Impact of Integrated Financial Services for Young People in Ecuador

A Comprehensive Research Report for the Freedom from Hunger *Advancing Integrated Microfinance for Youth* Project

Freedom from Hunger

The MasterCard Foundation

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Table of Contents

Executive Summary

Young adulthood and adolescence can be a "window of opportunity" for youth to obtain knowledge, skills and opportunities to overcome disadvantages in life as well as influence their current and future financial capability as an adult.

Freedom from Hunger, a recognized expert in integrated financial and non-financial services for the chronically hungry poor, launched the Advancing Integrated Microfinance for Youth (*AIM Youth*) initiative in partnership with The MasterCard Foundation in December 2009. As of September 2013, approximately 39,439 youth—exceeding the goal of reaching 37,000 youth—had received financial education sessions and had access to savings mechanisms either in the form of formal savings accounts or through non-formal group-based savings. Of these youth, 13,207 were reached in Ecuador. Four Cooperatives in Ecuador (Cooperative San José, Cooperative Cooprogreso, Cooperative San Miguel de los Bancos and Cooperative Santa Ana) provided financial education through middle and high schools to the students, which also included a number of sessions offering guidance on how to open an individual savings account. The accounts were also widely promoted through community events.

The project included a research agenda to understand the impact of the integrated financial services on the young people served. The overarching goal for conducting the research centered on understanding the degree to which the combination of financial services and financial education influenced food security, economic and civic engagement, socio-financial capability, ability to deal with life-cycle events, self-confidence and empowerment, social capital, knowledge and attitudes in money management. Additional key research questions included whether there were differences in outcomes according to age and gender, whether youth were satisfied with the services, and the conditions that facilitated or challenged youth accessing and using financial services. The methodologies used to collect data on these outcomes were meant to triangulate and strengthen findings found individually in the following: quantitative impact study (baseline, midline and endline), financial diaries, qualitative assessment of youth satisfaction and impact stories. The research was conducted with two of the four Ecuadorian partners, Cooperatives Cooprogreso and San José, as they were the first to launch the program.

While the *AIM Youth* program did not hypothesize that youth would experience improved food security or an improvement in economic and civic engagement in the short duration of the project due to having a savings account and participating in financial education, there were improvements in food security and poverty from baseline to endline and it was experienced in both the treatment and comparison groups. It is unclear what can explain this improvement but it also corresponds with treatment and comparison groups both reporting that they received, spent and saved more money. As for economic and civic engagement, the data suggests that about 30 percent of the entire study population was working and those working were concentrated in the older youth group. If youth did work, they were likely to work regularly throughout the school year. Most of the youth appeared to be in school and identified education as the key to achieving their goals of becoming "professionals" and creating a better life for themselves and their future children.

While not anticipated in the original design of the study, the comparison group also accessed the savings accounts through the Cooperatives. Consequently, the real difference between the treatment and comparison groups focused on whether the group received financial education. As a result of receiving both financial education and having access to a savings account, the treatment group reported higher amounts of total savings and emergency savings, and reported saving more proportionally to the amount of money received. The treatment group was also more likely than the comparison group to feel satisfied with its savings amount, were

more likely to feel motivated to save and less likely to report feeling worried about being able to pay their educational or household expenses. Therefore, some important improvements were achieved by the treatment group in terms of youth perceptions and feelings about their financial situation. The results also suggest that the financial education alone was likely most successful in changing attitudes, motivations and perceptions about one's financial situation and that in combination with actually interacting with the savings account, knowledge regarding how to manage their savings account was improved.

In terms of social capital, the relationship with parents was found to be important as parents play a role in both encouraging their children and assisting them with gaining access to and using a savings account. It appears that early account adopters are youth whose parents are already members of the Cooperatives, thus they are already "banked" adults who have experience with financial services. Most of the youth also reported that their mother was the most influential person in their lives when it came to how they thought about money to encouraging them to open a savings account. This suggests 1) parents could be a lever of change for more youth engaging with financial institutions and 2) they could also play a stronger role in building the financial literacy of their children by reinforcing key concepts through their daily interactions.

Additional results demonstrated that older youth were more likely to indicate they were saving at one of the two Cooperatives and to report higher amounts of total savings; however, younger youth were just as likely to indicate they had savings of any kind and to indicate they were saving for emergencies. While boys tended to report having more savings of any kind than girls at baseline, the amounts for boys and girls were very similar at endline. There were no differences between boys and girls as to who opened a savings account with either Cooperative. This suggests that the Cooperatives were successful in meeting the needs of girls and boys alike and they improved the inclusion of girls into financial services.

Key Findings from AIM Youth *in Ecuador*

Youth participating in *AIM Youth* were more likely (compared to the comparison group) to

- report having savings in general;
- have improved knowledge about how to manage their savings account;
- report higher amounts in total savings and emergency savings;
- report saving more proportionally to the amount of money they received;
- feel satisfied with their savings amounts and were more motivated to save; and
- feel less stressed about covering educational and household expenses.

Early adopters to the youth individual savings accounts were youth whose parents were already members of the Cooperatives.

Girls and boys alike were able to open savings accounts and maintain similar amounts in total savings.

To ensure youth stay engaged and continue to grow their savings, beyond providing access to a savings account and financial education sessions, additional "experiences" and touch-points with the youth have to be built into the product and service design. Overall, the youth from both YSG and GSA, as well as their parents, expressed that they are quite satisfied with the savings services and the financial education.

While youth appreciate the savings accounts and enjoyed the financial education because it was so different from the formal education they receive in the schools, there are certain savings product attributes that would make the savings accounts more attractive, such as more access points to make deposits and withdrawals, less lengthy wait times at the Cooperatives, and for the accounts to pay more interest.

There is a changing perception about how financial education is defined as well as how it expands the boundaries for the types of information necessary to help people make positive financial decisions and build financial capability. This research suggests youth face the challenge of discipline and commitment to grow their savings in the face of competing financial "pressures," even if these pressures are for their current expenses for entertainment or food and transportation for school. This research, supported by other industry findings on factors that build financial capability, implies more "experiences" should be built into the service package so that youth can practice and engage with the savings services more deeply. Product marketing and sharing of successful strategies to improve savings must be continual and should use mechanisms that youth find most acceptable. Engaging parents is an opportunity not just to build the financial capability of their children, but of the entire household. Finally, providing commitment savings products, in addition or in lieu of a general savings account, would formalize creating creatures of habit at a younger age.

