assess how their company performs against dozens of best practices; compare its baseline impact against other businesses; and develop a roadmap of improvements to deepen impact.)

Spotlight #2: New Profit

New Profit is a nonprofit venture philanthropy fund, with a mission to increase social mobility by strengthening, connecting, and amplifying the best ideas across United States.

New Profit utilizes a number of measurement methods – from scorecards to experimental evaluations – to help its grantees scale, become financially sustainable, and maximize impact. Two of the most interesting measurement methods New Profit utilizes to assess its impact are its externally-focused growth diagnostic and its internal scorecard.

The external growth diagnostic allows portfolio managers "to consistently place organizations within the growth stages"[32] New Profit observes: startup, intermediary, or growth stage. These organizations, or investees, are classified into stages using 50+ dimensions (e.g., distribution model, costs, talent development). This "stage" categorization helps portfolio managers to understand what growth targets and other KPIs to expect. These are also the KPIs that feed into the internal scorecard, which is fairly straightforward and tracks "activity on the deal" (KPIs) against New Profit's goals.

It is important to note that, through an external assessment, New Profit measures its own contribution effect. In a 4-year pilot study, New Profit has tracked its support activities on specific organizational dimensions within a subset of grantee organizations and attempted to systematically associate those activities with grantee self-reports of need, needs addressed, and growth/improvement. While the method has provided valuable guidance for New Profit staff as well as evidence of its effects on grantees, using external evaluators has made it resource intensive. The next phase of their exploration will be to test an internally managed model that makes this level of monitoring sustainable, albeit at some loss of data independence.

32 *Internal New Profit Documents*

Spotlight #3: Acumen

Acumen is a non-profit global venture fund whose mission is to invest in companies, leaders, and ideas that are changing the way the world tackles poverty.

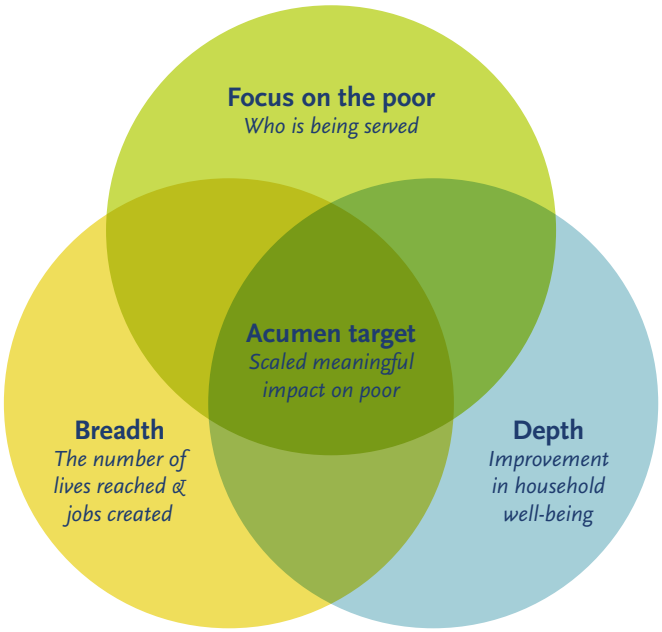
Acumen's focus is to invest in companies that increase access to basic goods and services for the poor. Acumen's impact philosophy considers that the ultimate measure of impact is how it changes lives at the customer level, which they have defined as a function of three dimensions:

- Breadth: the number of lives reached and jobs created
- Depth: improvement in household wellbeing
- Poverty focus: who is being served

These three elements provide the framework for Acumen's Impact Template. Under each dimension, the template provides suggested metrics for the investment team to analyze during due diligence and monitoring through the life of the investment. The data collected from the Impact Template provides a reference point for accountability and improvement.

To illustrate: under the "Breadth" dimension the template suggests metrics such as sales volume and number of lives impacted. Where appropriate, Acumen calculates breadth by applying a multiplier assumption to this first set of metrics (e.g., sales volume) because some goods or services benefit not just the customer, but potentially their whole household. For example, the "breadth of impact" for a drip irrigation company can be estimated by the number of drip irrigation kits sold multiplied by five—the average number of people per household who benefit from the increased income.

Figure 4.9 *Dimensions of Acumen's Impact Philosophy*[33]



The Impact Template suggests similar common metrics to monitor impact for "Depth" and "Poverty Focus" dimensions. Additional metrics may be added based on the investee's theory of change (as described in Section 4.2) and/or negotiations with the investee.

33 *Module 1, Making Sense of Social Impact" Acumen. +Acumen Courses. 2014.Pg. 7.*

Spotlight #4: Bridges Ventures

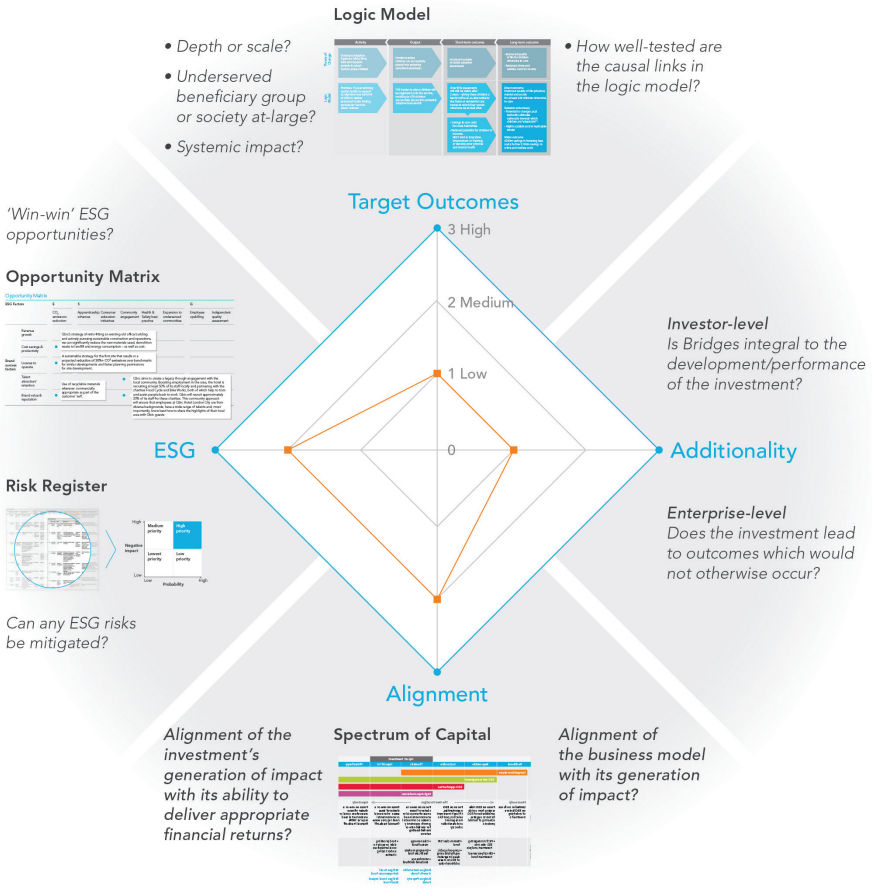
Bridges Ventures is a specialist fund manager focused on opportunities where investments can generate investor returns through helping meet pressing social or environmental challenges.

Bridges Ventures believes that understanding the risk associated with achieving social impact in an investment is just as important as the financial risk assessed pre-investment. Because of this, Bridges developed what they call their "IMPACT Methodology," comprised of the IMPACT Radar pre-investment, and the IMPACT Scorecard post-investment. The IMPACT methodology is applied to any potential investment.

Pre-investment, Bridges Ventures utilizes an IMPACT Radar,[34] which informs the due diligence of an opportunity. The IMPACT Radar lays out a high-medium-low risk/return analysis for each of the four investment criteria that are core to its investment thesis: target outcomes, additionality, environmental, social, and governance practices (ESG), and alignment. The risk and return of each investment criterion is given a high, medium, or low score. Scoring is supported by tools developed by the firm that enable Bridges Ventures to think about each investment according to similar frameworks. The IMPACT Radar, along with the tools that support Bridges' judgment in each dimension of the Radar, are illustrated in Figure 4.10:

Each of these four dimensions is further defined in Bridges Ventures' 2014 Impact report.

