LEARNING REPORT

How Impact-Linked Finance Incentivizes High-Impact Investment in Agricultural SMEs

A Case Study of Root Capital's Social Impact Incentives (SIINC) Project

Katie Naeve
245 Main Street, 2nd Floor
Cambridge, MA 02142
(617) 444-4545
knaeve@rootcapital.com

root capital

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IDB | LAB

Roots of Impact

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

ACRONYMS AND DEFINITIONS

Additionality	A measure of whether the financial investment would otherwise have been made. At Root Capital we consider a loan high additionality if no other lender (social or commercial) would make it on the same terms; medium additionality if only another social or public lender would make it on the same terms; and low additionality if any other lender (social or commercial) would make it on the same terms.
Agri-SME	Agricultural small- or medium-sized enterprise. At Root Capital we define this as formal cooperatives or for-profit enterprises working in agriculture with annual sales greater than X.
Gender inclusive business	At Root Capital we consider a business gender inclusive if women make up more than 30% of its farmer suppliers and employees, OR if it is led by a woman and women make up more than 20% of its farmer suppliers and employees.
IDB Lab	The Inter-American Development Bank Lab
MFI	Microfinance institution
RoI	Roots of Impact
SDC	Swiss Agency for Development and Cooperation
SIINC	Social Impact Incentives
Women-led business	At Root Capital we consider a business women-led if any of the following criteria are met: 1) One or more women hold the position of Executive Director, Senior Manager, Director of Operations, President or equivalent level of leadership; OR 2) If 51% of the membership of the cooperative or the membership of the board of directors (or similar government group) are women; OR 3) 51% or more of managers are women; OR 4) 51% or more of the business is owned by women.

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EXECUTIVE SUMMARY

Smallholder farmers in developing countries lack reliable access to inputs, credit, markets, technology, and agronomic knowledge—all tools that could boost productivity, build resilience to climate change, and increase incomes. Most live at or below the poverty line, suffer food insecurity, and are vulnerable to the shocks of volatile weather and markets. Agricultural small and medium enterprises (agri-SMEs) are critical actors with the potential to transform farmer livelihoods, build resilience to climate change, and ensure food security and adequate nutrition. Often operating in remote regions with poor infrastructure, agri-SMEs play an essential role in distributing inputs to smallholder farmers, linking them to markets, and creating employment to grow rural economies.

Yet SMEs typically fail to realize their full potential and impact, largely because they fall in the "missing middle" of agricultural finance—their needs are too large for microfinance to but these businesses are too small or risky to be attractive to commercial lenders. In fact, the International Finance Corporation estimates the financing gap for SMEs in emerging markets to be *$1 trillion,* and SMEs globally report inadequate financing as the single biggest barrier to growth.[1] This missing middle is particularly pronounced in the agriculture sector. Risks like price and demand volatility, climate patterns, and crop failure compound the challenges facing SMEs.

To address the lack of financing for high-impact agri-SMEs, Root Capital partnered with Roots of Impact (RoI), the Swiss Agency for Development and Cooperation (SDC), and the Inter-American Development Bank's Lab (IDB Lab) to develop and implement a new, innovative pay-for-performance project. The project, "Social Impact Incentives (SIINC) to Unlock Finance for Early-Stage Agricultural Businesses in Latin America" uses a market-correcting payment to incentivize Root Capital to take on that additional cost and risk of financing early-stage agri-SMEs. By closing the gap between the costs of these loans and their financial returns, Root Capital can finance agri-SMEs that would otherwise be unprofitable to serve, filling a credit gap that commercial lenders are unable or unwilling to fill.

After just two years, SIINC created measurable impact for Root Capital, its client agri-SMEs, and smallholder farmers. A total of $1M in outcome payments enabled Root Capital to disburse $12M in loans to 32 high-impact, early-stage agri-SMEs. These enterprises earned $48M in

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[1] The Elephant in the Room: Financial Inclusion for the Missing Middle, 2015

revenue and generated $41M in income for 9,300 smallholder farmers. SIINC had a meaningful impact on the makeup of Root Capital's portfolio: In the target countries, we made twice as many high-additionality loans during the project than we did in the same period before the project. It also showed how SIINC can be catalytic in boosting client outcomes. Over half of SIINC clients (18 of 32) grew their annual revenues, with the average client revenue growing by 41% over pre-SIINC levels. In addition, 47% of enterprises gained subsequently larger loans from Root Capital—on average $130,000 larger—with 9% receiving a loan >$500K. That pushed these clients over the threshold for requiring subsidy. Also, 9% increased their access to other sources of finance after 18 months, with two clients accessing social financing and one client accessing commercial financing.

The pilot also generated significant learning—for Root Capital and other social enterprises interested in implementing SIINC or other impact-linked financing projects.

1. **Strong systems and processes, loan officer commitment, complementary advisory services, and strong collaboration among partners** were critical to the project's success.

2. **SIINC helped Root Capital reach agri-SMEs working in more socially vulnerable areas.** Our SIINC clients were twice as likely to operate in areas of extreme poverty than the rest of our Latin America portfolio.

3. **SIINC clients performed as well on their loans as the rest of Root Capital's global coffee portfolio, despite their early stage and smaller size.** SIINC clients also saw larger year-on-year sales growth rates than average, growing at a rate of 43% compared to historical growth rates for Root Capital clients in Central America (26%) and South America (34%).

4. **The amount of the incentive payment was well-aligned with the costs to serve these businesses.** No SIINC loans were profitable without the SIINC subsidy. On average, each SIINC loan would have generated a $21,100 loss for Root Capital without the SIINC subsidy.

5. **The mechanism matters.** When the impact payment is aligned with and covers the costs to generate a specific outcome, it is more likely that the outcome will be reached.

6. **The project's challenges included:** faster-than-expected drawdown of outcome payments, late changes in loan terms, and the complexity of measuring additionality.

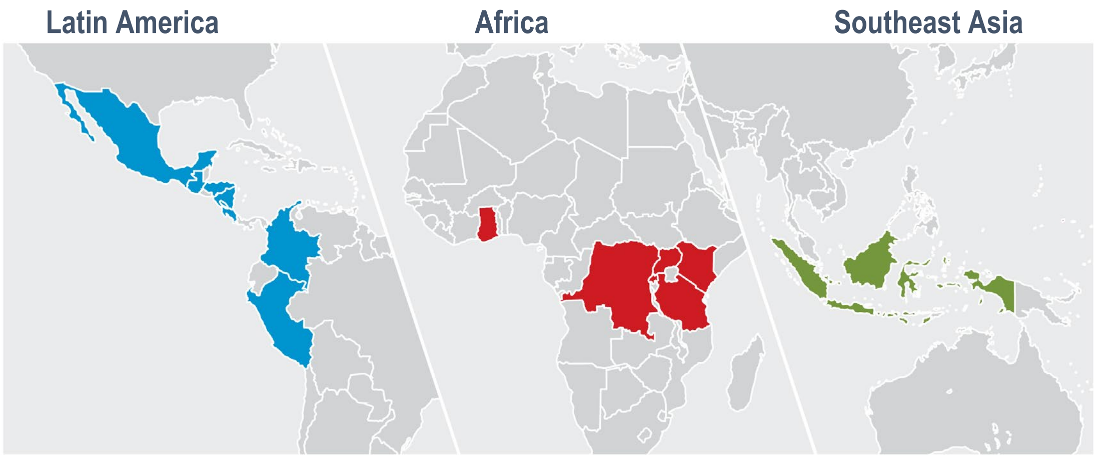
Building off the success and learning of this project, Root Capital and others are expanding our use of SIINC and other impact-linked finance mechanisms. Root Capital, RoI, IDB Lab and SDC launched a second SIINC project to support early-stage agri-SMEs throughout the COVID-19 pandemic. Additionally, Root Capital, in partnership with the Walmart Foundation and Visa Foundation, launched a SIINC-like gender lens investing initiative in 2021.

INTRODUCTION

Root Capital

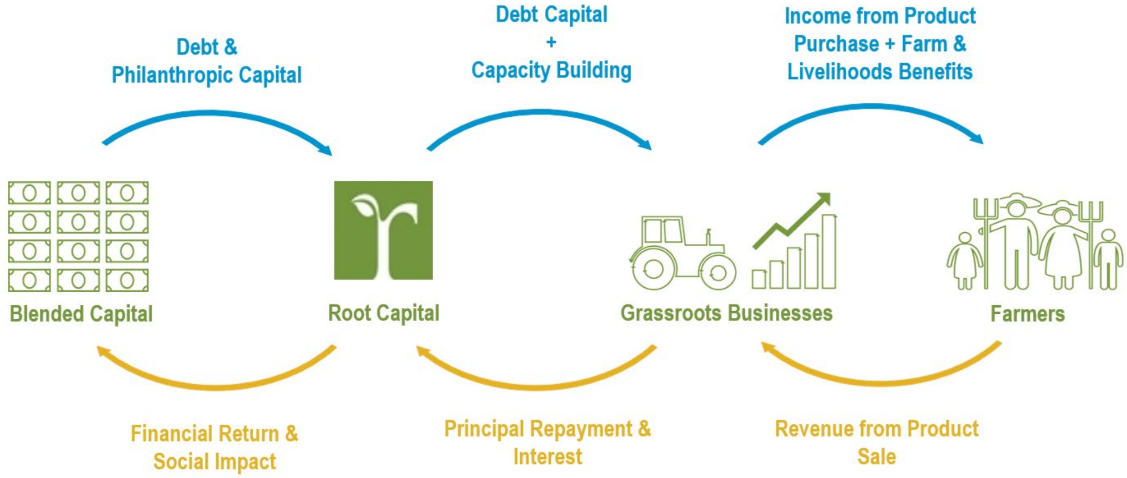
Root Capital invests in the growth of agricultural SMEs so they can transform rural communities. These businesses purchase crops such as coffee, cocoa, or grains from smallholder farmers. With growth, they become engines of impact that can raise incomes, create jobs, empower women and young people, sustain peace, and preserve vulnerable ecosystems. We supply these businesses with vital resources: access to capital, trade and technical partners, and targeted training. To date, we have distributed $1.6 billion to over 740 agri-SMEs and trained over 1,570 agri-SMEs. Through these agri-SMEs we have reached over 2.4 million smallholder farmers across Latin America, Africa, and Indonesia.