List of Acronyms

AIM Youth	*Advancing Integrated Microfinance for Youth*
LQAS	Lot Quality Assurance Sampling
PPI	Progress Out of Poverty Index
UBA	Universidad de Babahoyo
UBO	Universidad de Bolivar
USD	United States Dollar
UBA	Universidad Técnica de Manabí

Acknowledgements

The research activities for the *AIM Youth* financial services project in Ecuador have yielded useful insights into building financial capability for youth. It has been a joint learning effort among many stakeholders and there are many of them to thank for their input, tireless surveying and coordination efforts and support. Freedom from Hunger went into this research with some basic knowledge of what we might find due to market research that had already been conducted in Ecuador, but we were not sure what to otherwise expect. We labored over how to best design surveys and data-collection processes that would be interesting and relevant to the youth participating as well as provide reliable data that was feasible to collect over a relatively long period. We felt that it has been a rich learning experience.

First, our team would like to thank The MasterCard Foundation for partnering with Freedom from Hunger to conduct this research.

I would also like to thank the three universities for collecting the data in Ecuador. In particular, many thanks to Youry Rezabala from the Universidad Técnica de Manabí, Rene Mesias Villacres Borja from the Universidad de Bolivar, and Luis Alcivar from the Universidad de Babahoyo for their steadfast coordination with their universities and teams of students who collected this data as well as their insight into interpretations of the data and the challenges and benefits of using financial diaries with youth. Rocio Chavez and Amelia Kuklewicz—our Freedom from Hunger staff in Ecuador—this research would not have been possible without your assistance in the multi-faceted coordination that was necessary for this work.

I would also like to thank the adept analysis team from Brigham Young University that assisted us in data cleaning, data analysis and interpretation. Professor Benjamin Crookston from Brigham Young University's Department of Health Science led the following team of students: Martha Maxwell, Cameron Lister, Stephanie Hedges, Amber Mendenhall, and Danielle Scherbel.

And finally, I want to thank my colleagues who reviewed this paper to ensure it would contribute to the literature: Laura Munoz from the U.N. Capital Development Fund; Ruth Dueck-Mbeba from The MasterCard Foundation; Rossana Ramirez, Megan Gash, Julie Uejio and Brent Farrar from Freedom from Hunger.

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Introduction

Background

Young people living in poverty face many challenges as they transition from economic dependence to increased household responsibility. Their need to contribute to the household well-being is in constant tension with their limited access to financial resources and opportunities. This combination of factors can severely inhibit a young person's ability to break the vicious cycle of intergenerational poverty.[1]

But young adulthood and adolescence can be a "window of opportunity" for youth to obtain knowledge, skills and opportunities to overcome earlier disadvantages.[2] To surmount factors that contribute to chronic poverty, a young person can be encouraged to form behaviors earlier in life so that positive habits become automatic during adulthood.[3] One positive outcome sought by organizations and practitioners that focus on youth is financial capability, which is the combination of access to appropriate financial services and knowledge, skills, attitudes and behaviors that help a person make sound personal decisions.[4] Therefore, access to savings services and financial education, for example, provided to individuals at an early age can impact their financial capability as adults and improve the likelihood that they save money and make better money-management decisions.[5]

Freedom from Hunger, a recognized expert in integrated financial and non-financial services for the chronically hungry poor, launched the Advancing Integrated Microfinance for Youth (*AIM Youth*) initiative in 2010 in partnership with The MasterCard Foundation to address these needs with appropriate and locally adapted financial education curricula integrated with customized financial services—beginning with savings. It was hypothesized that youth participating in both the financial education and taking up and using a savings account would result in improved knowledge and attitudes regarding savings and money management, improved ability to deal with life-cycle events, improved social capital, improved self-confidence and empowerment, and improved socio-financial capability. These are the short-term indicators of success for this intervention. The theory also suggests that creating creatures of habit during adolescence would result in greater levels of economic and civic engagement, longer-term food security for their household as they entered adulthood and were in positions to make positive decisions for their own families; therefore, breaking intergenerational poverty.

The purpose of this paper is to present the research outcomes to test the hypothesis as well as describe the youth who participated in the *AIM Youth* program.

The Context for Ecuador

Ecuador is an upper middle-income country in South America. In 2012, it ranked 89 out of 187 countries and territories on the UNDP Human Development Index.[6] In 2009, Ecuador's economy slowed to 1 percent growth when it experienced the global financial crisis and a sharp decline in world oil prices and remittances flows. Since then, growth has picked up, with 8 percent growth in 2011 and a subsequent drop to 5 percent in 2012. As of 2012, approximately 27 percent of the population lives below the national poverty line. Those most vulnerable to poverty are indigenous, mixed race, and live in rural locations. Almost 19 percent of the population is between the ages of 15 and 24 years of age.[7]

According to the World Bank's Global Financial Inclusion (FinDex) database for 2011, which measures how adults (and young adults) in 148 countries save, borrow, make payments and manage risk, approximately 44 percent of youth worldwide have an account with a formal financial institution and a little over 18 percent

have saved money at a formal financial institution in the last year.[8] In Ecuador, however, 26 percent of youth between the ages of 15 and 24 years have an account with a formal financial institution and only 13 percent of youth save at a formal financial institution.[9]

The legal age to open an individual savings account, without the assistance of a parent, in Ecuador is 18 years of age.[10] Youth also cannot be a member of a Cooperative—which means no voting rights—or a financial institution until the age of 18. Before 18, assistance from parents is necessary to open a savings account and to make withdrawals. Youth must be able to provide five different items to open an account: their identification, the identification of a parent or guardian, a utility bill, a voting record and a photograph. Even though youth can access credit starting at the age of 18, it is difficult for them to receive credit because they lack patrimonio—or basically, a credit history.[11] While historically financial institutions have found youth to be too risky to include in financial services and there has been very little effort in the way of financial education for youth and adults alike, in the past several years, the government has determined that within the banking sector (not necessarily applicable to Cooperatives at this point), financial institutions must provide financial education not only to clients, but to communities in general.[12] Therefore, the enabling environment for youth financial inclusion is improving.

AIM Youth in Ecuador

In Ecuador, four Cooperatives (Cooperative San José, Cooperative Cooprogreso, Cooperative San Miguel de los Bancos, and Cooperative Santa Ana) provided financial education through middle and high schools and promoted individual savings accounts to participating students as well as to the wider community. The financial education addressed topics such as the differences between needs and wants, how to develop savings goals and savings plan, and how to open and manage a savings account. A summary of the financial education sessions are provided in Appendix A.