Figure 4.10 *Bridges Ventures' IMPACT Radar*[35]



34 *Bridges Ventures. "Bridges Impact Report: A Spotlight on our Methodology" (2013).*

35 *Bridges Ventures. Reproduced from "Bridges Impact Report: A Spotlight on our Methodology" (2013).*

Post-investment, the IMPACT Radar serves as a portfolio management tool through which Bridges can "monitor the impact risk/return profile of each investment (and therefore of each fund) on an ongoing basis." Essentially, Bridges turns to using its IMPACT Scorecard to capture the key performance indicators (KPIs) that relate to each dimension of the IMPACT Radar (e.g, there is a section for "ESG KPIs"). The KPIs captured on a Scorecard are determined with each investee and reflect both outputs and outcomes of the logic model. Designing the Scorecard in a way in which it links to the Radar (used during diligence) allows the Bridges team to track performance of the investee in a thoughtful, consistent and organized way.

Bridges also uses the Scorecard to provide impact performance data (contribution to society) to investors, alongside (separately sourced) financial performance (returns for investors).

Our Assessment

Advantages of Mission Alignment Measurement Methods

As mentioned in the Definition section, **surveys and screens are inexpensive, straightforward ways to monitor mission alignment** of an investor's or a grantee's impact. While these forms of measurement can certainly take on greater sophistication, at a basic level they can be utilized by an organization in any stage of development. RSF SF is able to effectively utilize its social value criteria during diligence and throughout the investment lifecycle.

Scorecards – similar to the expected return measurement method – is a **practice adopted from the private sector which resonates with investors**. Within each organization, scorecards and dashboards are an effective way to present KPIs and track a set of metrics over time (vs. plan, vs. peers, vs. prior year). For instance, Bridges' IMPACT Scorecard effectively captures measured outputs of a program, and compares them year over year. Not only does this enable them to track a consistent set of KPIs from due diligence to the end of the investment, but it also enables them to use the same KPIs as the basis of a comprehensive report to investors.

Concerns with Mission Alignment Measurement Methods

The biggest drawback with this approach to measurement is that the survey results or scorecards themselves – no matter how well organized, how frequently populated, or how widely circulated – are **only as meaningful as the data collection methods or KPI metrics that they capture.** If the metrics are not illustrative of the social impact or mask key issues with the social enterprise, the mission alignment measurement fails to serve its purpose.

Additionally, depending on the customization of scorecards, they **may not allow for direct comparisons across different investments, as KPIs may vary across investments and interventions.** This is in direct contrast to one of the major advantages of the expected return measurement methodology, which enables a common vocabulary by translating impact into economic terms.

Recommendation

(1) We believe that impact investors should adopt scorecards that complement their theory of change and logic model. We recommend scorecards as a one-stop-shop to monitor and track KPIs, link them with associated outcomes, and ensure that these outcomes are in alignment with an impact investor's theory of change and mission.

As discussed, traditional scorecards are not applicable to the social sector as they fail to link outputs to impact. In our analysis, the logic model structure commonly used in the social sector incorporates – in a different way – the metrics found in a traditional scorecard. **As such, a scorecard based on an organization's theory of change and logic model could be a useful tool in ensuring mission alignment in impact measurement.** This portfolio-level aggregate scorecard can also be used as a basis for designing an investment-level scorecard to monitor each investee.

A suggested (and very oversimplified) scorecard set-up for an impact investor based on a logic model could be the sample "Impact Investor Scorecard" in the top of Figure 4.11.

The scorecard should first incorporate inputs and activities, and show how they translate to outputs and ultimately to outcomes.

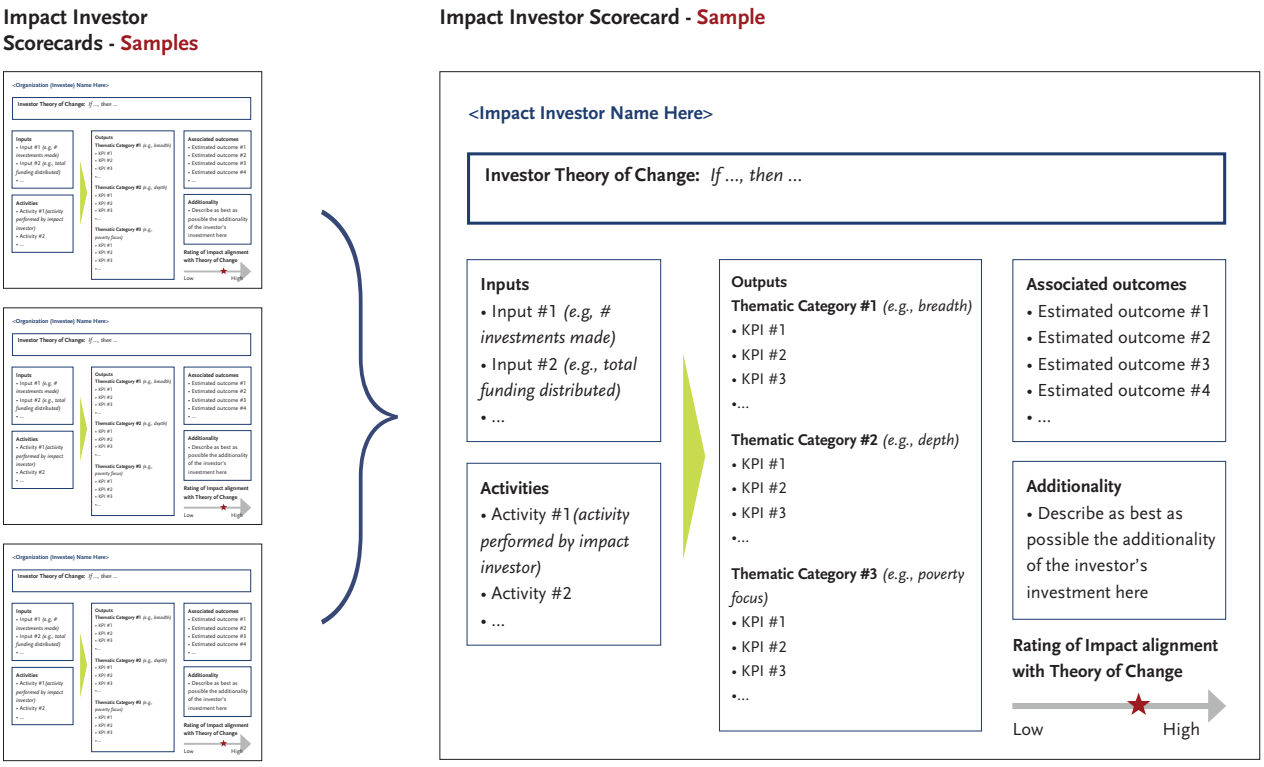
As outcomes are more difficult to measure – especially with any sort of frequency – "associated outcomes" should be calculated based on output metrics and studies of causation that can be drawn from previous research or other evidence.

And finally, additionality should be estimated or described – even if it is qualitative. This last step is important, because the impact investor can then go through a conscious exercise of determining to what degree the estimated additionality is in alignment with the organization's theory of change. This is a key link missing in traditional scorecards. Additionality is discussed further in section 5.2.

After the scorecard is set up for the impact investor at a fund-level, a similar scorecard framework can be used for each investee. Specifically, although the theory of change, inputs, and activities would differ based on the investee, the investor's theory of change can be used to help identify common and specific output KPIs to be tracked for each investee. This may be done through common thematic categories of KPI's that are fundamental to the investor's theory of change (for example, "breadth," "depth," and "poverty focus" as per the Acumen example above). Common thematic categories of KPIs can help ensure all investments are in alignment with the impact investor's mission and theory of change.