Figure 1. Root Capital's Geographic Reach



For over 20 years Root Capital has been a pioneering impact investor, pushing the frontiers of smallholder agricultural finance. We use an innovative blended-finance approach that combines investor and philanthropic capital to serve high-impact SMEs in some of the world's most hard-to-reach rural communities. As shown in Figure 2, we leverage investor debt to make seasonal working capital loans to agri-SMEs so that they can make earlier, higher, and more consistent payments to farmers for their crops while providing them critical agricultural services like technical assistance and credit.

Figure 2. Root Capital's Lending Model



We know our impact as a lender is greatest when we fill credit gaps that others—especially commercial lenders—are unwilling to fill. When our clients gain financing, they can grow and reach more small-scale farmers. As such, throughout our history we have targeted earlier-stage SMEs that require smaller loans but lack credit history or formal collateral. These businesses have a high capacity for impact, but they remain unprofitable for Root Capital to serve. Without an approach that closes the gap between the cost to serve and financial returns, we can't reach the many agri-SMEs with potential for growth and impact.

The Importance of Working Capital for Agri-SMEs

Wiston Vílchez had barely turned 24 when he took over as general manager of the fledgling Flor de Dalia coffee cooperative in 2014. At the time, the cooperative consisted of a handful of families who sold their coffee to local brokers at rock-bottom prices. The brokers then sold the coffee on the international market with a large markup.

A lot has changed over the half-decade since Wiston began leading Flor de Dalia. The cooperative, nestled in the foothills of northern Nicaragua, has grown to reach more than 200 farmers and now works directly with international buyers.

To fulfil international buyer contracts, however, Flor de Dalia needed working capital. Flor de Dalia's manager noted the story of a farmer who once needed to quickly sell his stock. The cash-strapped producer sold his coffee at $600 per quintal compared to the $1,500 he could have earned on the international market. Without cash flow, cooperatives and farmers can't boost their livelihoods and invest in their coffee. Stable access to financing engenders a positive and mutually-reinforcing cycle in which cooperatives access more financing, buy more product from more producers, gain more access to international clients, increase the overall demand for the product, and generate more employment in the region. The cycle then repeats anew, positively impacting whole family units as their direct beneficiaries.

Much of the higher revenues that Flor de Dalia has earned have been reinvested in social initiatives, including environmental stewardship and clean water projects that benefit all members of the community. One of the most important ways the cooperative has added to the quality of life for its farmers is through their internal credit system to extend access to financing for individual farmers as well. Producers make most of their income during the coffee harvest. Oftentimes, much of the previous year's income has been used before the next harvest is ready for picking, so this access to cash flow helps farmers keep food on the table and invest in themselves.

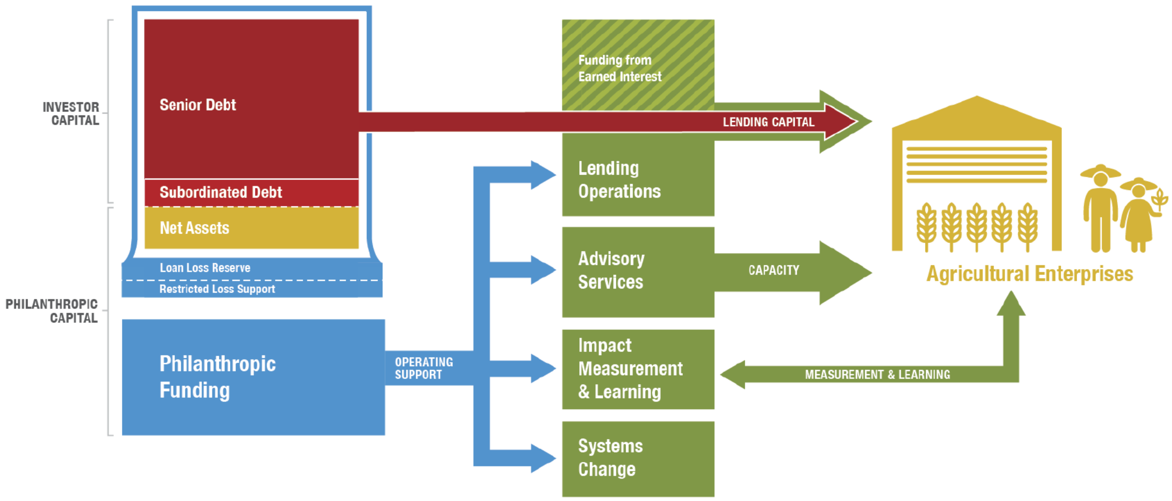
In early 2019, Root Capital made its first working capital loan to Flor de Dalia of $130,000—a loan that no other lender would provide them. For each of the next two years we lent the cooperative $150,000, and in late 2021 their financing from Root Capital grew to $230,000. Over that period their revenues grew 27% and their payments to producers grew 38%.

Root Capital's approach to blended finance

Root Capital's impact is as much about what we do as it is *how we do it*. In partnership with hundreds of investors and donors, we have developed an innovative blended financial structure. This impact-driven, risk-tolerant model enables us to go where other financiers won't, stay when others leave, and fulfill our mission as a stalwart ally for the world's most vulnerable rural communities.

Our blended finance model includes a mix of concessionary investor capital and philanthropic funding that enables Root Capital—and our donors and investors—to be strong and impactful partners for our clients and their communities. This blended model (Figure 3) includes five categories of capital: Investment capital from our senior note holders, investment capital from subordinated debt investors, philanthropic funding for our net asset base, restricted loss support, and operating support to fund our lending, advisory, and thought leadership activities.

Figure 3. Root Capital's Approach to Blended Finance



No matter how much loss protection we have in place, Root Capital wouldn't be able to use our resources towards their greatest impact without philanthropic general operating support. Operating support from philanthropic partners doesn't just fund our Advisory Services and impact measurement program, it also supports Root Capital's lending activities: business development, due diligence, and loan servicing activities. While loan interest from our lending program covers *some* of our own costs, it isn't enough to fulfill our mission and deploy investment capital to still un- and under-reached agribusinesses. Root Capital needs flexibility to pursue high-impact loans that won't generate sufficient revenue to cover their costs.

THE CHALLENGE: MARKET FAILURES IN LENDING TO EARLY-STAGE ENTERPRISES

Smallholder farmers in developing countries lack reliable access to inputs, credit, markets, technology, and knowledge of best agronomic practices. These are tools that boost productivity, build resilience to climate change, and increase their incomes. Most of these farmers live at or below the poverty line, suffer food insecurity, and are vulnerable to the shocks of volatile weather and markets. Agricultural SMEs are one of the most compelling avenues for agricultural growth. Agri-SMEs are critical actors that have the potential to transform farmer livelihoods, build resilience to climate change, and contribute to food security and nutrition. Often operating in remote regions with poor infrastructure, agricultural SMEs play an essential role in distributing inputs to smallholder farmers, linking them to markets, and creating employment (*e.g.*, processing, transportation) to grow rural economies.

Yet agricultural SMEs typically fail to realize their full potential in large part because they fall in the “missing middle” of finance (see Figure 4). That is, they are too small and risky for commercial lenders, but have financing needs too large for microfinance institutions (MFIs), as seen in the middle white space of Figure 4. In fact, The International Finance Corporation estimates the financing gap for SMEs in emerging markets to be *$1 trillion,* and SMEs globally report that inadequate financing is the single biggest barrier to growth.[2] The missing middle is particularly pronounced in the agriculture sector. The risk from market forces (e.g., price and demand volatility), climate patterns, and crop failure compound the challenges present in other sectors.

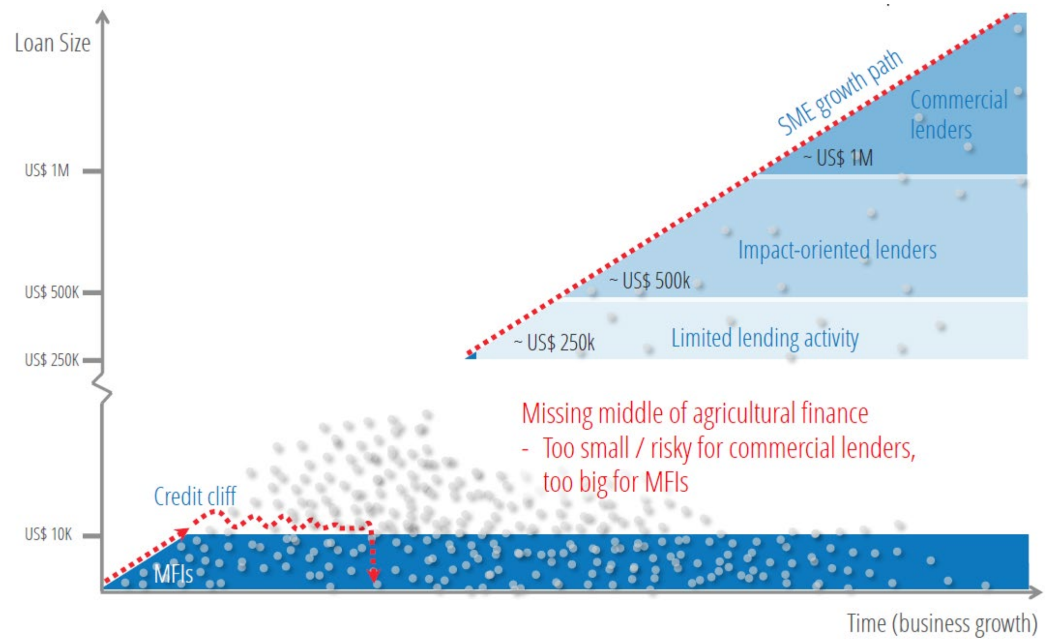
Commercial markets do not—and will not—serve early-stage agricultural SMEs because of the inherent risks and unattractive returns. These agricultural SMEs operate on thin margins and cannot afford to pay the interest rates that would cover the operating costs and risks inherent for financial institutions to make the seasonal working capital loans these businesses need. commercial Hence, lenders focus on highly collateralized lending above $500K. Meanwhile MFIs find that their underwriting and risk management protocols are ill-suited for SME lending. Even social lenders active in agricultural markets rarely lend in amounts below $500K. As a result, agricultural SMEs fail to realize their potential impact on farmers—purchasing lower

[2] The Elephant in the Room: Financial Inclusion for the Missing Middle, 2015

volumes of crop, processing less food for local markets, and generating less employment and demand for services that might otherwise boost regional economies.