Figure 1 presents the locations of the *AIM Youth* project in Ecuador. The areas highlighted in red are the regions served by the four Cooperatives.

Figure 1: Map of Ecuador Program

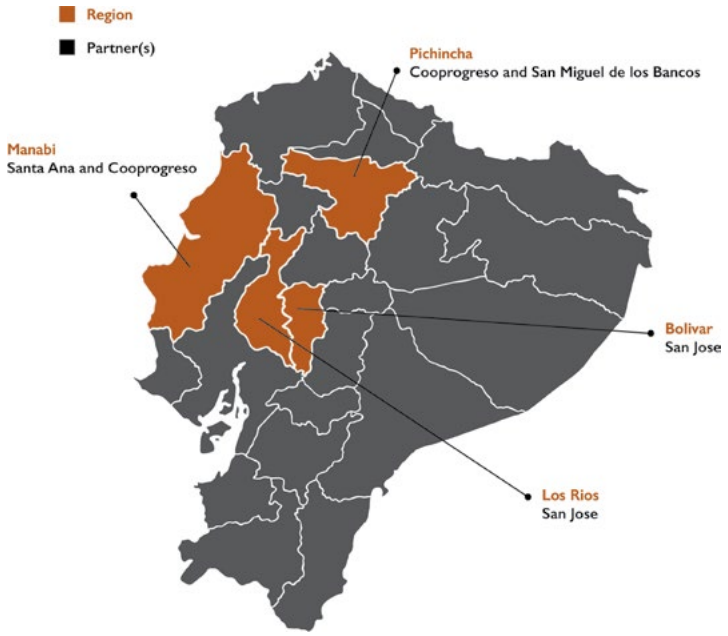


Table 1 provides a summary of institutional-level performance data for the services in Ecuador and their outreach as well as demographics as of December 2013. The segments of the data for age and gender are based only on the youth who participated in the financial education and does not represent all youth who opened a savings account. By the end of December 2013, 13,207 youth had received either financial education or opened a savings account or done both. Almost all youth who participated in the financial education were in school, as would be expected since the program initially targeted youth in middle and high schools. Almost half were girls and the majority of youth served were in the 13- to 17-year age range. A little over 5,700 savings accounts had been opened, with an average amount of US$134.00 of savings on deposit per young person.

Table 1: *AIM Youth* Services and Outreach in Ecuador as of December 2013

Outreach	Coop. San José	Coop. Santa Ana	Coop. San Miguel de Los Bancos	Coop. Cooprogreso	Total
Number of youth receiving 1 or more services to date	3,124	1,862	1,900	6,321	13,207
Number of youth who have received financial education to date	2,680	1,862	1,900	6,321	12,763
Percentage of girls	61%	58%	40%	46%	50%
Percentage of youth ages 13–17	69%	78%	99%	97%	89%
Percentage of youth ages 18–24	31%	22%	1%	2%	11%
Percentage of youth in school	100%	100%	99%	99%	99%
Percentage of youth married	1%	3%	0%	0%	1%
Savings Accounts					
Total number of individual savings accounts opened to date	3,124	483	884	1,210	5,701
Total amount in savings (USD)	$444,867	$42,753	$57,860	$216,155	$761,635
Average amount of savings per client/ member during this period (USD)	$142.40	$88.51	$65.45	$178.64	$134

AIM Youth Research and Evaluation Goals and Activities

To demonstrate progress and document the effectiveness of the program, Freedom from Hunger included a quasi-experimental and multiple-method research design with two of the four Ecuadorian partners: Cooperatives San José and Cooprogreso. These were the first two partners to launch the program. The intended audience for this paper includes financial-service providers, technical-assistance providers and donors who are interested in learning more about how youth interact with financial services as well as researchers interested in understanding the value of various methodologies for tracking change and progress over time.

The rest of the paper is structured as follows:

- **Methods.** This section summarizes the multiple methods used to evaluate the progress of this project.
- **Results.** This section summarizes the project's key findings and is organized as follows:
  a. **Profile of Youth.** Key characteristics of youth, such as gender, age, food security, poverty and school attendance.
  b. **Earnings and Expenses.** A brief overview of the amounts and types of earnings and expenses youth have.

c. **Saving Knowledge.** Analysis of changes in indicators measuring knowledge of benefits of saving as well as saving product attributes.

d. **Savings Behaviors.** Analysis of changes in savings behaviors and outcomes.

e. **Financial Attitudes and Perceptions.** Analysis of changes in financial attitudes and perceptions.

f. **Qualitative.** Covers the qualitative "impact stories" and other qualitative data-collection efforts.

- **Analysis.** Summary of the key findings from all research methodologies.
- **Conclusion.** Implications for future efforts at serving youth with integrated services, including financial education and financial services.

Methods

Summary

As was mentioned above, it was hypothesized that youth participating in the financial education and taking and using a savings account would result in improved knowledge and attitudes regarding savings and money management, improved ability to deal with life-cycle events, improved social capital, improved self-confidence and empowerment and improved socio-financial capability. These are the short-term indicators of success for this intervention. The theory also suggests that developing creatures of habit during adolescence would result in greater levels of economic and civic engagement, longer-term food security for their household as they entered adulthood and were in positions to make positive decisions for their own families, therefore, breaking intergenerational poverty. The benefit process (or theory of change) that Freedom from Hunger designed for the *AIM Youth* project is outlined below in Figure 2. This model takes into account the global expectations for youth-focused financial services and financial education initiatives[13] as well as the general logical framework that Freedom from Hunger uses to guide and focus all of its work. This model and the definitions of each term in the model were used to guide the evaluation work.

Figure 2: *AIM Youth* Benefit Process

It is important to note that while the benefits model was designed with a long-term perspective regarding the benefits of providing integrated services of financial education and financial services to youth, it was only expected that short-term changes would occur and could be measured during the short period of this project. Therefore, the methods used primarily focused on short-term change indicators but also collected long-term change indicators even if we did not expect visible changes in a year. For example, it was theorized that over time, as youth become responsible adult financial managers, their households will have an improved food-security and poverty status. It was not anticipated that food security, economic and civic engagement or improved family health would result in the short term for this project. Finally, the multiple-method approach was designed to facilitate triangulation of the data, therefore strengthening the understanding of outcomes from the project.