Figure 4.11, which we referred to previously, also illustrates the link between the two: the scorecard at the top shows the template for portfolio-level monitoring, which is in effect an aggregate of KPIs tracked by an adapted scorecard at an investment level shown below. While we recognize that this illustration of metric aggregation is overly simplistic, we believe that pursuing an approach that uses investee information to form a portfolio view is worthwhile to enhance mission alignment.

Figure 4.11 *Sample Investor-Level Scorecard Template and Hypothetical Portfolio-Level Scorecard Aggregation*



(2) Secondly, while identifying the best KPIs can be a complex exercise, organizations now have access to catalogs of generally-accepted performance metrics that leading impact investors use to measure social, environmental, and financial success, evaluate deals, and grow the credibility of the impact investing industry. The bigger challenge, we believe, is how to effectively manage this data and monitor the social impact and mission alignment of investments over time.

As a result, we believe that there is a real **opportunity to educate impact investors and their investees around the power of effective scorecards.** While organizations have access to suggested KPIs via networks like the IRIS and GIIRS, it seems that the biggest gap right now – not so much for impact investors, but for investees – is utilizing scorecards effectively and updating them often. Through impact investing forums, both investors and investees should learn how to design and best populate scorecards; in fact, forums and other forms of educational events would be great times for established impact investors to showcase scorecard templates. Once more impact investors are on board they can offer technical assistance to investees so these organizations can learn as well.

4.4 Experimental & Quasi-Experimental Methods

Definition

Experimental and quasi-experimental methods are forms of program evaluation, or measurement of impact after-the-fact. Both of these attempt to answer the question: "*What would the situation have been if the program or intervention had not taken place?*" A key component of these methods is a counterfactual analysis: a group given the treatment is compared to a similar group that is isolated from the intervention. This enables the evaluator to answer the cause-and-effect question; "*What are the changes in outcome directly attributable to the implemented intervention or program?*"

For our purposes, we define experimental methods as those that involve a Randomized Control Trial (RCT) and use a randomized control group as the counterfactual; we consider methods that use other types of counterfactuals quasi-experimental.

The RCT is widely regarded as the gold standard in evaluation. Key components of a RCT include:

- Random assignment of individuals to a treatment and control group; and,
- Controlled procedures to ensure all participants in the study are treated equally, except for the factor unique to each group.

These evaluation methods are rigid and cannot be easily adjusted while the evaluation is ongoing without potentially jeopardizing the integrity of the study.

Quasi-experimental designs, however, do not involve random assignment to treatment or control. Instead, quasi-experimental designs usually use another type of counterfactual, such as an historical baseline. Drawing upon some existing work on measurement methods for Social Impact Bonds[36], Table 4.7 below provides some common quasi-experimental methods, as well as considerations for application.

36 *So, Ivy and Adam Jagelewski, "A. Social Impact Bond Guide for Service Providers." MaRS Centre for Impact Investing. November 2013.*

Figure 4.12 *Examples of Quasi-Experimental Methods*

Comparison method	Activities	Outputs
Historical baseline: Comparison to past outcomes for a similar population using historical data.	For adolescents at the edge of care, a benchmark is generated by reviewing historical case files over a selected time period. Characteristics such as age, needs, and mental health status are reviewed, and adolescents who would have been suitable for the intervention are selected into the comparison group.	• Historical benchmarks require a reasonably stable population with a consistent level of outcomes over a number of years. • This approach is most suitable for outcomes that are not significantly influenced by broader socio-economic trends and external factors.
Pre/post: Comparison of intervention group before the intervention and after it has concluded. The "pre" baseline wave serves as a control group.	A group of marginalized women receive an intervention designed to increase their employability. The group is measured for their employment rate before and after the intervention.	• This approach assumes that change was caused by the intervention, and is unable to account for external factors that may have also contributed to the change. • While the extent of change to the specific population is measured, it does not reveal why conclusively.
Regression discontinuity design: Comparison with outcomes of those just below or just above intervention eligibility thresholds. This methodology is based on the premise that the difference between candidates who just miss and just make a threshold are negligible, and thus comparison of their outcomes post-intervention reveals the impact of the intervention.	An intervention is targeted towards students who scored below 50% on a diagnostic test. The evaluation framework may be based on comparison of the post-intervention outcomes of students who scored just above 50% with those of the students who scored just under 50% pre-intervention.	• This may incentivize service providers to focus their efforts on those closest to the threshold, even if those are not the clients that require the most effort. • This methodology is only applicable in interventions where the characteristics of those just above or just below the threshold are negligible.
Difference in differences comparison: Comparison with a similar population – one that is not offered the new intervention, but which is receiving another "treatment as usual". Both groups receive pre-and-post assessments, and the difference between those assessments is used to determine impact of the new intervention.	Two prisons have historically shown very similar recidivism trends. One prison is receiving the intervention, while the other is receiving treatment as usual during that timeframe. The difference in recidivism before and after the intervention is calculated for the treated population. The difference for the same timeframe is also calculated for the treatment as usual population. The difference of these differences reveals the impact of the intervention.	• The treatment as usual group must be a good representation of what would have happened to the treatment group, in the absence of the intervention.

Application

As opposed to measurement methods used to estimate impact or monitor impact, experimental methods measure and **prove impact with significant certainty**. Because of the integrity of the evaluation and the level of rigor, an RCT can **serve as an input for a future estimate** of expected return and inform future investment decisions.

Proving impact via RCTs and other experimental methods with a counterfactual design can be used to:

- **Assess outcome for payments in Social Impact Bonds** and other impact investments (various examples below).
- **Test hypothesis of an investor's theory of change**, to verify specific assumptions about what practices or interventions truly create positive impact.
- **Assess impact risk** of a potential investment by looking for evidence on "what works" and evaluating how well tested the causal links are in a potential investee's logic model.
- **Increase evidence level** of investee impact and capture learning to **improve implementation** of investee intervention; such learnings may also be applied to other **investees in the portfolio** and help inform areas to invest in the future.

In addition to their use in the impact investing funds directly, we have also come across two more applications of experimental and quasi-experimental methods in related arenas:

- **Obtain an evidence base** to demonstrate impact and gain additional funding: Large nonprofit organizations who have sufficient funding are able to conduct RCTs to measure the effectiveness of their own programs, adjust their interventions after the evaluation, and better articulate the value of their programs to gain additional funding. For example, Nurse Family Partnership – a non-profit that provides ongoing home visits from registered nurses to low-income, first-time mothers – have been able to prove through RCTs that its interventions lead to improved prenatal health, fewer childhood injuries, fewer subsequent pregnancies, increased intervals between births, increased maternal employment, and improved school readiness. This demonstrated evidence has helped them in securing additional funding and expand its impact from one to 43 states.

- **Drive evidence-based policy-making:** In April 2009, the newly signed Edward M. Kennedy Serve America Act created the Social Innovation Fund (SIF), which was designed to create a portfolio of evidence-based approaches that could be replicated in communities across the United States. SIF combines public and private funding to grow promising programs in economic opportunity, healthy future, and youth development. SIF has invested more than half a billion dollars in just a few years and has provided organizations with an Evaluation Guidance Template (a step by step guide to designing a rigorous evaluation), and connected them with a network of external evaluations including Mathematica to develop evidence of intervention outcomes. With 33% of SIF-funded evaluations based on experimental design SIF's major end goal in this is to use strong evaluations to then inform policy.

For impact investors, applying experimental or quasi-experimental evaluations to their investments' interventions can help demonstrate the evidence of positive social outcomes, and ultimately influence government policy to allow the intervention to be adopted by programs such as SIF.

Spotlight #1: Social Impact Bond examples

A Social Impact Bond is an impact investment based on an outcomes-contract with the public sector, where the government commits to paying for improved social outcomes. Private investors provide the upfront capital to fund the social services, and may realize financial returns depending on the achievement of measured social outcomes.

Both experimental and quasi-experimental methods have been used in the outcome measurement designs of Social Impact Bonds.