Root Capital provides working capital and training to agricultural SMEs, with loans typically ranging from $250K-$2M (shown by the rightmost red dotted line in Figure 4). However, there are large numbers of agri-SMEs with financing needs in the lowest segment of that range, including many agricultural SMEs with financing needs lower than $250K. These SMEs are extremely hard to serve—even for an impact-first investor like Root Capital. As a result, these SMEs fall off the proverbial credit cliff.

Figure 4. The Missing Middle in Agricultural Finance



"Root Capital is not just a lending service. It is a strategic ally and forms part of a chain, a chain that is constituted of the company, the producers, partners and clients. When everything works, it's good, but if the financing fails…well, then the whole chain fails."

Juan Vasques, General accountant for Root Capital client Aprocam

We need a market-correcting incentive that balances the high risks and costs of agri-SMEs in this segment with the potential positive impact associated with their growth.

A SOLUTION: MARKET CORRECTING SOCIAL IMPACT INCENTIVES (SIINC)

Social Impact Incentives (SIINC)

Co-developed by Roots of Impact (RoI) and the Swiss Agency for Development and Cooperation (SDC), Social Impact Incentives (SIINC) is an impact-linked financing instrument that rewards high-impact enterprises like Root Capital with time-limited premium payments for achieving social impact.[3] SIINC enables social enterprises to scale without compromising impact by acting as an additional revenue stream—through premium payments—when impact is restricted by financial constraints. SIINC also offers great value to funders and donors who pay only when agreed-upon outcomes are achieved. Finally, SIINC is a catalytic mechanism that ensures investment in high-impact enterprises that are positioned to grow or scale. With SIINC support, enterprises grow beyond the need for a subsidy to achieve impact.

Impact-Linked Finance
Impact-linked finance refers to linking financial rewards for market-based organizations to the achievements of positive social outcomes. It is a highly effective way of aligning positive impact with economic viability and lies at the intersection between blended finance, impact investing, and results-based finance. For more information, see: https://www.roots-of-impact.org/impact-linked-finance/

Today SIINC is used in a variety of innovative programs to provide financial rewards to high-impact enterprises across multiple sectors and geographies, from gender equity to health care.[4]

Root Capital's SIINC Project

In 2019 Root Capital partnered with RoI, SDC, and IDB Lab to launch a SIINC project that encourages lending to early-stage agricultural enterprises with high impact potential. The

[3] See https://www.roots-of-impact.org/siinc/ for more information.
[4] See https://www.roots-of-impact.org/wp-content/uploads/2019/09/SIINC-Case-Studies-CdA-Update-Results-2019.pdf for more information.

project creates a market-correcting incentive that compensates Root Capital for the short-term unprofitability of this segment.

This incentive model rewards Root Capital for lending to agricultural SMEs in Latin America that are unprofitable to serve today, but which demonstrate substantial promise for growth and impact. Together, IDB Lab and SDC collectively agreed to pay Root Capital up to $1 million for making high-impact—but also high-risk and high-cost—loans with up to 40 early-stage agricultural businesses in Colombia, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, and Peru. Root Capital, RoI, IDB Lab and SDC defined "high-impact loan" as meeting the following criteria:

1. **Less than or equal to $500K**

   Early-stage agri-SMEs face large barriers to financing as most lenders—even many social or subsidized lenders—are unable or unwilling to make smaller loans because they are too costly. At Root Capital, loans at or below $500K yield a $25K upfront loss, on average, as returns from fees and interest that these SMEs can afford to pay don't offset our costs to serve them. This means it's difficult to make these loans without additional resources. Loans begin to be offset Root Capital's costs when they exceed $500K.

2. **Medium or high additionality**

   Root Capital exists to fill critical credit gaps for agri-SMEs so they can strengthen smallholder livelihoods. Therefore, we know our impact as a lender is greatest when we provide loans that others do not. This concept is called "additionality"—the extent to which our loan would be additional to what the client otherwise would have received from other lenders—and is a key measure of our impact as a lender. We consider a loan "high additionality" if no other lender would make the same loans on the same terms; "medium additionality" if only a social, subsidized or government institution would make the loan; and "low additionality" if a commercial lender would make it.

3. **To a gender inclusive business**

   Women working in agriculture face a multitude of gender inequities that inhibit their ability to participate and benefit equally from their labor. Women are less likely to own the land they work, have less access to credit and training, and face time poverty as they juggle work and responsibilities at home.[5] In fact, only 7% of all agricultural

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[5] See https://rootcapital.org/in-photos-leveling-the-playing-field-for-women-in-agriculture/ for more information.

investment goes to women.[6] With the right resources, agri-SMEs can help level the playing field for women, providing them critical social and economic opportunities. Since 2012, Root Capital has measured the gender inclusivity of our lending clients and used that information to guide our efforts to promote gender inclusion through our Women in Agriculture Initiative. We define a gender-inclusive enterprise as one that has more than 30% women producers and employees OR is led by a woman and has more than 20% women producers and employees.

4. **To a new enterprise that Root Capital had not previously reached**

   Root Capital portfolio analyses show that with financing, Root Capital clients average year-on-year growth rates of 24.7% and that 66% of clients with access to only Root Capital loans eventually access other sources of financing within an average of 2.1 years. However, because new clients require due diligence and capacity-building services, the costs to make loans to them are higher than they are for existing clients. In addition, this measure was included to encourage Root Capital to expand its portfolio and reach

In addition to outcome payments to incentivize high-impact lending, IDB Lab also provided Root Capital an additional $550,000 to deploy targeted capacity-building services to 30 enterprises, helping prepare them for future financing while further facilitating their growth and resilience. These services included loan application support and training on business and financial management.

STRUCTURE

The project was structured as straightforward, impact driving, and transparent. As shown in Figure 5, Root Capital provided qualifying loans and advisory services to early-stage agri-SMEs. To do this, we modified our lending and decision-making processes from pipeline development through loan closing to ensure that we had the protocols in place to support project implementation. We broadened our originations to focus on earlier-stage businesses with financing needs smaller than we would typically make. We also adjusted our database to tag loans that qualified as SIINC eligible so that they could be prioritized and approved by the credit committee. Importantly, we also trained all of our lending and business development teams to ensure they understood both the SIINC qualification criteria and the process for originating and closing a SIINC-eligible loan.

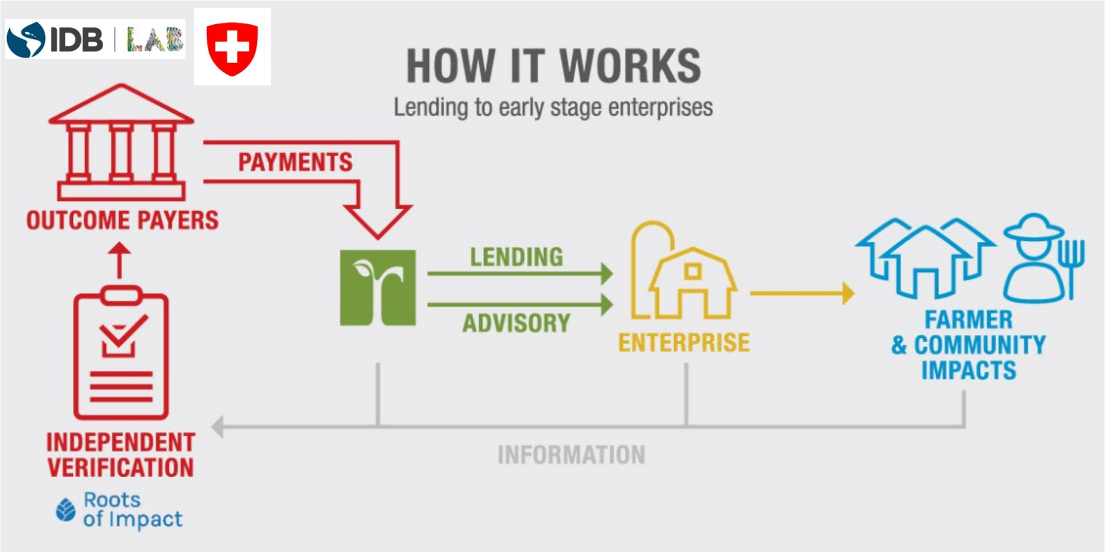
[6] http://www.fao.org/resources/infographics/infographics-details/en/c/180754/

With Root Capital financing, agri-SMEs used these working capital loans to purchase crop from farmers—earlier and at higher prices—provide critical farm training and inputs, and fulfil international sales contracts. The impact of each enterprise was tracked through Root Capital's social and environmental performance processes whereby we collect dozens of impact indicators from clients at the time of loan closing. These include the number of their supplying producers, income generated for producers, and women's participation at all levels of the enterprise. These metrics help us understand the impact that the enterprise is having on their community.