Key Research Questions

The key research questions, based on the benefits model articulated above aimed to answer the questions below. These research questions are also articulated in a simplified logical framework located in Appendix B, along with the research methods that were designed to help answer these primary questions as well as the related sub-questions.

1. To what degree does the combination of financial services and financial education influence the intermediate and long-term outcomes for youth (as described in the benefits model above)?
2. How do these outcomes differ in regards to age and gender?
3. To what degree are youth (and their family) satisfied with the financial services?
4. What are the conditions that help or challenge youth's access to financial services?
5. To what degree do youth have increased savings?

Description and Application of the Multiple Methods

Freedom from Hunger employed multiple methods to capture and triangulate program findings and outcomes that also resulted in a richer understanding of the possible effects of a program. In the *AIM Youth* research, the quasi-experimental quantitative methods used to evaluate the key research questions above included a baseline, midline and endline assessment as well as a financial diaries component. The baseline, midline and endline surveys collected food security (as measured by Freedom from Hunger's Food Security Survey), poverty data (as measured by the Grameen Foundation's Progress Out of Poverty Index), demographic and household information, reported earnings (money received and earnings), reported expenses, reported savings and respective behaviors, attitudes and perceptions regarding savings and one's financial situation, and social involvement such as church and sports groups. It is important to note that on the food security and PPI surveys, these questions are actually intended to be answered by heads of household; however, they were included in the assessment to not only serve as a means to evaluate poverty and food security, but to also serve as test a for the accuracy with which youth could answer these questions. While no comparison was conducted between what parents or other households would have answered and what youth reported, comparisons between this data and other available data were completed to determine how likely youth were able to answer these questions accurately. Qualitative assessments included youth "impact stories," which were life history descriptions as well as focus group discussions and key informant interviews to assess the program at the midterm to review how youth were engaging with the program as well as their satisfaction with it.

Cooperatives San José and Cooprogreso participated in a baseline and endline evaluation including both treatment (youth who participated in financial education and had access and/or opened a savings product)

and comparison groups (youth who had no access to financial education sessions and were supposed to be unaware of being able to access or had no access to a savings product through these institutions). While the original design assumed youth in the comparison groups would not receive financial education or receive a lot of promotion of the youth savings accounts, the Cooperatives did conduct community-wide events to promote the savings accounts. Therefore, the real difference between the treatment and comparison groups is limited to whether they received the financial education sessions or not.

Cooperatives San José and Cooprogreso also participated in a series of financial diaries, which included five or six short, high-frequency surveys with a subset of youth who participated in the baseline study. Some of the youth participating in the financial diaries also participated in qualitative "impact story" life-history interviews. Lastly, focus-group discussions to assess client satisfaction involved youth directly served by the four organizations as well as some comparison groups. Some of the same youth were followed over time in multiple surveys, contributing to a longitudinal study with multiple data points. In addition, with Cooperative San José, the treatment group completed a midline. These multiple methods allow for triangulating findings, which will strengthen our understanding of any given outcome. A summary of the evaluation activities and sample sizes is included in Table 2 below. Table 2 also summarizes the key research objectives for each method as well as provides a mapping of the key research questions listed in section B to the various methodologies.

Table 2: Evaluation Methodologies for *AIM Youth* and Sample Sizes

	Baseline		Midline	Endline		Financial Diaries		Impact Stories		Qualitative Interviews	Total N°of Interviews*
	Treatment (T)	Comparison (C)	T-only	T	C	T	C	T	C		
Cooperative San José	108	108	108	108	108	110	110**	20	19	20	819
Cooperative Cooprogreso	30	30	—	26	28	60	60***	8	10	17	269
Key Objectives	Understand changes that were influenced by the program					Understand short-term financial transactions		Understand youth holistically		Help explain quantitative results	
Key Research Questions Mapped to Methods	Questions 1-5					Questions 1, 4, 5		Questions 1, 3, 4, 5		Questions 3,4	
Total for Ecuador											1,088

** Includes double counting youth participating in multiple evaluation activities, such as the baseline and financial diaries.*
***40 youth interviewed five or six times over a three-month period.*
****20 youth interviewed six times over a three-month period.*

Study Team

Freedom from Hunger oversaw the study design, survey design, survey implementation and data analysis. Three Ecuadorian universities, Universidad Técnica de Manabí (UTM), Universidad de Bolivar (UBO) and Universidad de Babahoyo (UBA), were hired to provide initial input into the survey, help identify treatment and comparison groups, hire a team of student researchers, pilot test the survey, collect the data, conduct the data-entry and participate in the interpretation of the data. All surveyors were between the ages of 18 and

25 years. All three universities followed protocol to obtain parental consent for all participants under the age of 18 years. Cooperative San José launched the savings and financial education services in the cantons of Los Rios (communities covered were Montalvo and Ventanas) and Bolivar (communities covered were Ventanas, San Miguel, Chillanes, Guarando and Chimbo). UBO managed the evaluation in Bolivar and UBA managed the evaluation in Los Rios. Cooprogreso launched the savings and financial education program in Manabí and UTM managed the evaluation.

Consultant Dr. Benjamin Crookston, assistant professor at Brigham Young University, also advised Freedom from Hunger staff on the study design and data analysis. Dr. Crookston participated in reviewing the final report for the accuracy of how the data was presented and interpreted. Cameron Lister and Stephanie Hedges, graduate students from Brigham Young University, assisted with the data analysis.

Sampling

To facilitate participation of the Cooperatives in the evaluation, Freedom from Hunger elected to use Lot Quality Assurance Sampling (LQAS[14]) to select the treatment and comparison group participants. LQAS is a low-cost sampling methodology designed to measure the quality of a program and provides enough statistical confidence to determine whether certain "lots," or meaningful supervision areas, are meeting expected levels of performance.

LQAS requires that a minimum of 19 surveys be conducted on a random sampling basis for each supervision area—for San José, these "supervision areas" were the four local offices across the cantons of Bolivar and Los Rios providing the financial education and the savings accounts for youth: Montalvo, Ventanas, San Miguel and Chillanes (combined into one supervision area) and Guarando and Chimbo (also combined into one supervision area). Because of the size of Cooprogreso's pilot, there is only one supervision area: Manabí. In order to facilitate analysis for Cooperative San José only as well as to facilitate analysis across San José and Cooprogreso, we increased the sample size from 19 to 30 to ensure we could maintain a sample size large enough to run statistical analysis as well as to ensure we could compare the treatment and comparison groups.