New York State, randomized control trial*:* The first SIB to use an RCT in determining outcome payments was the social impact partnership between the state of New York; Center for Employment Opportunities (CEO); Bank of America Merrill Lynch; Robin Hood; Rockefeller Foundation; Chesapeake Research Associates; and Social Finance US. The deal aims to expand comprehensive reentry employment services to 2,000 formerly incarcerated individuals in New York City and Rochester, New York. For the evaluation process, the New York State Department of Corrections and Community Supervision identifies eligible individuals in NYC and Rochester and randomly assigns them to the treatment and control groups. The performance-based payments will be based on three outcome metrics:

- *Recidivism:* The number of "bed days," as captured in the NYS Department of Corrections and Community Supervision administration data systems.
- *Employment:* Indication of positive earnings, as captured in NYS Department of Labor's quarterly unemployment insurance wage data.
- *Engagement in transitional jobs:* number of treatment group members who start a Centre of Employment Opportunities transitional job, as captured by the CEO intervention data.

These metrics were selected by the project partners based on a set of criteria, including: the degree it represents meaningful improvement in the lives of individuals; alignment with the intervention's theory of change; relationship to public sector savings and other benefits; whether it is captured in existing state administrative data systems; and degree that the outcome of the metric can be affected by the intervention, as demonstrated by prior evaluations.

The Social Impact Bond was announced in December 2013 and the measurement and payment calculation of Phase I is expected to take place in Year 4.

Essex County, historical baseline**:** The SIB will enable the Essex County Council to provide Multi-Systemic Therapy (MST) to 380 young people at risk of entering care and their families over an 8 year period. MST is an evidence-based program that delivers family therapy in the home through qualified therapists.

The primary metric on which outcomes are measured is the number of care placement days saved over 30 months post-referral as compared against a control review figure; i.e. the average number of days spent in care by a comparable group of children over a 30-month period. This control review figure was established prior to signing of contracts and is based on a historical case file review of 650 cases with data tracked over 30 months.

The outcomes contract was signed in November 2012, and the intervention is currently in progress. To date, no outcomes data has been found for public release.[37]

37 *"Social Impact Bond Knowledge Box." UK Cabinet Office Center for Social Impact Bonds. data.gov.uk/sib_knowledge_box. Web. Accessed December 2014.*

Peterborough, UK, difference in difference: In September 2010 HMP Peterborough became the site of the world's first SIB, aimed at reducing re-offending rates among short-sentenced prisoners leaving Peterborough Prison. The aim is a reduction in court, police, and prison costs as a result of reduced re-offending, for which reconviction events are a suitable intermediate proxy.

The success of this Social Impact Bond will be measured by reconviction events by all of the short sentenced male prisoners from Peterborough prison — whether or not they engage with the service. Each cohort will be compared by an independent evaluator to a similar group of prisoners across the UK from the Police National Computer. The independent evaluator is responsible for developing the comparison group of prisoners against which the SIB's 3,000 short-sentence prisoners will be compared to assess whether the outcome has been achieved and a payment is due to investors. The comparison group is developed using Propensity Scoring Matching (PSM) methodology – this is where each Peterborough prison-leaver is matched to up to 10 prisoners released elsewhere in the country. This is done to remove, as far as possible, the influence of external factors on reconviction levels.

Outcome payments will be made if there is a 10% reduction in the number of reconviction events over 12 months compared to a control group, or if the SIB's three cohorts achieve an average reduction of 7.5%. The first interim results, released August 2014, showed that there was an 8.4% reduction in re-offending amongst the intervention group compared to the national average. The service reported that its success is increasing over time as it gains experience and is able to learn from early challenges.[38]

38 *See 37 above.*

Spotlight #2: Root Capital

Root Capital lends to farmer associations and private businesses that help build sustainable livelihoods by aggregating rural producers in Africa and Latin Americas.

One of Root Capital's main goals in measuring impact is to test their primary hypothesis that agricultural businesses enable farmers to achieve improved livelihoods. They design studies of selected clients to evaluate whether and how their client agricultural businesses support farmer livelihoods, to verify that they are truly reaching under-served businesses, and to inform their assumptions about what social and environmental practices truly create positive impacts.

In 2014, Root Capital released their first multi-site impact study - *Improving Rural Livelihoods: A Study of Four Guatemalan Coffee Cooperatives*[39]. This study provides a detailed picture of the impact that Root Capital's client enterprises have on the livelihoods of smallholder framers and the environment, and seeks to answer the question: Does Root Capital's financing and training enable their clients to *increase* their impacts, and if so, how and to what extent?

This study looked at four of Root Capital's coffee cooperative clients in Guatemala. The research focused on the cooperatives' roles in promoting farmer livelihoods, and involved surveying 640 farmers. With each cooperative, they recruited a comparison group of farmers living in the same communities to allow the researchers to correlate differences (e.g., in income, access to services, and production practices) with services provided by the cooperatives.

Spotlight #3: Bridges Ventures

Bridges Ventures is a specialist fund manager (with 3 fund types) focused on opportunities where investments can generate investor returns through helping meet pressing social or environmental challenges

The "target outcomes" component of Bridge's IMPACT Radar is concerned with the outcomes that the investment is intended to generate, and the strength of the causal links in the investment's logic model – i.e. the extent to which causality has been evidenced from the venture's progress thus far. In their framework, Bridges scores an investment "low" on the target outcome risk scale if there is a minimal threat to the logic model, from internal or external factors, such as if there is a scientific study (e.g. control trial or longitudinal study, which is considered quasi-experimental for our purposes) that evidences causality. It is considered that such a study demonstrates that the investment is generating impact. On the other hand, if the investment only has secondary research that evidences causality in a different but comparable context, then it is regarded as "high" target outcome impact risk on Bridges' scale as it poses a high threat to the logic chain.

39 *"Improving Rural Livelihoods: A Study of Four Guatemalan Coffee Cooperatives." Root Capital. November 2014.*

Spotlight #4: LGT Venture Philanthropy & Acumen

LGT Venture Philanthropy an impact investor that support organizations in their growth and expansion phase towards implementing an effective solution to a social or environmental problem.

Acumen is a non-profit global venture fund that uses entrepreneurial approaches to solve the problems of poverty. The aim is to help build financially sustainable organizations that deliver affordable goods and services that improve the lives of the poor

LGTVP and Acumen are supporting an ongoing JPAL study to measure how much off-grid consumers in Bihar are willing to pay for Husk Power electricity and whether their wellbeing changes as a result of having access to energy. Husk Power is a portfolio company of both Acumen and LGTVP, and JPAL is a global network of researchers who conduct randomized evaluations to test and improve the effectiveness of programs and policies aimed at reducing poverty. Studies such as this one helps increase the evidence level that portfolio companies are driving impact, and also helps both the portfolio companies and the impact investors learn about and test the links of impact in the investee's theory of change.

Similarly, LGT Venture Philanthropy funded an independent study of an education investment in India's rural and tribal communities using creative learning techniques that combine the traditional way of family with education. This study revealed that while the creative learning techniques did achieve the desired effect, they were most pronounced in the students that were already performing relatively well. This enabled LGTVP to work with its investee to adjust the training of the educators to further improve the outcomes of the students that they want to reach.

Our Assessment

Advantages

...of Experimental Methods

As mentioned in the Application section above, experimental methods can be effective in building an evidence base, better articulating the value proposition of an organization, and even informing policy decisions by providing credible results to lawmakers and other experts. This is all because experimental methods like RCTs **allow for robust cause-and-effect attribution**. Results of these experimental methods can serve as inputs for expected return calculations (as discussed in 4.1), in turn strengthening these estimates.

...of Quasi-Experimental Methods

Quasi-experimental methods allow for a way to verify outcomes in the cases where an RCT is too costly, impractical, and/or unethical (e.g. denying people of treatment by random order). These methods are generally **more flexible and less costly than RCT**, and can make good use of available data (e.g. historical data).

Both experimental and quasi-experimental methods also help to **demonstrate additionality** – whether the target outcomes would have occurred anyway without the investment or intervention. Additionality will be discussed in more detail in section 5.2.