An independent verifier contracted and managed by RoI verified that the outcomes associated with outcome payments were reached through both desk and field research. Every six months Root Capital submitted to RoI a list of qualifying loans we closed in the previous six months as well as documentation that they met the required outcomes, including: 1) official loan agreements to show the loan was closed; 2) excerpts from clients' financial reports indicating their access to other sources of financing; 3) their gender scorecard to justify gender inclusive status; and 4) other impact data such as number of producers they source from. RoI reviewed this documentation and also conducted a series of spot checks in one or more countries where Root Capital made loans during the period. The spot checks relied on 1) in-depth interviews with clients and loan officers to validate that the impact criteria were met and also provide more detail about the impact of Root Capital's support on the business and its producers; and 2) interviews key informants with expertise on the agri-finance sector in the target countries. The independent verifier then decided whether each loan qualified for an outcome payment and the amount of the payment. If the determination of the independent verifier were to differ from that of Root Capital's, Root Capital would have the opportunity to provide additional information or context to refute the finding. In the case of a more difficult decision, the process dictated that RoI would hire an external expert to provide his or her opinion. As described in more detail in the Learnings section below, the verification process requires the collaboration of all parties, especially when the impact criteria include some degree of nuance, as in the case of additionality.

RoI then submitted a report and letter of verification to the outcome payers—IDB Lab and SDC—that triggered the outcome payment.

Figure 5. The SIINC Project Structure



PAYMENT SCHEME

Using 15 years of historical portfolio lending and impact data, Root Capital, RoI, SDC, and IDB Lab estimated the costs associated with lending to early-stage agri-SMEs and achieving the targeted project impact. We then designed the payment scheme to directly tie cost barriers to potential impact and provide a corresponding incentive in order to reduce those barriers.

The biggest driver of cost and impact is the operating deficit Root Capital incurs by making loans less than $500K. As shown through an example in Table 1, Root Capital loses an average of $25K on each loan less than $500K. This is due to the high costs of serving this segment and low relative loan revenue. Note that this loss is incurred regardless of whether the loan is repaid. In addition, the smaller the loans, the greater the loss. This is because less revenue is earned from fees to offset our operating costs. Therefore, the payment scheme (see Figure 5) uses an average outcome payment of $25K per loan, with variation based on the size of the loan. Smaller loans yield a higher outcome payment in recognition that they are more difficult and costly to make.

Table 1. Economics of a $250K Loan

Revenue from $250K loan*	
~$2,500	Closing fee *(1%)*
~$12,500	Interest income *(10% interest rate, 50% utilization)*
~$15,000	Total revenue
Costs of $250K loan (expenses + risk)	
~$30,000	Cost to source & service client
~$5,000	Root's cost of capital (2% debt)
~$6,250	Expected loss (5-15% prob. default)
~$41,250	Total costs
($26,250)	**Profit (loss)**

In addition, Root Capital historical lending data shows that high-additionality loans cost $3-7K more than loans that are medium additionality. This is due to the costs of due diligence and monitoring associated with these loans.

We also included in the payment scheme a $1,000 bonus for reaching gender-inclusive businesses. This component of the payment scheme was not based on the additional costs to serve gender inclusive businesses—in fact, our portfolio analysis shows that loans made to women-led businesses are *more* profitable than those made to male-led businesses, even when controlling for industry, country and loan size—but rather designed as a "bonus payment" to incentivize Root Capital's lending team to prioritize making loans to inclusive businesses, which we have found to be more difficult to find and integrate into our pipeline.

We did not build into the payment scheme the costs associated with reaching new clients.

Figure 5. SIINC Outcome Payment Scheme

CRITERIA FOR OUTCOME PAYMENTS

The outcome payments are provided to help cover Root Capital's operating expenses.

ADDITIONALITY*	PAYMENT FOR LOAN $300K - $500K	PAYMENT FOR LOAN $150K - $300K	GENDER INCLUSIVE*
HIGH	$26,000	$28,000	+$1,000
MEDIUM	$22,000	$24,000	+$1,000

RESULTS

After just two years, SIINC had a measurable impact on Root Capital, our client agri-SMEs, and smallholder producers. Through SIINC, Root Capital closed **39 loans** to **32 early-stage agri-SMEs** across the target countries (see Figure 6). At an average loan size of $294,000, 77% of the loans wouldn't have been made by *any* other lender, and 23% of the loans would have only been made by another social or subsidized lender. This means this financing was highly additional and filled critical credit gaps for agri-SMEs.

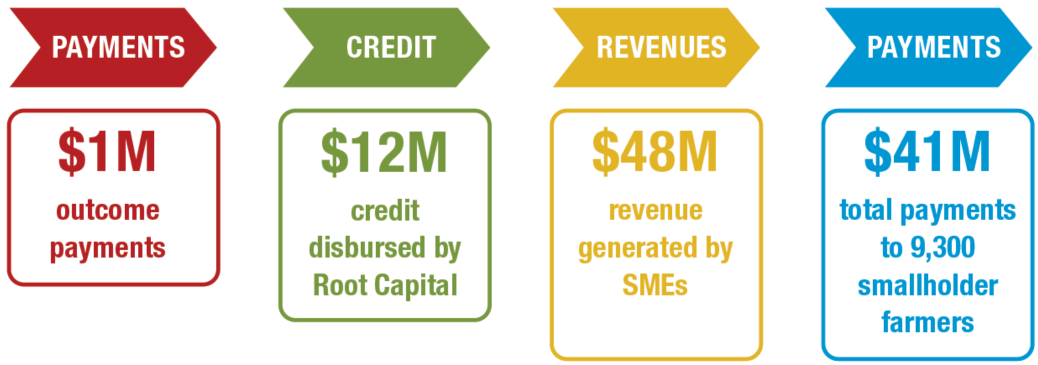
Figure 6. SIINC Loans 2019-2021

Country	Loans Closed	Amount Disbursed	Average Loan Size	Loan Additionality[7]
Colombia	5	$3,397,230	$360,000	40% - High Additionality 60% - Medium Additionality
Costa Rica	--	--	--	--
Guatemala	3	$492,400	$208,000	100% - High Additionality
Honduras	1	$205,428	$500,000	100% - Medium Additionality
Mexico	11	$2,626,618	$299,000	90% - High Additionality 10% - Medium Additionality
Nicaragua	7	$1,825,300	$290,000	70% - High Additionality 30% - Medium Additionality
Peru	12	$3,820,160	$270,000	80% - High Additionality 20% - Medium Additionality
Total	**39**	**$12,376,136**	**$294,000**	**77% - High Additionality** **23% - Medium Additionality**

Leveraging $1M in outcome payments from SDC and IDB Lab, Root Capital disbursed $12M of credit to 32 agri-SMEs. With that credit, these agri-SMEs generated $48M in total revenues of which they paid $41M directly o smallholder farmers.

[7] Additionality is defined as follows: medium additionality – a loan that the business could not access in the same amount and on the same terms from a commercial lender; high additionality – a loan that a business could not access in the same amount and on the same terms from any lender.

Figure 7. SIINC Results 2018-2021



In addition to generating these key outcomes, this pilot project aimed to test three key hypotheses about the use of incentives like SIINC for high-impact agri-SME financing. These hypotheses focused on the project's impacts on Root Capital, early-stage agri-SMEs, and smallholders:

1. *A targeted incentive can influence Root Capital's lending towards earlier-stage, high-impact businesses that are otherwise too costly to reach.*
2. *The model is catalytic; early-stage businesses grow to 1) take on loan amounts that no longer result in a financial loss to Root Capital; and 2) access other sources of financing.*
3. *With critical financing and complementary training, early-stage agricultural SMEs can generate impact in rural communities.*

Hypothesis I: A targeted incentive can influence Root Capital's lending towards early-stage, high-impact businesses that are otherwise too costly to reach.

IMPACT OF SIINC ON ROOT CAPITAL

To measure the influence that SIINC had on Root Capital lending, we analyzed Root Capital's performance on each of the SIINC impact criteria and compared Root Capital's performance with SIINC to our performance in the year prior to SIINC.

Loan size

As shown in Figure 6, the **average size of Root Capital loans made under the SIINC project was $294K**, far below the $500K maximum for outcome payment. The smallest loan, for $130K, went to a cocoa cooperative in Nicaragua. Guatemala had the smallest average loan size, with all three clients receiving a loan for $250K or less. Across the project's target countries, SIINC helped Root Capital maintain the portion of smaller loans in our portfolio despite changes to our lending risk appetite. In the past, we had more frequently made loans under $300K, but we implemented more austere lending policies the year before SIINC to protect the financial sustainability of our lending. These changes reduced our ability to make loans of this size. SIINC's incentive payments offset the costs of making these smaller loans so that we could continue to do so within our adjusted risk appetite.

Maintained the percentage of loans **equal to or under $300K** in our portfolio.

More than *doubled* the percentage of **loans we made that no other lender would make**

Reached 13 new agri-SME clients.