Baseline, Midline, and Endline

Since we wanted to compare youth who received financial education and had access to a savings account with those who did not, two lists of youth were developed to represent these two groups. We surveyed 30 clients per each of the five supervision areas; 138 surveys were conducted with randomly selected youth who received the treatment, and 138 surveys were conducted with randomly selected youth who did not receive the treatment. In total, 276 surveys were conducted across the program areas of Cooperatives San José and Cooprogreso for both the baseline and the endline. The same youth were interviewed at baseline and at endline. Our participation rate for the surveys was 98 percent. For the midline with San José, the same 108 participants from the treatment group from Cooperative San José participated in the survey; there were no comparison group participants in the midline. Each interview lasted approximately 60 minutes.

Financial Diaries

For the financial diaries, a random sample of the baseline respondents was conducted such that 20 youth from the treatment and 20 youth from the comparison group from Cooperative San José and 10 youth from the treatment and 10 youth from the comparison group were selected to participate in the financial diaries. These youth were interviewed every two weeks for a total of five to six interviews starting in October 2012 and ending in February 2013. Unfortunately, it was not feasible to conduct the financial diaries at the same time for all areas due to varying school vacations in the different target provinces. Therefore, some youth started their financial diaries in October and completed them by December. Some started in January and completed them

in February. Some started in November and completed them in January. For all areas except for UBA, youth only participated in five financial diaries and their sixth diary was replaced by the "impact story." For UTM and UBO, youth participated in six financial diaries and the impact stories were completed during the endline data-collection period. While a six-month diary approach was originally planned, three months were all that was possible due to the reduced evaluation period caused when the partnerships between Freedom from Hunger and the original partners changed. This caused a six-month lag period in the original evaluation schedule.

Impact Stories

For UTM and UBA, the same youth who participated in the financial diaries also participated in the impact stories. For UBO, a random sample of baseline participants participated in the impact stories.

Table 3 presents the evaluation methodologies in relationship to an annual calendar and important events that contribute to some of the interpretation of the data.

Table 3: Seasonal Calendar and Evaluation Timeline

	Jul–Sept 2011	Oct–Dec 2011	Jan–Mar 2012	Apr–Jun 2012	Jul–Sept 2012	Oct–Dec 2012	Jan–Mar 2013	Apr–Jun 2013
Key events, activities and holidays in Ecuador	School in session for San José youth starting in September. Cooprogreso out of session July-August and some of September.	Christmas holiday and short break for all students in December.	School out of session for Coo-progreso youth in January. Some San José schools out of session on the coast from February and March.	Some San José Schools out in April for holiday.	School in session for San José youth starting in September. Cooprogreso out of session July-August and some of September.	Christmas holiday and short break for all students in December.	School out of session for Coo-progreso youth in January. Some San José schools out of session on the coast from February and March.	Some San José Schools out in April for holiday.
Baseline*								
Cooperative Cooprogreso (Treatment and Comparison)								
Cooperative San José Treatment Group								
Cooperative San José Comparison Group								

	Jul–Sept 2011	Oct–Dec 2011	Jan–Mar 2012	Apr–Jun 2012	Jul–Sept 2012	Oct–Dec 2012	Jan–Mar 2013	Apr–Jun 2013
Midline								
Cooperative San José Treatment Group Only								
Qualitative								
All partners								
Financial Diaries								
All partners								
Endline								
All partners								
Impact Stories								

**San José's treatment group was interviewed between August and October 2011. Due to a partnership revision, the comparison group interviews were conducted between November 2011 and February 2012. Cooprogreso's treatment and comparison groups were interviewed over April and May 2012. Cooprogreso started their AIM Youth project almost an entire year after Cooperative San José.*

Analysis

The endline has a **difference-in-difference analysis** (or double difference). That is, the analysis will first examine the difference between the pre- and post-test outcomes for the treatment group and then those for the comparison group; second, we will compare the difference between those two.

Table 4: Difference-in-Difference Analysis

	Pre-Test	Post-Test	Difference
Treatment Group	a	b	a – b
Comparison Group	c	d	c – d
Difference in Difference	b – d		

This analysis will show the difference between the outcomes for the two groups with special consideration of any differences they had between them at the starting point. This is especially important if treatment and comparison groups differ on any outcomes at the pre-test, and naturally there are almost always differences in some indicators that we could not have predicted when selecting participants for the groups.

In addition to comparing baseline and endline outcomes, LQAS was used to determine whether the individual supervision areas of this evaluation were performing equally and to help identify under-achieving areas so that human and financial resources could be targeted to those regions that need extra support to achieve the targets. The LQAS analysis in this report has been limited to the financial knowledge questions as well as some savings behaviors given their importance to understanding the performance of this project.

Limitations

There are limitations inherent in the study design that affected results from both participant groups. Program participants were identified a few weeks after program launch; therefore, they had exposure to the basic concepts of the program and were already receiving program messages from the field officer at the time of the survey. We aimed to conduct the baseline survey before the third meeting, in the worst case. As the data-collection teams were conducting the baseline with treatment group youth, there was a disruption in the partnership between Freedom from Hunger and the Cooperatives, therefore, the comparison group was interviewed a month to four months after the treatment group.

This study design, although it has treatment and comparison groups, cannot control for self-selection bias of participants who open a savings account or who tend to engage in community education efforts. Thus, the results may not be clearly generalized to youth who do not participate in youth programs or who are already generally good savers. Furthermore, the information captured in the survey was self-reported by participants, without outside verification.

As has previously been mentioned, in the original design, the treatment group was to receive both financial education and access to the savings accounts while the comparison group was to receive neither. However, during the project period, the Cooperatives and other possible influences coming from the surveyors in this study ended up promoting the youth savings accounts, resulting in the comparison group also receiving marketing and access to the savings accounts. Therefore, the real difference between the treatment and comparison groups focuses on the difference in whether they participated in the financial education sessions.

Although these considerations pose limitations on interpreting results, this study, with multiple data points for triangulation, nevertheless greatly helps us understand how youth engage with financial education and financial services and provides guidance to where suggested impacts exist. It also gives us a clearer picture of how the financial education influenced the outcomes for the treatment group, which alone is quite valuable.

Results

Profile of Youth

Basic demographics

Because the same youth were followed over time, baseline statistics are used to describe them as they entered the program. Where there are differences at endline from the baseline, they are referenced in the descriptions below.