Concerns

....with Experimental Methods

RCTs are not always the answer to measurement. On the flip side of what was discussed above as an advantage to quasi-experimental methods, RCTs **can be expensive and resource intensive**. Often administered by a third party evaluator, RCTs require significant funding as well as a group of individuals internal to the organization who can test and pilot the evaluation before fully implementing it.

RCT's are **most appropriate when the causal variables and their effects can be clearly distinguished, and sample sizes are sufficiently large.** Since RCTs are so resource intensive, there should be an amount of certainty that the evaluation will reveal statistically significant success for it to be worth the investment. Additionally, because an RCT cannot be adjusted midway through, **course-corrections can be restricted** due to the evaluation process. This limits intervention's management ability to respond to changes in real time, which can lead to a very frustrating work environment, as well as less than ideal treatment for the beneficiaries involved.

In general, RCTs **are not suited for all interventions**, for three distinct reasons:

1. The evaluation **must be able to be administered in an environment that can be somewhat controlled**, which is not always possible. For instance, MDRC piloted an RCT for the Rikers Island SIB but found that the evaluation would have been ineffective. Through this SIB, MDRC is implementing a cognitive behavioral therapy program for 16- to 18-year-olds detained at New York City's Rikers Island with the goal of reducing the high recidivism rate for this population. After the RCT pilot, it was evident that the environment was too volatile for the controls required by an RCT and the population moved around too much to be able to measure the impact of the intervention alone. MDRC had to settle for a pre-/post-comparison study instead.
2. **Few interventions are sufficient to drive outcomes on their own**; these typically require comprehensive, wrap-around solutions. Many social programs and enterprises work within an ecosystem, and isolating the impact of the specific investment can be very challenging and/or inappropriate.
3. It **may not be ethical or desirable to randomize** people into a treatment and control group. Some have ethical concerns about denying the control group an intervention that could be helpful for the purposes of an evaluation exercise.

....with Quasi-Experimental Methods

While they are less costly than RCT, quasi-experimental methods still **require significant effort for each undertaking**. And unlike an RCT, despite such effort there can often be **limits to their ability to rule out exogenous factors**, depending on the rigour of the counterfactual.

Other thoughts

Compared to most of the methodologies discussed on this paper, experimental and quasi-experimental methods are often costly and resource-intensive. As such, it is no surprise that while these methods are widely advocated in the Social Impact Bond context, they do not appear to be widely used by most other impact investors. Even in the cases where they are used to assess an investment's impact risk, impact investors appear to seek out *previously completed* experimental or quasi-experimental studies that demonstrates evidence for outcome, rather than designing and executing a study themselves.

While using these methods may be infeasible for all investees of an impact investment, we believe that these methods hold great potential to test impact investors' own theory of change. This is particularly relevant for impact investors that have a very focused investment thesis driving towards specific change, as illustrated by the Root Capital example above.

Recommendations

(1) Given the time and resource intensity of these methods, we believe that the results of such evaluation efforts should be shared as widely as possible. We believe that drawing from and adding to **"what works" databases** of evidence from previous experimental studies can add tremendous value to community practices around a social issue as well as to impact investors and social entrepreneurs. While entrepreneurs can use the evidence from previous experimental and quasi-experimental studies to inform venture strategy and operations, investors can use the available evidence to assess the impact risk. Since studies are often time and cost intensive, the wide sharing of results can lower costs for the sector in general, catalyze evidence-based interventions, and increase the benefit of each completed study.

A few clearinghouses fit this description and purposes; however, they don't appear to be widely used by impact investors today, and many focus on traditional interventions rather than social ventures. For example, the Campbell Collaboration[40] has a library of systematic reviews of the effects of social interventions in crime and justice, education, international development, and social welfare. Similarly, International Initiative for Impact Evaluation (3ie)[41] funds and provides a repository of impact evaluations and systematic reviews that generate evidence on what works in development programs and why.

Other databases tend to be specific to individual social issues or sub-sectors. For example, there is a What Works Clearing House[42] established by the Institute of Education Sciences that serves as a central source of scientific evidence for what works in education. The Initiative for Smallholder Finance also created a "Smallholder Impact Literature Wiki", which is a living resource for the smallholder community to capture, organize, and easily access the increasing body of literature on evidence about smallholder interventions[43]. The assumptions implied in the Universal Theory of Change – which represents an emerging consensus of a common theory of change across the smallholder finance community, and was developed based on consultation with the community – are stated in the Wiki. Each assumption has a red – amber – green label, which indicates the low – medium – high level of literature availability.

40 "About Us", The Campbell Collaboration. http://www.campbellcollaboration.org/. Accessed December 2014

41 "About 3ie", International Initiative for Impact Evaluation. http://www.3ieimpact.org/ Accessed December 2014

42 "About the WWC" Institute of Education Sciences. What Works Clearing House. http://ies.ed.gov/ncee/wwc/ Accessed December 2014.

43 "Impact and Risk Metrics in Smallholder Finance" The Initiative for Smallholder Finance. http://www.globaldevincubator.org/initiative-incubator/. Accessed December 2014.

Figure 4.13 *Screenshot of Smallholder Impact Literature Wiki*[44]

We believe that replicating these models in other subsectors can be very valuable for impact investing and evidence-based decision making more broadly.

(2) The cost and effort related to conducting experimental and quasi-experimental evaluations can be reduced by **following the principles of low-cost RCTs**[45], a recent innovation in policy research that holds the potential to more rapidly build evidence of "what works" to address social problems as proposed by the Coalition of Evidence-Based Policy. Low-cost RCT principles suggest using administrative data that are collected for other purposes to measure the key outcomes, rather than engaging in original data collection. Particularly in more developed countries, administrative data may be available to measure outcomes such as employment, earnings, student test scores, criminal arrests, receipt of government assistance, and health care expenditures. Evaluators can benefit by taking stock of existing available data as they begin designing the experimental and quasi-experimental evaluations to leverage opportunities to lost cost and effort required.

Low-cost RCTs also suggest embedding random assignment as part of usual program operations. The principle holds that since programs often do not have sufficient funds to serve everyone who is eligible, program managers might as well use random assignment to determine who will be offered program services, thus providing a base for a randomized evaluation. While this may not be as applicable in impact investments where customers are the beneficiaries – since beneficiary selection is largely driven by market forces in those instances – this may be relevant for Social Impact Bond interventions or social enterprises that produce impact as a result of their operations (e.g. increasing opportunity by hiring marginalized population as workforce).

44 *Smallholder Impact Literature Wiki. http://smallholderimpactliterature.globaldevincubator.org/ Accessed December 2014.*

45 *"Demonstrating How LowCost Randomized Controlled Trials Can Drive Effective Social Spending: Project Overview and Request for Proposals 2015" Coalition for Evidence-based policy.*

5. Cross-Cutting Themes

In addition to the specific methodologies outlined, our research also revealed two cross cutting themes: stakeholder incentives and additionality. These themes will be explored more in depth in this section.

5.1 Incentives

While impact measurement offers benefits for multiple stakeholders, there appears to be a need for greater alignment of incentives to devote the resources to measuring impact. Currently, there is little clarity or consensus on whose responsibility it is to lead the impact measurement work. We believe that a number of factors contribute to the lack of incentives to measure impact, including:

- Perception of low value in impact measurement by entrepreneur
- Survey fatigue of beneficiaries
- Low fund investor appetite for robust measurement
- Limited incentive structures for delivery of social impact

We dive into each of these below.

Perception of low value in impact measurement by entrepreneurs

Social entrepreneurs have limited time and resources to allocate to extensive impact measurement. Some entrepreneurs may see impact measurement as outside of the work of pursuing their business opportunity and perceive it as a top down requirement from investors that does not provide a direct benefit. Given that the data collection for impact measurement often requires cooperation or self-reporting from the entrepreneurs, this perception can often be an obstacle to implementing impact measurement work, particularly in the monitoring and evaluation phases.