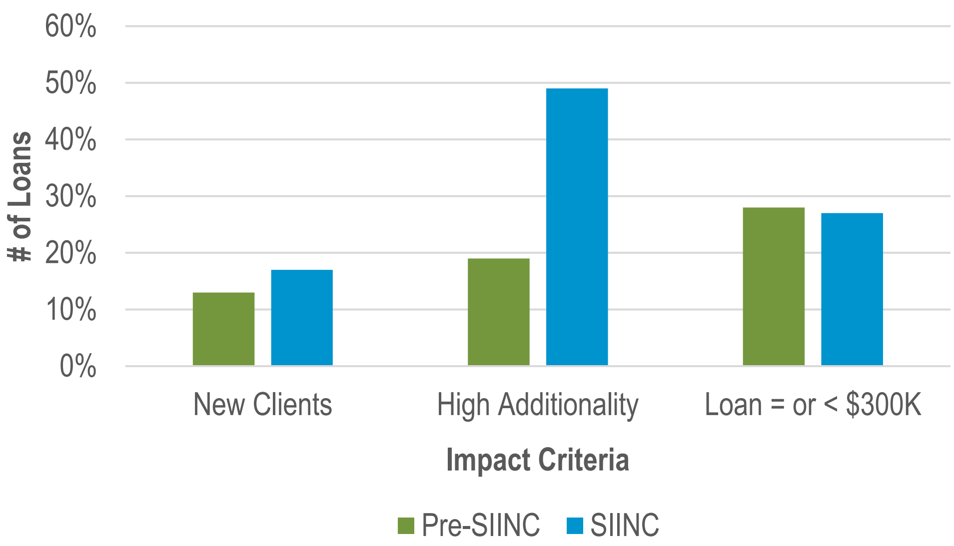
Financed 9 gender inclusive businesses and 6 women-led businesses

Additionality

SIINC's clearest impact on Root Capital's portfolio is the increase in the proportion and overall number of high-additionality loans in our portfolio. These results show us effectively expanding access to finance for agri-SMEs. In the year prior to SIINC, 19% of loans in Root Capital's Latin America lending portfolio were high additionality, a figure that **increased by 30 percentage points** to 49% during the project period. This validates the efficacy of the SIINC mechanism as a tool to drive credit to unserved markets by boosting a financier's ability make especially impactful investments. The increase of high-additionality loans in our Latin America portfolio is an indicator that we are reaching more agri-SMEs at the beginning of their journey to credit readiness.

Interestingly, the portion of high-additionality loans in our portfolio actually *decreased* from Year 1 to Year 2 of the project. To some degree this was an anticipated outcome, as some of our clients gained access to other sources of finance following the initial loan from Root Capital. In Year 2, we served three repeat clients from Year 1; these clients required a longer runway and the consistent access to SIINC-enabled finance helped build their credit-readiness, allowing each of these businesses to access new sources of financing in Year 2. The decrease of high-additionality loans in the SIINC cohort is actually a positive sign, showing that SIINC loan recipients are indeed advancing in their journey to credit-readiness. In addition, we found that clients reached in Year 2 were also more likely to already have access to loans from social lenders. For example, in Nicaragua, loan additionality decreased from 100% high additionality in Year 1 to 60% in Year 2 as we added three clients to our SIINC portfolio, two of which already had access to financing from social lenders.

Figure 8. SIINC's Impact on Root Capital's Lending to Agri-SMEs



New Clients

Throughout the project, Root Capital **reached a total of 13 enterprises that we had never before financed**. When Root Capital takes on a new client, we are often the *only* lender willing to make a loan that meets their needs. In fact, only two of the 13 new clients had other access to finance when we first financed them. Compared to our pre-SIINC portfolio in project countries **we increased our reach to new clients by 30%.**

Gender Inclusion

During SIINC, Root Capital **financed nine gender inclusive businesses**, including six that are women-led. As shown in Table 2. the majority of the gender inclusive and women-led enterprises we reached were in Nicaragua and Peru. Interestingly, despite the SIINC “bonus payment” for loans to gender inclusive businesses, we saw no difference in the percent of gender inclusive businesses between our pre-SIINC and SIINC portfolios in the target countries. The Learnings section below provides more detail on this finding.

Table 2. Gender Inclusion in the SIINC Portfolio

Country	# Gender-inclusive Businesses	# Women-led Businesses	Average % Women Employees	Average % Women Managers	Average % Women Farmers
Colombia	1	0	57%	0%	24%
Costa Rica	--	--	--	--	--
Guatemala	0	0	17%	0%	18%
Honduras	1	0	20%	0%	31%
Mexico	1	0	20%	0%	26%
Nicaragua	3	2	47%	10%	22%
Peru	3	4	32%	21%	19%
Total	**9**	**6**	**33%**	**10%**	**22%**

Across all of the SIINC clients, **women accounted for 33% of employees and 22% of farmers**, with measurable variation by country. Clients in Colombia and Nicaragua had the highest portion of women employees, clients in Peru had the highest portion of women managers, and those in Honduras and Mexico had the highest portion of women producers. These figures are in line with figures from our full Latin America portfolio and indicate the need for ongoing investment in agri-SMEs that boost women’s inclusion in agricultural supply chains.

For a snapshot of how a SIINC client provides inclusive opportunities for women, see our *Gender-inclusion in Action* box below.

Gender Inclusion in Action	
	**Sanchirio Palomar** is a small coffee cooperative in the central Andes of Peru that connects local coffee farmers to international markets that offer premium prices for their coffee. Here, the cooperative is actively generating economic opportunities for women—**women account for 35% of their farmer and employee base.** They also have a formalized policy to promote gender-inclusion and advance opportunities for the cooperative's women. **SIINC allowed Root Capital to provide Sanchirio Palomar with a $300K loan**. **Sanchirio Palomar** has been a lending client of Root Capital's since 2009, but their smaller credit needs have been difficult to meet in recent years amidst changes to Root Capital's credit policies. With SIINC, Root Capital is able to renew our commitment to this high-impact agri-SME in order to continue generating inclusive economic opportunities for women in the male-dominated coffee sector in Latin America.

Hypothesis II: The model is catalytic; early-stage businesses grow to 1) take on loan amounts that no longer result in a financial loss to Root Capital; and 2) access other sources of financing.

IMPACT OF SIINC ON AGRI-SMES

Revenue Growth

Root Capital's **39 SIINC loans to 32 unique clients** provided them with the catalytic financing they needed to fuel their growth. **Over half of SIINC clients (18 of 32) grew their annual revenues** with access to a SIINC loan, with the **average client growing their revenue by 41%** over their pre-SIINC revenue. This cohort of 18 SIINC clients who grew their revenue **earned an additional $10.6M**—an average of $600K in extra revenue per client. SIINC loan recipients pay an average of 85% of their annual revenue to their farmers, meaning increases in revenue likely mean higher payments to their farmers.

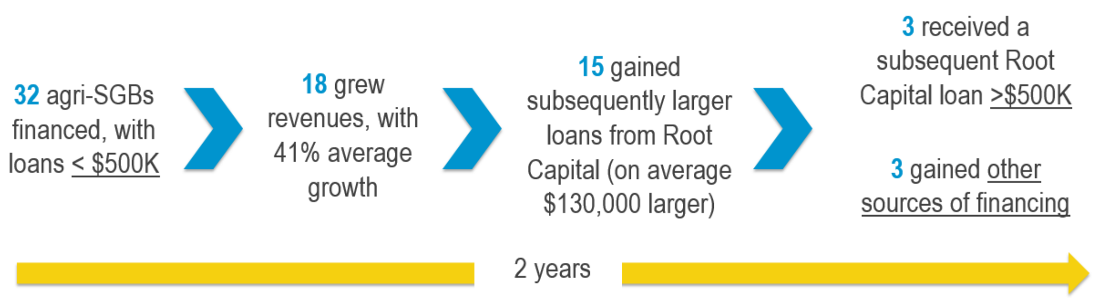
Furthermore, 47% of agri-SMEs gained larger subsequent loans from Root Capital—on average $130,000 larger; and 9% received a subsequent loan for more than $500,000, over the threshold loan amount requiring SIINC subsidy. Another 9% of agri-SMEs accessed other sources of financing after just 18 months. That is, 18% of the agri-SMEs reached through SIINC graduated either to non-subsidized loans or to additional sources of financing.

56% grew their sales, with the average client growing their revenue by **41%**.

47% gained subsequently larger loans from Root Capital, on average $130,000 larger; **9% received a loan >$500K,** over the threshold for requiring subsidy

9% increased their access to finance after just 18 months, with two clients accessing social financing and one client accessing commercial financing.

Figure 9. SIINC Client Growth



SIINC IMPACT ON ACCESS TO NEW SOURCES OF FINANCING

Three agri-SMEs gained access to an additional form of financing (either social or commercial) over the limited timeframe of the project—just two one-year loan cycles. These clients account for 12% of all clients reached in Year 1 of the project. Because this analysis requires at least two data points, we could not include clients reached for the first time in the second (i.e. final) year of the project.

When Root Capital takes on a new client—especially an early-stage client—we are often the *only* lender able to make a loan in the amount they need or on terms they can meet. As clients grow with Root Capital's financing, their credit needs become financially sustainable for other lenders. Our commitment to serving agri-SMEs in Latin America with smaller credit needs helps mature their operations and build their credit-readiness to further access finance from other sources, a requirement for long-term sustainability. This project shows the ripple effect of innovative finance. By helping these businesses grow and showing that early-stage businesses can be successful, Root Capital has helped to "crowd in" other financiers to this segment.

"If you get a credit with Root Capital the rest (other lenders) will follow."

Manager at a coffee cooperative in Peru during impact verification in July, 2021.

Compared to Root Capital's overall portfolio, however, SIINC clients have lower access to other sources of financing. In Latin America, 74% of clients whose sole source of financing is Root Capital graduate to accessing other sources of financing within roughly two years. This is much higher than the 12% of SIINC clients to do so. This is most likely due to the smaller credit needs of early-stage SIINC clients, which make them less attractive to other lenders, especially those with minimum loan sizes above the needs of these agri-SMEs. The average loan size of our full portfolio is $767K compared to just $294K for SIINC clients.

Hypothesis III: With critical financing and complementary training, early-stage agricultural SMEs can generate impact in rural communities.

IMPACT OF SIINC ON SMALLHOLDER COMMUNITIES

Income Generation

Across Root Capital's broader portfolio, agri-SMEs pass around 80% of their revenues to their farmer suppliers. Greater revenue for these businesses therefore means more income generated for smallholders. From 2018 to 2021, the 32 SIINC borrowers generated **$41M in income for 9,300 farmers**, resulting in an average per-farmer income of $4,408. In addition, **72% paid their farmers prices at least 10% above the market**, meaning that they generated income for farmers beyond what they would have earned had they not worked with a Root Capital client.