At baseline (Table 5), 59 percent of the youth in the sample were male and the treatment group had slightly more males than the comparison group, but this difference was not statistically significant. The average age for both the treatment and comparison group was 18 years of age. There were more youth in the 13- to 17-year-old category in the treatment group compared to the comparison group, with an average of 55 percent youth being between the ages of 13 and 17. However, it is important to note that in the endline (data not shown), there were exactly 41 percent of youth ages 13–17 in the treatment and 41 percent of youth ages 13–17 in the comparison group, which indicates that the majority of the difference between treatment and comparison group is that the number of 17 year olds in the treatment group was greater at baseline. There were also no statistically significant differences in age for the treatment and comparison groups. Overall, very few youth reported being married and having children.

Table 5: Baseline Respondent Characteristics

Indicator	Treatment	Comparison	Total Population
General Demographics			
Male	59%	46%	53%
Female	41%	54%	47%
Average age	18	18	18
Ages 18–25	36%	51%	45%
Not married	96%	90%	93%
In school	96%	86%	91%
Have children	2%	6%	3%
Full week of school last week	61%	84%	72%
Food Security			
Periodic food insecurity	20%	25%	23%
Chronic food insecurity	13%	17%	15%
Progress Out of Poverty Index			
Estimated percentage of group living below the national poverty line	23%	25%	24%
Estimated percentage below $1.25 poverty line	0.82%	1.34%	1.1%
Estimated percentage below $2.50 poverty line	8.52%	10.98%	9.75%

*Significant difference between baseline treatment and comparison outcomes: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$*

Food-Security and Poverty Status

At baseline, approximately 23 percent of the total sample was experiencing periodic food insecurity as measured by Freedom from Hunger's Food-Security Survey.[15] During the financial diaries, food-insecurity levels dropped and were no greater than approximately 3 percent of youth at any given interview point. Endline data (data not shown) indicates that the food-insecurity level was between 1–6 percent; a substantial decline from baseline. It is unclear whether this is a meaningful improvement in food security, whether seasonality impacted the change, or whether measurement bias impacted the outcome (e.g., youth at the baseline may have overstated food insecurity or understated it during the financial diaries and endline).

For poverty levels, the baseline, the financial diary "average" and endline average for **youth who fell below the national poverty level stayed fairly consistent for the baseline and financial diary averages** (24%, 21%, respectively).[16] However, **at endline, approximately 15 percent overall and 15.2 percent of the treatment group and 14.7 percent of the comparison group were likely to fall below the national poverty line.** While the difference between the percentages at baseline and endline might be meaningful, **both treatment and comparison groups saw a drop in the poverty rates at endline,** suggesting broader contextual factors that caused improvements to be equal in both groups. This drop also corresponded with a drop in food security as well. These findings reinforce the comparability of the groups at endline, strengthening our ability to make meaningful comparisons between these two groups.

Interestingly, the **individual PPI status of each individual collected during the financial diary data-collection tends to fluctuate over time.** See Box 1 for an illustration. While this might be expected in the long-run, these interviews were completed every two weeks, and it was unexpected that ownership in household assets and other indicators would fluctuate on a biweekly basis. However, review of the data indicates that some youth likely did experience a change in their PPI status by the simple purchase of a television (which for some was their savings goal) or because they or someone else in their household had a

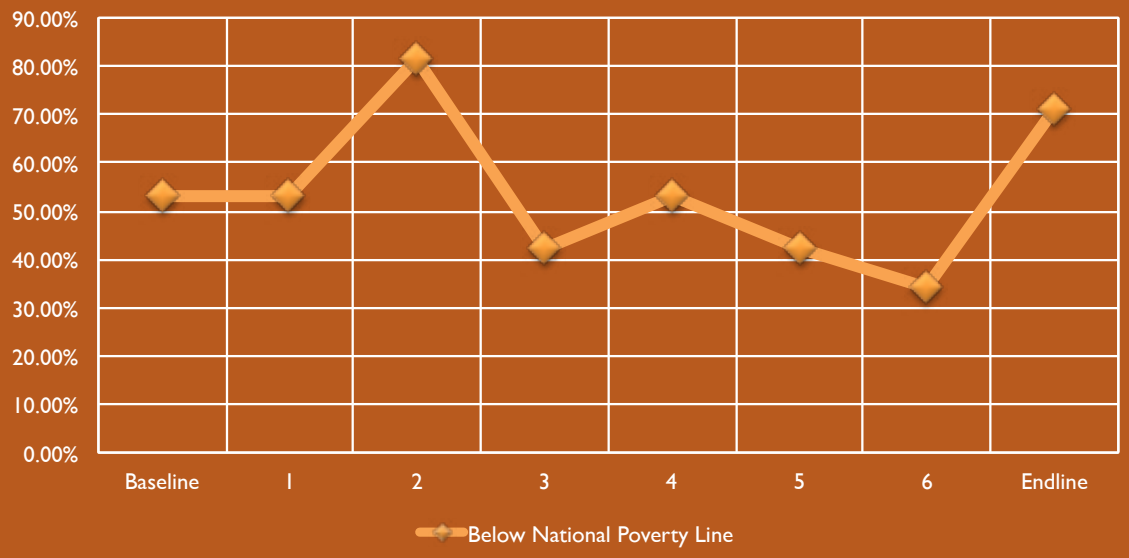
birthday during the survey period (one of the PPI questions asks about the number of youth in the household ages 16 or less). But this appears to be very few cases and likely does not explain all the fluctuations. Another possibility is that youth simply do not have an accurate perception about how to answer many of the questions in the PPI (e.g., type of roof material). While one would not expect youth to answer these questions like an adult would (and the PPI surveys were designed to be answered by a head-of-household), this was a good test to understand whether the PPI could be reliably used with youth. While the similarities in poverty between the treatment and comparison groups as well as the fact both groups tend to report less poverty at the endline adds some confidence to our numbers because youth are answering these questions similarly, it does suggest that for a more accurate and reliable measure of poverty using the PPI, a parent or adult member of the household should answer these questions.

Case Study on PPI Fluctuation

Ricardo is a 13-year-old boy living in Manabí in a household of six people. Ricardo believes his greatest weakness is his lack of economic resources. His Progress Out of Poverty likelihood score for falling below the national poverty line was 53.2 percent at baseline and the average for all the participants was approximately 28.8 percent. At endline, he was 71.3 percent likely to fall below the national poverty line. While there are people in his community who face food insecurity, particularly those who have few economic resources, he doesn't mention that his family worries about food and he also never scores as food-insecure.