Survey fatigue of beneficiaries

In theory, impact measurement can help improve the investment's effectiveness in creating social impact, and thereby improve outcomes. However, this link is often is lost on the beneficiaries who may be repeatedly bombarded with survey or interview requests. On BBC's "The Forum Program"[46], Mike McCreless, Root Capital's Director of Strategy & Impact, provided an anecdote that describes this issue:

> "There was a farmer that we talked to, we started asking him the typical questions and he said, 'You know, I answered a survey like this 6 months ago, 12 months ago, 2 years ago and 3 years ago...people are always coming here to try to measure how poor are we. All you're going to do is take the data and take it to the funding agencies and you're going to get funded and I'm going to be left with nothing so I'm not going to answer these questions and I'm not going to participate in this any longer, goodbye sir.' He was tired of being measured."

As McCreless points out, it is important to remember that the communities we are working with are not objects of research or experiments to be measured. They are people with their own lives and experiences. There are no direct incentives for them to take their time to complete surveys or interviews, though their information is often critical to the data collection process.

Low fund investor appetite for robust measurement

Expectations of individual fund investors (i.e. Limited partners, or LPs) also influence the level of emphasis on impact measurement. One portfolio manager interviewee described his goal as "maximizing financial return while meeting the impact threshold." Similarly, impact investing firms report that their funders care that firms have "metrics themselves, [but do not care] what the metrics are."[47] Additionally, firms report that funders wrongfully associate general metrics or financial returns for social impact. In either case, there is a perception that

46 *"Mike McCreless on the mango farmer who got fed up with completing surveys." The Forum, BBC World Service. October 2013.*

47 *Excerpt from our interviews with impact investors. See Appendix A*

the investors in the fund care less about the actual outcomes from the investments than the practices and diligence around impact, potentially due to the amount of effort required to fully understand the former.

We believe that there are a few underlying causes for low investor appetite when it comes to social impact measurement:

1. *Fund investors believe that due diligence in the investment manager is enough*. The investors or LPs in this context were described as investors who seem satisfied that the fund managers demonstrate that they care about impact, by having methodologies and metrics that embedded in their work. Plus, traditional investor clients – especially those that are less educated in financial markets – perform diligence in finding fund managers and rarely question competency after the initial selection.
2. *The private sector doesn't operate like this*. The private sector does not have to justify impact to investors; impact is measured with financial returns alone, and fund investors rarely assess a whole slew of other outputs and outcomes if all holds steady. As a result, it is likely that some clients or investors do not even know to ask for social impact measures.
3. *It is perceived that costly measurement activities are not worth investor funds*. Some LPs question whether investing to develop impact systems is the most effective use of their funds, when these monies could instead be used to finance further expansion or growth. Many investors hope that their investees would take it upon themselves to perform better impact measurement in improving their strategies and operations (Reed et al, 2014). There is also a view held by some investors that impact investing funds are penalized because they have to incur costs related to impact measurement that traditional funds do not.

Limited individual performance incentives for delivery of social impact

Lastly, there appear to be limited incentive structures at the fund manager level to reward the delivery of social impact. Very few – if any – portfolio managers are financially rewarded for delivery of social outcomes; their performance is linked to their ability to deliver financial return.

As a result, in already tight budgets, impact measurement is de-prioritized. Unless there is funding for measurement, it can be a struggle to execute on the desire to measure impact rigorously – especially because it entails not only coming up with the funding to do it, but also building the capacity to become more results-focused (e.g., infrastructure, technology, resources). One of our portfolio manager interviewees said it best: "Until someone gets paid for impact, measurement will lag. I don't get paid to maximize impact return. I get paid to check the impact box."

Recommendations

Many observers believe that impact investing is at an important juncture as it tries to "make the move from philanthropic thought experiment to powerful instrument for global change."[48] Studies show that millennials' values, experiences, and preferences are poised to accelerate impact investing, directing billions of dollars toward social benefit.[49]

This potential influx of new investors, however, must be met by an impact investing industry with a strong infrastructure. The ability to accurately assess social impact is a cornerstone of this necessary infrastructure. Further, without increased rigor in impact measurement and a push to maximize impact, impact investing runs the **risk of becoming a term being used merely as a marketing tool**. Finally, impact measurement plays a critical role in building the capital markets that reward performance. For these reasons and others, we must solve the problem of limited incentives around impact measurement in the market today.

Take a survey respondent-centric approach

A respondent-centric approach can mitigate some of the challenges related to both entrepreneurs' perception of impact measurement and beneficiaries' survey fatigue. A number of investors highlighted the importance of

48 *Emerson, Jed and Lindsay Norcott. "Millennials Will Bring Impact Investing Mainstream." Stanford Social Innovation Review. April 2014.*

49 *Dhar, Vilas and Julia Fetherston. "Impact Investing Needs Millennials." Harvard Business Review. October 2014.*

thinking in the entrepreneurs' shoes when designing impact measurement processes. For example, what data would they find valuable and meaningful? How is the company and its products changing lives? This approach can provide customer insight for the company while also providing useful impact data.

We have borrowed the term "respondent-centric approach" from Root Capital's "client centric approach."[50] Root Capital's guiding principle is to generate data that helps Root Capital understand its impact on small-scale farmers while also creating value for the farmers and enterprises. This often translates to generating the data that the investor needs by working with clients and their procedures to generate data that they need. As such, Root Capital *positions itself as a value-added partner* who observes and measures impact to help farmers and enterprises increase their value, rather than as impartial outsiders measuring impact. Similarly, a respondent-centric approach can improve the quality of the impact data by focusing on issues of true importance to the community, increasing the commitment level of participants, and creating an environment for honest and representative responses.

Design innovative incentive structures

Some impact investing funds are exploring innovative incentive structures such as a "social impact carry," where portfolio managers (and/or relationship managers) are rewarded partly based on results related to measured social impact from investments under their management. For instance, they may be rewarded based on the degree to which their investments meet or exceed predetermined impact targets. Similarly, the financial carry may be restructured to incorporate an element that is contingent on social impact.

For example, Core Innovation Capital created a direct link between an Impact Score and General Partner (GP) financial compensation to provide a clear incentive for the GP to manage the portfolio toward high social as well as financial performance. An Impact Audit Committee determines an Impact Score by reviewing the social performance of investments and the GP's actions in supporting intended social outcomes. The GP's annual bonus, derived from a 2% management fee, is paid to the GP in direct proportion to the percentage of the total Impact Score achieved. The 20% carry is comprised of two components: 90% of the carry is tied to financial performance, and the remaining 10% is tied to to the Impact Score.[51]

Embed the impact measurement role

In some impact investing funds, investment managers tend to be drawn from the mainstream finance sector, with impact assessment being left to a dedicated professional who may sit alongside, or more often outside the core team managing the investments.[52] This practice structurally positions impact measurement as an afterthought. Instead of concentrating the work of impact measurement to a dedicated resource outside of the core investment process, impact investors should consider training their portfolio and investment managers in impact measurement, and/or including the activity as part of their core work.

For example, at LGT Venture Philanthropy, investment managers are responsible for impact measurement, including building the theory of change, conducting site visits and working with the ventures to collect impact data. The Head of Impact Management works with each the investment managers to review investment memos and other documents to provide feedback, and offers a sounding board and challenge function for investment managers throughout the process. The Head of Impact Management also consolidates the impact figures to report the data to stakeholders and looks to continuously improve data quality for the organization.

50 *A Roadmap to Impact, Root Capital. 2012*

51 *"Impact-Based Incentive Structures." Global Impact Investing Network. Issue Brief. December 2011.*

52 *Reeder, Neil, Gemma Rocyn Jones, John Loder and Andrea Colantonio. "Measuring Impact Preliminary insights from interviews with impact investors." LSE Cities. London School of Economics and Political Science. April 2014.*

5.2. Additionality

Additionality refers to whether the target outcomes would have occurred anyway, without the investment. In the impact investing context, additionality can be broken down into two aspects: investor-level additionality, and enterprise level additionality. The former is concerned with the impact that the investor has to the development and performance of the investee, and the latter analyzes whether the investee would be delivering outcomes that would otherwise occur without the investment. This section draws largely from articles by Paul Brest and Kelly Born in Stanford Social Innovation Review in 2013 and 2014.[53]

Investor-level additionality

Investor-level additionality argues that a particular investment can only have impact if it increases the quantity or quality of an enterprise's social outputs that would otherwise not happen. This requires that either 1) the investment provides the enterprise with capital that it otherwise would not have access to, or 2) the investors provide non-financial benefits to the enterprise, such as technical assistance, mentorship, or connections.