While it is difficult to determine how much of the income generated for farmers is *attributed to* the SIINC loan, we can try to estimate it by accounting for the portion of a SME's sales contracts that Root Capital finances. For any working capital loan Root Capital makes, we extend up to 60% of the total value of a clients' buyer contract to provide the liquidity needed to purchase crops from farmers and fulfill the contract's sales order.[8] We know, from an external evaluation[9], that Root Capital's loans to credit-constrained agri-SMEs—which include all SIINC clients—translate almost dollar-for-dollar to increases in purchases from farmers. Therefore, we can reasonably assume that because our SIINC clients used our loans nearly dollar-for-dollar to purchase from farmers, and Root Capital financed 60% of those purchases, **the income gains for farmers likely attributable to the SIINC project was $24.6M, or $2,645 per farmer** (60% of the total $41M paid to farmers). This translates to **an estimated social return on investment of $1 to $13.**

Figure 10: SIINC Project Costs and Social Returns

Philanthropic Investment	
SIINC payments for loans	$1,000,000
Advisory services	$550,000
Impact measurement and verification	$330,000
Total project costs	**$1,880,000**

Social Return	
Total farmer income	**$24,600,000**

Another important consideration when analyzing farmer income is the cost of production. Nearly all of the farmers reached through SIINC farm coffee as their primary cash crop. Coffee farmers are finding it increasingly difficult to earn a living given the low, volatile price for coffee and a rising cost of production driven by increased input costs and decreased productivity caused by climate change.[10] In fact, millions of smallholder coffee farmers around the world actually *lose* money for each pound of coffee they grow.

Root Capital has measured cost of production and price data in our impact studies with 14 coffee clients in Latin America.[11] Although these studies precede the SIINC project and therefore didn't include any SIINC clients, the results provide illustrative information on the cost of production and associated farmer profit. As shown in Table 3, at the local market price,

[8] Note: The 60% threshold refers to Root Capital's approved loan amount, not total disbursements.
[9] Finding from an external evaluation of Root Capital's coffee portfolio. See Arthur Blouin and Rocco Macchiavello, "Strategic Default in the International Coffee Market", Quarterly Journal of Economics 134 (2) (2019), 895–951.
[10] See https://rootcapital.org/the-farmer-who-grew-your-coffee-is-losing-money-on-every-cup/ for more information about the cost of production for coffee famers.
[11] Visit https://rootcapital.org/about-us/publications/ to download Root Capital's Impact Study Reports.

coffee farmers often take a loss. However, because Root Capital clients tend to pay higher prices—most farmers affiliated with Root Capital clients in our studies earned a positive profit margin.

Table 3. Coffee Farmer Cost of Production and Profit Margin Finding from Root Capital Studies

Country (number of clients studied)	Cost of Production (USD per quintal/ ~100 lbs of coffee)	Local Farmgate Price	Farmer Profit Margin @ Local Farmgate Price	Root Capital Client Farmgate Price	Farmer Profit Margin @ Root Capital Client Price
Peru (n=7)	$85–$154	$100–$110	-54% to 29%	$120–$143	-16% to 59%
Colombia (n=1)	$95	$82	-16%	$102	7%
Guatemala (n=4)	$78–162	$104	-56% to 25%	$104–$169	4% to 40%
Mexico (n=2)	$129–$143	$140	-2% to 8%	$165–$167	14% to 22%

Coffee cooperatives pool the collective power of farmers to cut costs, access premium prices on the international market, and improve livelihoods for farming families. With access to financing and business management training like that provided by Root Capital, cooperatives grow their purchasing power and forge stronger contracts with international buyers. This means higher prices for their member farmers. In addition, this credit allows the cooperatives to pay their members on time. And, when farmers have cash on hand, they can make critical investments in their farms to boost productivity and cut their cost of production per pound. Cooperatives support this cost cutting with additional services such as training on good agricultural practices or subsidized inputs like fertilizer or seedlings. These measures help farmers improve their yield per hectare, improve their coffee quality and farm more sustainably.

Access to Critical Services and Benefits

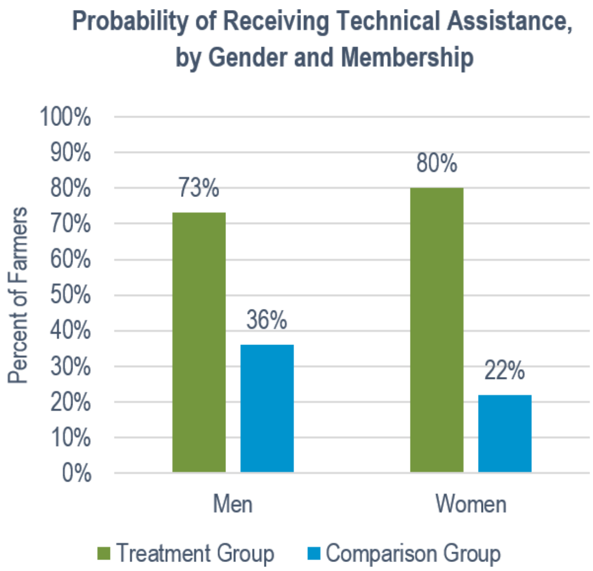
Beyond income generation, all 32 SIINC clients were found to implement at least one key social or environmental program at meaningful scale to their farmers, such as providing farm inputs or microcredit programs.[12] The most common program provided by these clients was

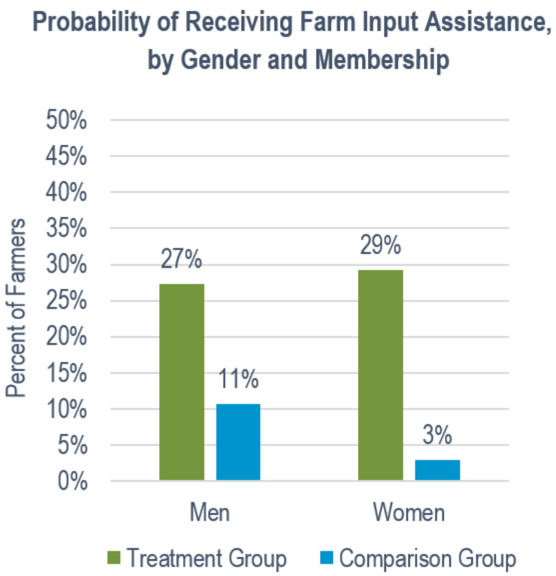
[12] See the Appendix for more detail on these social and environmental programs.

agronomic extension services where clients deliver on-farm training to help their smallholders maintain crop quality and productivity in order to sustain their livelihoods.

According to our impact evaluations, farmers affiliated with our client agri-SMEs are far more likely to receive these services than unaffiliated farmers. For example, our recent evaluation with three agri-SME clients in Peru showed that farmers affiliated with Root Capital client agri-SMEs were more than twice as likely to receive farm-related technical assistance and inputs than unaffiliated farmers.[13] For women farmers affiliated with our clients, the impacts were even greater. Women farmers affiliated with the businesses were nearly four times and 10 times more likely to receive technical assistance and inputs, respectively, than unaffiliated women.

Figure 11. Findings on Farmer Benefits of agri-SME Affiliation from Recent Root Capital Evaluation in Peru





Furthermore, 100% of clients reached through SIINC met our strict standard for being environmental stewards—defined as not engaging in harmful practices like slash-and-burn agriculture or deforestation. This is especially important given that all of the businesses operate in important biodiversity areas or an area that is particularly vulnerable to biodegradation.

[13] The full evaluation report can be found at https://rootcapital.org/resources/evaluating-how-root-capitals-client-businesses-impact-smallholder-livelihoods-cocoa-cooperatives-in-peru/

Client Profile: Se Origen (Colombia)	
 Photo from https://www.anei.org.co/en/	**Se Origin** was founded in 2013 as the commercialization and export arm of the cooperative ANEI. ANEI was founded by Aurora Izquierdo, a woman of the indigenous Arhuaca community in 1995 with just 20 members and twin goals: To strengthen the livelihoods and rights of communities in the Sierra Nevada while protecting the local ecosystem. Today, Se Origin exports coffee produced by **600 coffee farmers** of the indigenous Arhuaca community in the impoverished Sierra Nevada region of Colombia. By offering its producer members agricultural training, promoting organic farming, and ensuring stable, premium prices, Se Origin has boosted livelihoods in the area. They also provide internships and educational programs to integrate youth into the business. Furthermore, Se Origen promotes the participation of women in all aspects of the enterprise, providing training workshops exclusively for women. Women make up the majority of the employees. SIINC enabled Root Capital to make our first loan to Se Origin in 2018 in the amount of **$350K**, which they used to finance the purchase of **1.2M kg of coffee from producers,** generating **$3.6M of revenue** and **$3.3M in payments to producers**. With the success of our first loan to Se Origin, and again with financial support from SIINC, we made a second loan to the cooperative of **$500K** in 2019.

LEARNINGS

1. CRITICAL TO THE SUCCESS OF THE PROJECT WERE STRONG SYSTEMS AND PROCESSES, LOAN OFFICER COMMITMENT, COMPLEMENTARY ADVISORY SERVICES, AND STRONG COLLABORATION AMONG PARTNERS

From the launch of the SIINC project, Root Capital's credit administration team worked to adapt our lending systems and processes to support the project. This included: training our loan officers on the SIINC criteria and how to determine qualification; adding "tags" into our internal lending database to flag which loans qualified for SIINC outcomes payments during the underwriting process; and working with the decision-makers on our credit committee to set new approval criteria for SIINC-eligible loans. These systems facilitated the smooth implementation of SIINC by seamlessly integrating into our existing protocols.

When the SIINC project launched, Root Capital had just begun implementing more austere lending protocols to strengthen our financial health. Those new protocols limited the number of smaller loans we could make. As a result, our loan officers—who work for Root Capital because they believe in our mission of serving underserved and high-impact agricultural enterprises—were unable to finance many of the smaller, impactful businesses they had in their pipelines. As a result, our loan officers in the SIINC project target countries were highly enthusiastic, empowered, and inspired by the project.