When asked about his savings goal for the financial diaries, his main reported savings goal for several periods was the purchase of a television. Interestingly, his PPI score fluctuates on the report of the number of color televisions in his house. In one interview period, there are two or more TVs in his household, the next period, there is one, and the following periods there are more than two TVs in his household again—which likely reflects him achieving a short-term goal of purchasing a color TV. At the endline however, his household poverty score jumps up to a much greater level of poverty.

Please note: Use of the PPI at the individual level is discouraged; however, it is used here more to illustrate fluctuations in how one person answers the questions differently over time, even during a short period of time.



Both food-insecurity and poverty levels seemed to have improved between the baseline and endline suggesting 1) there was an improvement in the young person's perceived "wealth" status of their household during the 1.5-year evaluation period or 2) by the time they answered the follow-up questions, they were also older (and perhaps more economically active, which could influence their answers) and understood the questions better and might have given more accurate information at endline.

School Attendance

At baseline, **school attendance was generally quite high at 91 percent.** While the treatment group tended to report higher attendance, this had more to do with the fact they were still in school when the baseline was completed and the comparison group was interviewed at a separate time when school was not in session. **School attendance during the financial diary period fluctuated quite a bit, from a high of 80 percent to a low of 30 percent.** Some of this can be explained by the autumn and winter holidays and youth from different schools taking vacation at similar or different times. At the endline, approximately 75 percent of all youth reported being in school. This decrease in school attendance at endline would be natural since many youth in the sample, as indicated above, were 17 years of age at baseline and after a year's time, could have graduated from high school and not continued onto college.

Earnings and Expenses

Data in this section on earnings (or access to money and income) and expenses is primarily descriptive and is being used to help understand cash flows of youth as related to their potential to save money, which will be explored in the savings section below. Also, the data on earnings and incomes as well as how youth spend their money were measured to improve our understanding of how much youth in Ecuador were engaged economically, which is a long-term goal of this program.

In this section, while data points are presented comparing baseline and endline as well as between treatment and comparison groups, results from tests of statistical significance will not be provided except for when there is a question about how results differ by gender and age, which are factors known to vary among youth in terms of money management.[17]

Access to Money/Income

Table 6 shows the sources of money received, including from parents and work, and how the money was to be used. The questions ask both what they received the previous week and what they expected to receive in the following week. A visible difference was reported at baseline and at endline between treatment and comparison groups regarding the amount they expected to earn the following week. Survey participants in the treatment and comparison groups received an average of $15 for personal use, and $8.50 to be used for the household. **Both treatment and comparison groups report slightly more access to money at the endline, which might also be a factor of both groups being 1 or 2 years older at the endline and more likely to work. This could also correspond with the improvement in poverty and food security referenced in an earlier section.**

While the comparison group reported having more money in general at baseline, youth were less likely to indicate they were working to earn money. At endline, however, it appears that similar numbers of youth from the treatment and comparison groups are working. It appears that most of the money youth receive is for their own personal purposes, such as food and clothing and very little of it is for household purposes. Fewer youth in the treatment group report receiving money for household expenses at endline, compared to the baseline. It is unclear why this dropped, but it might reflect they received more money for other items than those reported here.

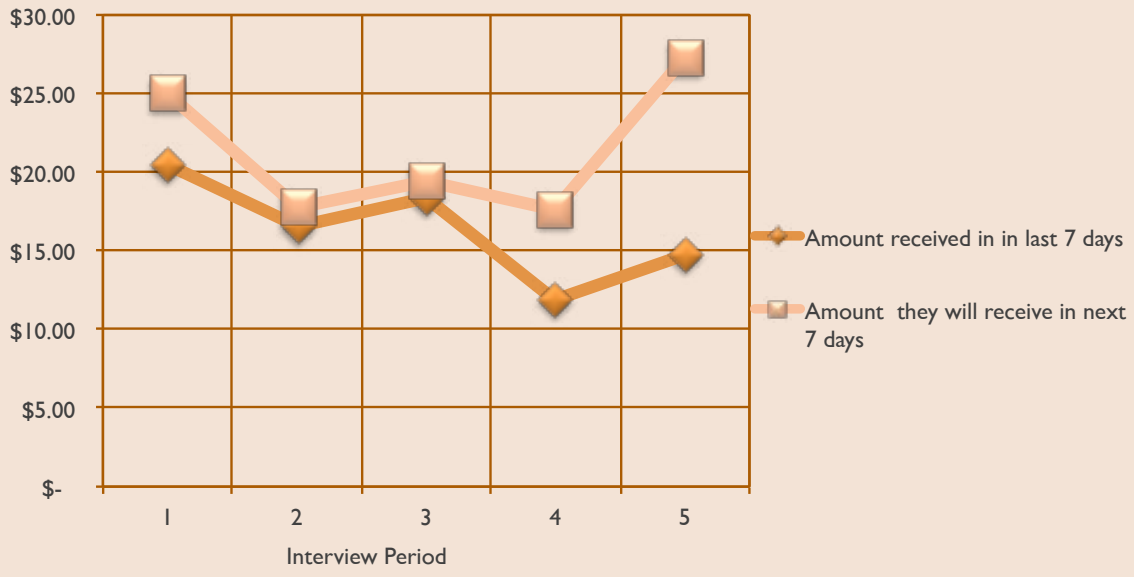
Interestingly, at baseline, more youth report working and looking for work than at the endline for both treatment and comparison groups. Fewer in the treatment group report migrating at endline as well, but the number migrating for the comparison group remains somewhat consistent. This trend could likely be explained by the improved food-security and poverty levels seen between baseline and endline as youth felt less need to earn income as their household economic status improved.

Table 6: Access to Money (Income) Comparisons

Indicators	Baseline		Endline	
	Treatment	Comparison	Treatment	Comparison
Amount of money they estimate they will receive in the next 7 days (includes money from parents, work, etc.)	$19.29	$38.23	$24.22	$42.56
Amount of money they received in the last 7 days	$19.03	$22.00	$20.83	$29.34
Amount of money they received to use on themselves, for food, clothes or school supplies	$12.98	$16.58	$10.77	$17.82
Amount of money they received to use on things for the household, such as food or water	$7.13	$9.87	$3.01	$7.07
In the last 4 months, percentage who worked or completed tasks and chores, either inside or outside of your household, to earn money	58%	45%	28%	32%
In the last 4 months, percentage who looked for work	36%	31%	19%	21%
Percentage who migrated outside of their community in the last year to work	10%	8%	5%	10%

The financial diary data suggests that youth continually estimated they would receive more money in the next seven days compared to the last seven days, demonstrating optimism about their financial future (Figure 3). There also appears to be a relationship between the relative amounts they are reporting, such that if they received less money in the last seven days compared to a prior survey period, they also predicted they would receive less money for the coming seven days.