Investments that target and expect a below risk-adjusted return tend to have high additionality. These investments tend to be devoted to an enterprise that is otherwise capital-constrained, since they are not able to offer the market rates of risk-adjusted returns. This can take a number of forms, including below market investments, subordinated debt or equity positions, patient capital with longer terms before exit, among others. For investments that offer an approximate risk-adjusted market return, investors also have the opportunity to create additionality by identifying an opportunity that other managers may regard as too risky and thereby undercapitalize. This can happen when an impact investor has specific expertise or on the ground knowledge about the risk and potential social and financial returns of an investment opportunity that others are likely to pass up.

Aside from providing capital, impact investors can provide non-financial benefits to the enterprise that can create investor-level additionality in impact. For example, impact investors can provide technical assistance, strategic guidance, or access to their own networks to enterprises wishing to grow. Further, investors can play a role in protecting an enterprise's social mission. In public markets, impact investors may also use stakeholder activism to press firms towards impact-driven strategies.

Enterprise level additionality

Investor-level additionality assumes that the investee has enterprise-level additionality; i.e., a positive net benefit to society created by the enterprise. Without enterprise-level additionality, investor-level activities will not have any real additional impact.

Enterprise-level additionality can be broken down in two ways. One is product impact, which refers to the impact of the goods or services produced by the enterprise (e.g. providing clean water). Two is operational impact. This second aspect is concerned with the effects of the enterprise's management practices on its employees, and the operation's overall effect on the environment and community.

How do we incorporate additionality into our impact measurement?

Professor Paul Brest from Stanford Law School, in his October 2014 Stanford Social Innovation Review article "The G8 Task Force Report: Making Impact or Making Believe?" put forward a proposal that draws upon an analogy from nutrition labeling systems. He describes a simple traffic-light labeling system of green for healthy, red for unhealthy, and yellow for in-between. Brest suggests a similar system for the labeling of investment products in the impact investing system, where green labels investments that provide funds to undercapitalized enterprises, or where the investor provides unique and significant non-financial benefits; red labels investments in enterprises that are equally attractive to ordinary commercial investors; and yellow labels are for the in-between — for example, when an investment will notably reduce the cost of capital to the enterprise in instances as it begins to attract commercial capital.

While we appreciate the clarity and simplicity suggested by Professor Brest's proposal, we believe that this will be

53 Brest, Paul. "The G8 Task Force Report: Making Impact or Making Believe?" Stanford Social Innovation Review. October 2014. Best, Paul and Kelly Born. "Unpacking the Impact in Impact Investing." Stanford Social Innovation Review. August 2013.

challenging to implement due to the significant disincentive for impact investors who currently offer mainly "red" products to self-identify their products as such. Without a large group of investors willing to self-identify as belonging an undesirable category, this system may find itself challenged to gather momentum. While there may be an opportunity for an organization like the Global Impact Investing Network to take a leadership role in introducing it into the ecosystem, our hypothesis is that the market institutions are not currently at a stage where this can be strongly enforced across the industry.

Instead, our recommendation is to encourage impact investors to try to measure the additionality in their impact, and to include it in their impact reports. Some investors such as Bridges are already doing this; the spotlight below outlines their approach and framework. We believe that a similar approach should be applied to other impact investors to bring the subject of additionality into the forefront. We also recommend elevating the conversation on additionality and encourage it to be on the forefront of any conversation regarding measuring impact in impact investing; this will help LP's and other funders in the ecosystem understand the concept and push for it to be included in the impact reports that they receive. Ultimately, we hope that this emphasis will push for a greater emphasis on additionality, which in turn will lead to a greater impact to addressing our society's pressing social and environmental issues.

Spotlight: Bridges Ventures

Bridges Ventures is a specialist fund manager (with 3 fund types) focused on opportunities where investments can generate investor returns through helping to meet pressing social or environmental challenges.

Bridges' additionality scoring guide considers both investor-level and enterprise-level additionality.

In their framework, an investment scores low on investor-level additionality if the business is already well-established with other competing investors. In co-investment situations, investor-level additionality is analyzed by the extent to which Bridges leads the development of the investment, and therefore the leverage of additional capital. An investment is considered medium in investor-level additionality if Bridges is the sole or lead investor in an opportunity overlooked by mainstream investors. For example, Bridges' investor-level additionality in their Underserved Markets theme lies in directing capital to businesses that demonstrate strong value to some of the most deprived communities in the UK. Another example is Bridges' Social Sector Funds, which provide flexible capital to business models that cannot attract commercial capital due to their structure or target market. In addition to providing capital, Bridges' non-monetary support that can drive increased impact is also considered as additionality. The highest level of investor-level additionality is when Bridges is incubating the business in-house. For example, Bridges identified a gap in low-cost gyms in inner city areas, despite the potential for exercise to address the rapidly rising levels of obesity and other chronic diseases. As a result, the Gym – a chain of low-cost gyms in UK's deprived areas – was incubated within Bridges. This involved conducting due diligence research, writing up a business plan, selecting a management team, and executing the launch. The Gym was founded in 2007, with Bridges holding majority ownership.

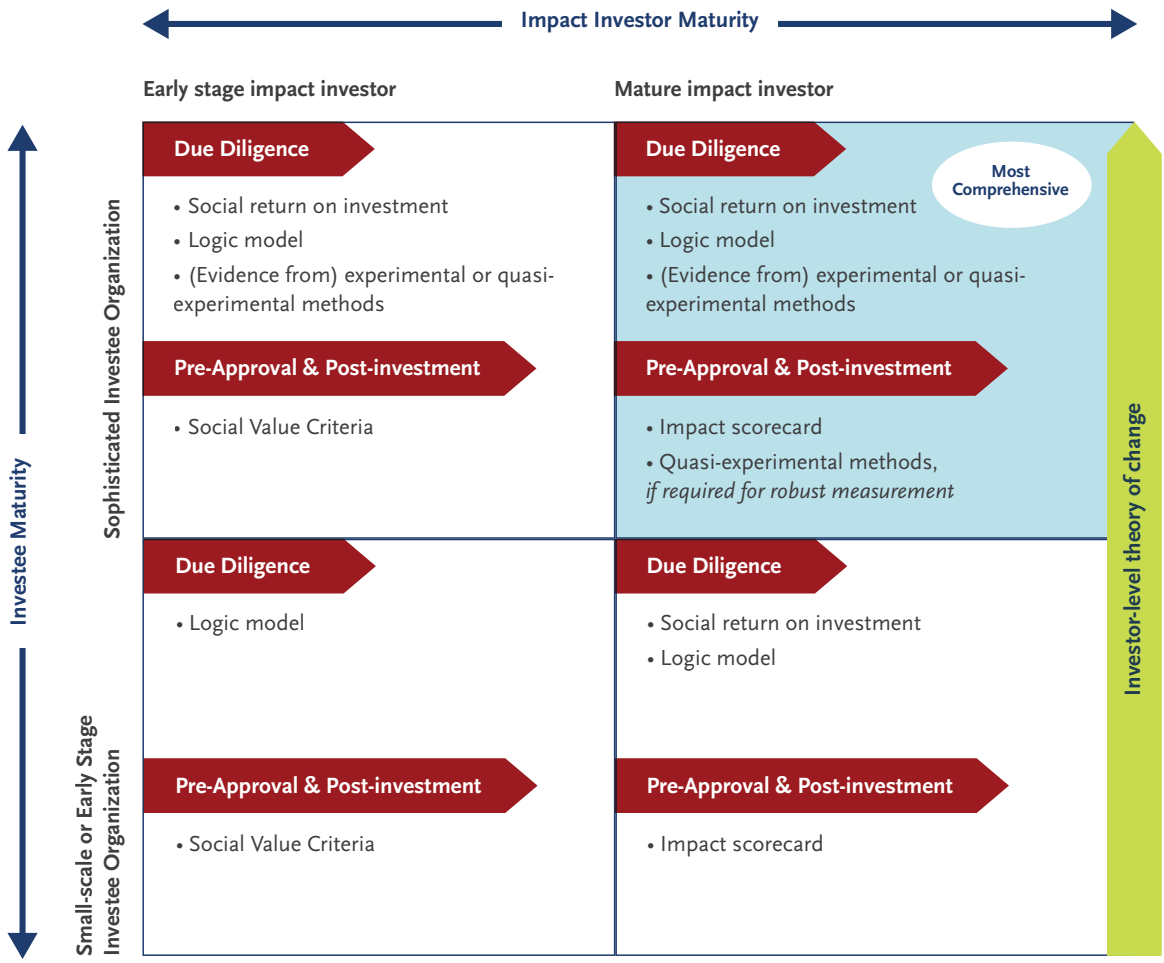
For the enterprise-level additionality aspect, Bridges assesses whether the social outcomes generated by the underlying investment will create a positive net benefit for society, rather than displacing comparable benefits in the current environment. Enterprise-level additionality is considered low if there is a likely displacement of comparable societal benefits; for instance, if the investee is simply stealing market share with no impact value-add. In contrast, enterprise-level additionality is considered high if displacement of comparable societal benefits is very unlikely due to increased quantity or quality by the investee in addressing a current market failure.