"We have the opportunity to offer [smaller agri-SMEs] loans because we can recoup administrative and due diligence costs thanks to SIINC"

- Angela Milena Rivera, Root Capital Loan Officer in Colombia

It takes time to build a pipeline of early-stage businesses that have been excluded from the agricultural finance market. Because these businesses are typically smaller and less mature, they are not typically ready for Root Capital loans when they first approach us. In fact, only about 10% meet our basic qualifications for borrowers—having official registration, accurate business records, established relationships with buyers, and basic accounting, financial management, and planning capacity. Therefore, providing these businesses with capacity building was critical to building our lending pipeline. Advisory Services likely also helped de-risk SIINC clients by strengthening their business and financial management skills. Across our global lending portfolio in 2020, only 2% of clients receiving Advisory Services had loans categorized as "at risk", compared with 12% of those that weren't receiving Advisory Services.

Finally, the strong collaboration, transparency, and goal alignment among the SIINC project partners were crucial to the project's success. At every step of the process—from setting impact criteria or the payment structure to troubleshooting challenges—Root Capital, RoI, IDB Lab, and SDC worked closely to encourage the project to do and achieve more. When the independent verifier conducted the six-month impact verifications, Root Capital coordinated with our country-level loan officers and clients to ensure RoI researchers had the access they needed to conduct deep dive interviews and data collection. In addition, as we shared the project implementation and impact after Year 1, all partners asked critical questions that helped improve the program at its midpoint.

2. SIINC HELPED ROOT CAPITAL REACH AGRI-SMES WORKING IN MORE SOCIALLY VULNERABLE AREAS

Analysis of our SIINC portfolio data shows that by enabling Root Capital to finance early-stage, underserved agri-SMEs we were able to reach more vulnerable communities in Latin America. Compared to the rest of Root Capital's Latin America portfolio (excluding SIINC loans), SIINC clients are *twice* as likely to operate in areas of extreme poverty, where households live on less than $2.50 per day (see Table 4). SIINC clients were just as likely as our broader portfolio to operate in areas of climate vulnerability.

Although SIINC clients offered critical social and environmental services to their farmers and employees, they were less likely to offer these benefits than clients in our broader Latin America portfolio. This is mostly likely because early-stage businesses like the SIINC clients have fewer people on staff and less revenue to provide these types of services, and because SIINC clients had previously been less likely to access capital to invest in these resources. No SIINC client had access to commercial financing when they received their first SIINC loan compared to 17% of Root Capital's overall portfolio. The difference between these two cohorts illustrates the importance of financing and supporting the growth of smaller, earlier-stage businesses so they can build deep, long-term impact in their communities.

Table 4. Comparison of SIINC Clients' Social and Environmental Impact to Clients in the Rest of Root Capital Latin America Portfolio

	Impact Metric[14]	SIINC Clients	Full Latin America Portfolio (excluding SIINC Clients)
	# of unique clients	32	96
	# of loans	39	135
Social Vulnerability	% Moderate Poverty	50%	56%
	% High Poverty	34%	35%
	% Extreme Poverty	16%	8%
Environmental Vulnerability	% Degradation Hotspot	25%	25%
	% Climate Hotspot	3%	2%
	% Degradation & Climate Hotspot	72%	73%
Social Programs / Policies	% Higher Prices	72%	80%
	% Higher Wages & Benefits	6%	32%
	% Agronomic Extension	63%	70%
	% Income Diversification	22%	29%
	% Internal Credit	38%	44%
	% Community Programs	41%	60%
	% Food Security & Nutrition	0%	0%
	% Gender Inclusion	25%	31%
Climate Programs / Policies	% Clean Technology	19%	36%
	% Climate Mitigation/Adaptation Project	19%	20%
	% Diversified Agroforestry	34%	56%
	% Reforestation	34%	33%
	% Wild Tree Stands	3%	0%
Certifications	Certification(s)	88%	93%

3. SIINC CLIENTS PERFORM NEARLY AS WELL OR BETTER ON THEIR LOANS AND BUSINES OUTCOMES AS LARGER, MORE MATURE BUSINESSES

Overall, SIINC clients performed as well on their loans as Root Capital's overall portfolio and achieved greater business outcomes.

First, the loss rate for our SIINC portfolio was 2.5% compared to 2.4% across our coffee portfolio globally.[15] This is an important finding as the SIINC project does not include loss

[14] See the Appendix for the definitions of impact metrics.

[15] Loss rate is the percentage of originations that were lost on coffee loans closed from 2015 to 2020 that have an outcome (i.e. are no longer active), excluding guarantees.

support. It does cover our operating costs, which include a small amount of loan loss reserve of about 2.5% the amount of the loan, but it does not include a loss support or guarantee fund. This result does perhaps reflect how SIINC helps de-risk loans by providing funds for capacity-building services.

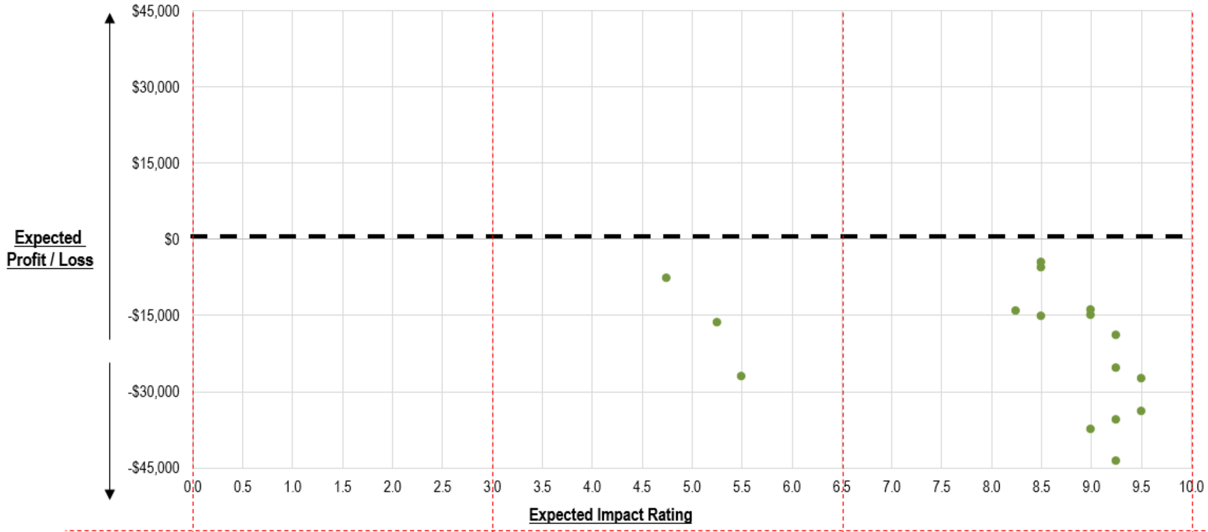
In addition, SIINC clients saw larger year-on-year (YoY) growth rates in sales than did clients in Root Capital's larger portfolio. The average YoY growth rate among the 15 SIINC clients that received two SIINC loans was 43% compared to historical growth rates for Root Capital's clients in the target countries of 26% in Central America and 34% in South America.

4. THE INCENTIVE PAYMENT WAS WELL-ALIGNED

The average $25,000 per loan SIINC payment was well-aligned with the average operating deficit of SIINC loans. As part of our portfolio-wide impact management efforts, we graph each loan's expected profit/loss against its expected impact, using a 0–10-point impact rating.[16] This helps us measure whether we are prioritizing loan subsidies for the highest impact businesses (those in the far right third of the graph in Figure 12). As the figure below shows, no SIINC loan yielded returns that covered our costs (i.e. they did not break even). Before accounting for the average $25,000 per-loan SIINC subsidy, the largest loss we incurred on a loan during the project was $43,000, the smallest loss was $4,400, and the average loss was $21,095.

[16] See the Appendix for details of the Expected Impact Rating.

Figure 12.



Expected loan impact (additionality)	*Enterprise could obtain similar loan on similar terms from commercial sector*	*Enterprise could obtain similar loan on similar terms from non-profit or public sector*	*Enterprise could not obtain similar loan on similar terms from any other source*
Expected enterprise impact	Benefits farmers, environment → Greater benefit and / or need	Benefits farmers, environment → Greater benefit and / or need	Benefits farmers, environment → Greater benefit and / or need

5. THE MECHANISM MATTERS

Through an analysis of the SIINC-targeted impact areas before, during, and after the project, we found that SIINC helped Root Capital improve our impact on most, but not all, impact areas. This is likely due to the mechanism in place.

We saw that the project successfully incentivized Root Capital to make smaller and more highly additional loans. As described earlier, this impact was incentivized through a payment directly linked to the costs of generating that impact. We also found that the project incentivized Root Capital to make more loans to new businesses. This impact area was incentivized through the grant agreement, which required that at least 25% of all SIINC clients must be new to Root Capital's lending portfolio. This mechanism was effective, though we will need to tweak the mechanism for future SIINC-like projects so that it accounts for the extra costs needed to reach new clients.

However, we found that SIINC had no impact on our investments in gender-inclusive businesses: The percentage of gender inclusive businesses in the target countries remained consistent before and during SIINC. This is likely because the mechanism for this impact area was a $1,000 bonus rather than a payment linked to the costs of generating that impact. As previously mentioned, loans to women-led businesses are more profitable in the long-run, despite being costlier to originate. Future SIINC-like projects should take this into consideration when designing the specifics of the mechanism.

Figure 13. SIINC Impact Area, Mechanism, and Results

IMPACT AREA	Loans to new businesses	Loan size	Additionality	Gender inclusion
GOAL	Finance more first-time borrowers	Provide loans that are otherwise too costly to make	Make loans commercial lenders won't make	Finance businesses that are inclusive of women
MECHANISM	Grant requirement	Impact payment linked to cost	Impact payment linked to cost	$1K "bonus" payment to Root Capital
RESULT (pre vs post SIINC)	⬆ % of new businesses in portfolio (13% > 17%)	⬆ Maintained the % of smaller amidst more austere lending policies	⬆ > 2X the % of loans that **no** other lender would make	= no change in % gender inclusive businesses

6. CHALLENGES INCLUDED FASTER-THAN-EXPECTED DRAWDOWN OF OUTCOME PAYMENTS, LATE CHANGES IN LOAN TERMS, AND ONE COMPLEX IMPACT CRITERIA

Although the SIINC project was highly successful at generating impact for agri-SMEs and smallholder producers, it wasn't without its challenges.

First, Root Capital underestimated the rate at which we could make loans to agri-SMEs in the targeted market segment. Root Capital drew down almost 75% of the $1M in available incentive payments in in Year 1 as the timeline coincided with the coffee harvests in Peru and Colombia. These were the two largest countries in terms of disbursements, and combined to receive over 50% of the project's total disbursements in Year 1 alone. This was likely because Peru is the largest country by number of clients in Root Capital's lending portfolio. This quick drawdown meant that we had less funds for Year 2 of the project. As a result, we had less funds to reach new clients as we prioritized continuing to support existing SIINC clients with credit needs that remained below $500K. Overall, we completed the lending portion of the project early—after just 18 months instead of the planned three years.

Secondly, we found that our well-planned process for impact verification assumed that the characteristics of our loans would not change after they are closed. However, on rare occasions they did indeed change, affecting the impact classification of the loan. For example, one client was originally classified as receiving a high-additionality loan because it couldn't receive the same financing from any other source, but was actually able to secure another loan from a social lender between the underwriting and closing of the Root Capital loan. Because the client didn't inform Root Capital of the change, RoI's impact verification revealed that the loan needed to be re-classified as medium additionality, which reduced the associated outcome payment.

Finally, while the partners felt the impact criteria were well-aligned with the project goals and would be straightforward to validate, we found that the additionality criteria were more difficult to validate than anticipated. Loan additionality is relative to each local agricultural finance market and determining it requires significant research and knowledge of country—or even sub-country—context. For example, during one round of impact verification in Peru, the verifier learned that some social lenders were actually willing to make loans on similar terms to Root Capital's. However, this didn't hold true throughout the country. In the northern Peruvian region of Jaén, we found there were no other social lenders operating. We learned how important the hyper-localized context is in determining the additionality—and impact—of each loan.

THE NEXT HORIZON

Building off the success and learning of this project, Root Capital and others are expanding our use of SIINC and similar SIINC-like impact-linked finance mechanisms.

SIINC SUPPORT FOR AGRI-SMES AND THEIR COMMUNITIES DURING THE COVID-19 PANDEMIC

The results from the SIINC project are encouraging, but the challenges facing these early-stage businesses do not end after receiving one or two loans. As COVID-19 continues to threaten small and growing businesses around the world, early-stage businesses without a financial safety net are particularly vulnerable. To ensure continued success for these businesses, we recently launched the next iteration of the SIINC partnership.

Over the next two years, Root Capital will leverage up to $750,000 in SIINC outcome payments to provide an estimated $6 million in loans to as many as 25 early-stage businesses in Latin America. In this next phase, funding from IDB Lab and SDC also supports one-time grants, critical advisory services, and debt relief for early-stage agri-SMEs to help them manage their operations through the pandemic. The project also includes a loan loss reserve that provides greater protection to Root Capital amidst the increased risks of lending during the pandemic.

> **"The COVID crisis made us very concerned about the achievements of the first round. What if existing cooperatives stop growing, go backwards, or even go out of business? We have to continue the collaboration while accommodating for now even higher risks and costs."**
>
> **Peter Beez, Senior Policy Advisor, Swiss Agency for Development and Cooperation**

IMPACT-LINKED FINANCE TO CLOSE THE GENDER AGRI-FINANCE GAP

Agri-SMEs can help level the playing field for women by elevating women's voices and needs, both in businesses and on the farm. However, there is a $320 billion gender financing gap for small and growing businesses in low- and middle- income countries. Experience shows that closing this gender financing gap requires lenders to be willing and able to finance early-stage enterprises in need of smaller loans. However, many lenders won't finance these businesses because of inherent risks and unattractive returns. To help close this gap, Root Capital launched a gender lens investing initiative that uses an innovative financing approach adapted from the SIINC project to provide much-needed credit to gender-inclusive and women-led businesses globally. With grant funding from the Walmart Foundation and Visa Foundation, Root Capital will be able to overcome the operational cost and risk barriers associated with reaching early-stage, gender-inclusive and women-led businesses. This support will allow Root Capital to disburse an additional $37 million of investor capital to these businesses, filling a critical financing need that will benefit more than 16,000 farmers and employees. The mechanism will incentivize Root Capital to make investments that put high-impact businesses on a path to growth, diminishing their need for a subsidized loan in the future. We will also publish our results and lessons to help build the evidence base for how catalytic, blended finance can be deployed to increase impact for women.

SIINC ADOPTION BEYOND ROOT CAPITAL

Closing the persistent financing gap for agricultural businesses can help address some of the most fundamental challenges of our day, from poverty to climate change. Across the sector, others have begun to adopt similar incentive models. For example, the Council on Smallholder Agricultural Finance (of which Root Capital is a founding member) launched Aceli Africa with a SIINC-like incentive scheme to increase lending to the least-served segments of agri-SMEs in Africa, working alongside SDC and Roots of Impact. As more innovative financing mechanisms come to market, we must share successes and challenges across sectors to build a more inclusive financial market for all.

APPENDIX

Definitions of Root Capital Social and Environmental Metrics

Social Performance Indicators

Indicator	Definition
Higher Prices	Enterprise pays farmers 10% or more above local market price
Higher Wages & Benefits	Enterprise pays more than 20% above minimum wage OR pays more than 10% above minimum wage and provides benefits
Agronomic Extension	Enterprise provides farm visits and at least one additional extension service (e.g., centralized training, access to inputs) to at least 50% of suppliers
Income Diversification	Enterprise promotes income diversification with at least 25% of suppliers
Internal Credit	Enterprise provides internal credit to at least 25% of suppliers
Community Services	Enterprise provides a community service in education, health, water or transportation to at least 25% of suppliers or employees
Food Security & Nutrition	Enterprise engages in value chain activities for sale into local and regional food markets for human consumption
Gender Inclusion Policy or Program	Enterprise provides at least one gender-inclusive policy or program for employees and/or producers
Gender Inclusive	Women make up more than 30% of enterprise farmer suppliers and employees OR the enterprise is woman-led and women make up more than 20% of enterprise farmer suppliers and employees
Youth Inclusion Policy or Program	Enterprise provides at least one youth livelihood-related policy or program for employees and/or producers

Environmental Performance Indicators

Indicator	Definition
Environmental certification	The enterprise complies with a third-party, audited environmental performance standard, as evidenced by an active certification certificate
Reduce Enterprise GHG Emissions	Management towards documented goals to reduce enterprise greenhouse gas emissions
Out-of-Crop Reforestation	Management or facilitation of out-of-crop reforestation, resulting in the planting of 1000+ trees in the last year
Agroforestry or Wild Tree Stands	Management of or support for rustic or traditional polyculture agroforestry farms and/or management of or support for wild-harvest tree concessions (e.g., Brazil Nut, Shea)
Clean Technology or Circular Agriculture	Use or distribution of low-emissions or clean technology (e.g., solar panels, biodigesters) or circular agriculture (e.g., nutrient recycling, reutilization of organic waste)
Pest & Disease Management	Improved management of emerging and intensifying pest and diseases
Soil Conservation	Management or facilitation of soil conservation efforts
Water Conservation	Water conservation efforts in areas experiencing greater droughts or precipitation variability
Weather Alert Systems	Distribution of weather information such as weather forecasts, weather observations, or early warning systems; distribution can be made through various mechanisms (i.e. radio, text message, phone calls)
On-Farm Crop Diversification	Management or facilitation of on-farm crop diversification, while retaining the anchor crop for 25%+ farmers
Crop Diversification with New Varietals	On-farm crop diversification through the use of new varietals that are more resistant to climate risks for 25%+ farmers

The Expected Impact Rating

Scale (0.5)

< 500 farmers & employees = 0 pts
≥ 500 farmers & employees = .25 pts
≥ 1,500 farmers & employees= 0.5 pts

Social Performance (1.0)

Each worth 0.25 pts, max 1 pt:
Price 10%+ above local market paid to farmers
Agronomic extension for 50%+ farmers
Income diversification for 25%+ farmers
Loans to 25%+ farmers
Community services to 25%+ farmers
Higher wages & benefits to employees
Improved food security & nutrition
Gender Inclusion

Environmental Performance (1.0)

Environmental certification = 0.5 pts
Climate change mitigation/adaptation = 0.25 pts each

- Diversified agroforestry
- Wild harvest tree crops
- A/reforestation activities
- Low-emissions technology
- Weather/crop early warning system
- Third-party mitigation/adaptation project
- Other mitigation/adaptation activities

Social Vulnerability (0.5)

Extreme poverty (<$2.5/day per capita) = 0.5 pts
High poverty (<$4/day per capita) = 0.25 pts
Moderate poverty (>$4/day per capita) = 0 pts

Environmental Vulnerability (0.5)

Environmental degradation hotspot = 0.25 pts
Climate change hotspot = 0.25 pts

Additionality

Low (0)	Medium (3.0)	High (6.5)
Enterprise could get similar loan on similar terms from commercial lender	Enterprise could get similar loan on similar terms from social or government lender	Enterprise could not obtain similar loan on similar terms from any other source

Further Reading

Roots of Impact SIINC Project Page

Roots of Impact Impact-Linked Finance Page

Root Capital Blog Post on the SIINC Project Results and SIINC COVID-19 Response Project

Impact Alpha Article on the results of the SIINC Project Results