6. Putting It Together: Integrated Approach to Impact Measurement

Our research has shown us that impact investors are using various methods at different stages of investment (e.g. due diligence, post-investment) to fulfill a variety of purposes in impact measurement (e.g. estimating impact, planning impact, monitoring impact, evaluating impact). In this section, we seek to bring together what we learned by suggesting an integrated model for impact measurement for investors.

Recognizing that investors vary in their level of maturity and resources – and that their investees may also vary in their level of impact measurement sophistication – we have developed a draft framework that proposes a number of approaches depending on the stage of investor and investee. The matrix below illustrates the recommended measurement activities per investment.

Figure 6.1 *Integrated Model of Impact Measurement*



Note: Investee maturity should be determined by the impact investor based on the investee's size, reach, budget, or years in existence

The best practices integrated model

Our best practices model is most appropriate for a mature impact investor that is working with a sophisticated investee. In this model, we envision that the investor uses a number of tools to screen investees candidates and conduct due diligence of potential investments.

To begin the due diligence process, an **expected return** calculation (e.g. SROI) is used to compare the impact of potential investments. However, this is only one of the several sources of input in the impact estimate. The investor also works with the entrepreneur to map out the **logic model** of their theory of change to understand how the investment will convert theory to action. This tool is also used to identify the causal links underlying the investment's path to social impact, and allows the investor to identify hypotheses to test and assesses the strengths of these linkages. This assessment **may draw upon existing experimental or quasi-experimental studies** from a "what works" database that demonstrate evidence of the causal links in impact.

Also in the due diligence and selection processes the investor considers the **enterprise additionality** – whether the social outcomes generated by the underlying investment will create a positive net benefit for society, rather than displacing comparable benefits in the current environment – and **investor-level additionality**; i.e., the ease of capital for the investee, and any non-monetary benefits that the investor can offer to boost the investee's social impact.

In the pre-approval stage, the investor works with investee to determine **KPIs to track on the scorecard** used to monitor the investment. These KPIs can be drawn from indicators suggested by the logic model from the due diligence stage; the Contingency Framework for Measuring Social Performance is used as a basis for discussion on the level of KPIs used (e.g. outputs vs. outcomes). Strategy maps or the investor's scorecard template may also be used as a starting point for identifying appropriate KPIs. Regardless, they are negotiated between the parties and selected at this stage. These KPIs should be chosen from a **respondent-centric perspective** so that the data gathered is useful to both the investor and the actor that is collecting and/or reporting the data (investee, beneficiary / customer). Note that scorecards are recommended here over social value criteria; this is because we believe scorecards are a more robust form of performance measurement and tracking over time.

In post-investment, the investor works with the investee to gather data on the KPIs, and analyzes them to monitor the social impact performance of the investee. This information may be used to extract lessons learned, make course-corrections, and/or inform the investor's broader strategy.

In the evaluation stage, measuring social impact may entail a **quasi-experimental method evaluation**; if required – or if the impact investor is interested – we recommend using some of the least resource-intensive quasi-experimental studies (e.g., pre-/post-test or historical baseline study). The findings from this are used to test the links of impact in the investee's theory of change, and build confidence for similar business model for future investments. Note that RCTs are not recommended, even in the best practices model. This is because, based on our research and analysis, we conclude that RCTs are often too academic and resource-intensive to provide the value that impact investors look for in evaluating outcomes. Quasi-experimental methods are a superior use of funds in this case.

Above this investee-specific level, we also encourage impact investors to **map their own theory of change**. This exercise allows the investor to articulate and understand how their investments translate into intended impact. This process can also be used to identify hypotheses underlying the investment thesis, and the investor may choose to conduct deep dives to investigate whether hypotheses confirm (or adjust) its own theory of change.

Finally, in this best practice scenario we envision that the impact measurement efforts are **well integrated** into the portfolio team as part of the investor's core work. Additionally, we envision that portfolio managers are **rewarded based on results** related to social impact generated by investments under their management, potentially in an arrangement such as a social impact carry or bonus.

The simpler adaptation

Recognizing that not all investors are ready to take on all of the above, our framework proposes a simpler version for those that are just starting out. As a first step, we encourage investors to work with entrepreneurs to develop a **logic model** to map out their venture's theory of change, so that the investor can understand and evaluate its path to impact. In the pre-approval stage, we suggest adopting **social value criteria** to rate investments, and to monitor the investee's progress post-investment.

7. Conclusion

The field of impact investing is attracting increasing interest from investors, creating a greater number of impact investing organizations, and fueling an inflow of capital to the sector. The sector growth to date – as well as its projected scale in the next 5 to 10 years – has led investment stakeholders to pursue impact measurement to understand both financial return and social impact.

The aim of our study was to deepen understanding of the specific practices and methodologies that established impact investors and other funders are using to measure the social impact generated by their investments, and to analyze the conditions under which each measurement method is most applicable.

We believe that informal, inconsistent, and weak impact measurement methods could be a real constraint to the growth of the impact investing sector and its prospects to create real social change. We believe that impact investing holds tremendous potential in tackling some of our world's most pressing challenges; however, we also believe that the term "impact investing" runs the risk of being diluted and used as a marketing tool if a certain level of rigor in impact measurement is not established in the industry. To that end, we hope that this paper has contributed to the dialogue and progress development of impact measurement in the emerging impact investment field.

Appendix A: List of interviewees

We greatly appreciate the time and input of our interviewees:

Organization	Contact Name
Acumen	Kasia Stochniol
Bank of America Merrill Lynch	Surya Kolluri
Bridges Ventures	Brian Trelstad
Draper Richards Kaplan	Christy Chin Mira Wijayanti
FSG	Valerie Bockstette
GIIN	Kelly McCarthy
Grassroots Business Fund	Kathryn DeSutter
Harvard Business School	Dan Brown Lisa Chase
Harvard Kennedy School Social Impact Bond Lab	Jeffrey Liebman
JPMorgan	Ali Idrissi
LGT Venture Philanthropy	Tom Kagerer
MaRS Centre for Impact Investing	Joyce Sou
MDRC	David Butler
New Profit	Lance Potter
Omidyar Network	Sara Eshelman Masha Lisak
REDF	Esther Kim
Robin Hood Foundation	Dana Rosenthal
Root Capital	Michael McCreless
RSF Social Finance	Reed Mayfield
Social Finance US	Caitlin Reimers Brumme
Social Innovation Fund (CNCS)	Lily Zandniapour
Third Sector Capital Partners	John Grossman

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