Figure 3: Amount of Money Received Over Time—Treatment Group Only



In addition to comparing baseline and endline results, earnings and working behaviors were assessed between genders and between young youth (ages 13–17) and older youth (ages 18–14).

At baseline, the only difference between genders is that boys were more likely to report they were working to earn money (Table 7). Older youth, ages 18–24, were more likely to report having more money, working and looking for work.

Table 7: Baseline Access to Money (Income) by Gender and Age

	Girls	Boys	Young Youth (13–17)	Older Youth (18–24)
Amount of money they received in the last 7 days	**Mean=$15.80** **Median=$10.00**	**Mean=$17.30** **Median=$15.00**	**Mean=$11.70** **Median=$10.00**	**Mean=$22.10***** **Median=$20.00**
In the last 4 months, percentage who worked or complete tasks and chores, either inside or outside of household, to earn money	35.1%	57.1%***	27.9%	67.3%***
In the last 4 months, percentage who looked for work	27.0%	35.9%	12.5%	54.6%***

*Significant difference between genders or young and older youth outcomes: *p≤0.1 (10%), **p≤0.05 (5%), ***p≤0.01 (1%)*

At endline (Table 8), many of these differences held, except for the difference between genders. Girls and boys were equally likely to report working at endline; though overall, fewer boys and girls reported working compared to baseline. Older youth were more likely to be the ones migrating compared to younger youth.

Table 8: Endline Access to Money (Income) by Gender and Age

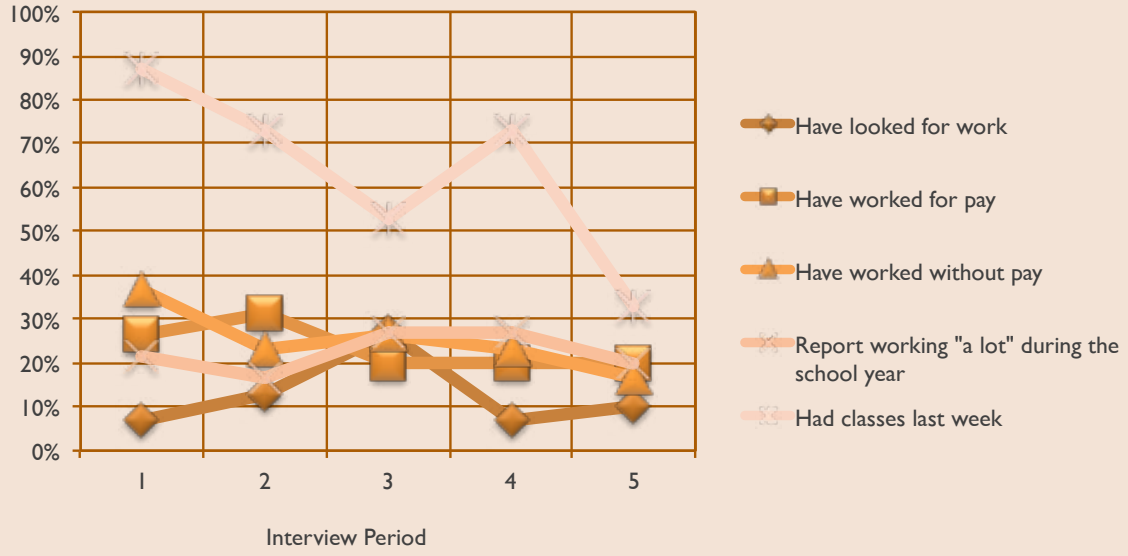
	Girls	Boys	Young Youth (13–17)	Older Youth (18–24)
Amount of money they received in the last 7 days	**Mean = $22.30 Median=$10.00**	**Mean=$25.50 Median=$13.00**	**Mean=$12.70 Median=$8.00**	**Mean=$31.80*** Median=$20.00**
In the last 4 months, percentage who worked or completed tasks and chores, either inside or outside of household, to earn money	22.8%	36.6%	15.9%	40.1%***
In the last 4 months, percentage who looked for work	19.7%	21.1%	9.7%	28.0%***
Percentage who migrated out of their community in the last year to work	—	—	1.8%	12.2%***

*Significant difference between the girls and boys or young and older youth outcomes: *p≤0.1 (10%), **p≤0.05 (5%), ***p≤0.01 (1%)*

At baseline (data not shown), the most common types of work done by youth included household chores (20%), agriculture (15%), or some form of wage labor (11%). The majority (45%) of youth reported earning less than $25 a month for their work; however, 31 percent of youth reported receiving reimbursement other than money in the form of livestock or other type of payment. Thirty percent of the youth indicated they often participated in these economic activities throughout the school year, and about half liked what they did to earn money and felt that their economic activity was not dangerous.

In Figure 4 below, the financial diary data demonstrates that no more than 35 percent of the treatment group were ever working, with or without pay. At the high point, only 25 percent reported actually looking for work (if they were not already working). It does appear as school attendance dips (dramatically toward the fifth interview, which corresponds with Christmas and winter holidays), more youth report looking for work during these periods, but this does not directly correspond with youth reporting that they actually worked. It appears that those reporting working at all indicate that they work "a lot" during the school year. Migration overall appears to be uncommon for this population during this time period. Leaving one's community to work was reported no more than 3 percent at any given period.

Figure 4: Relationships Between Working and School Attendance—Treatment Group Only



Expenses

At baseline, the treatment group estimated spending $17 in the previous week, compared to about $21 in the comparison group. **The amount of money spent by the treatment and comparison groups at the endline were similar to the baseline amounts.** The treatment group, at both baseline and endline, tends to estimate spending less money in the coming seven days compared to the amount they reported spending in the past seven days. The comparison group tends to estimate spending slightly more money in the future compared to the past seven days. About one-half of the youth, at both baseline and endline, felt they would spend their money similarly in the future as they did in the past seven days.

The majority of the money spent went for candy and drinks, as well as other personal items. **The most common purchases in the last week were food and drinks for self, transportation, cell phone expenses, clothing and entertainment and internet/electronic games.** This is fairly consistent between baseline and endline for both groups.

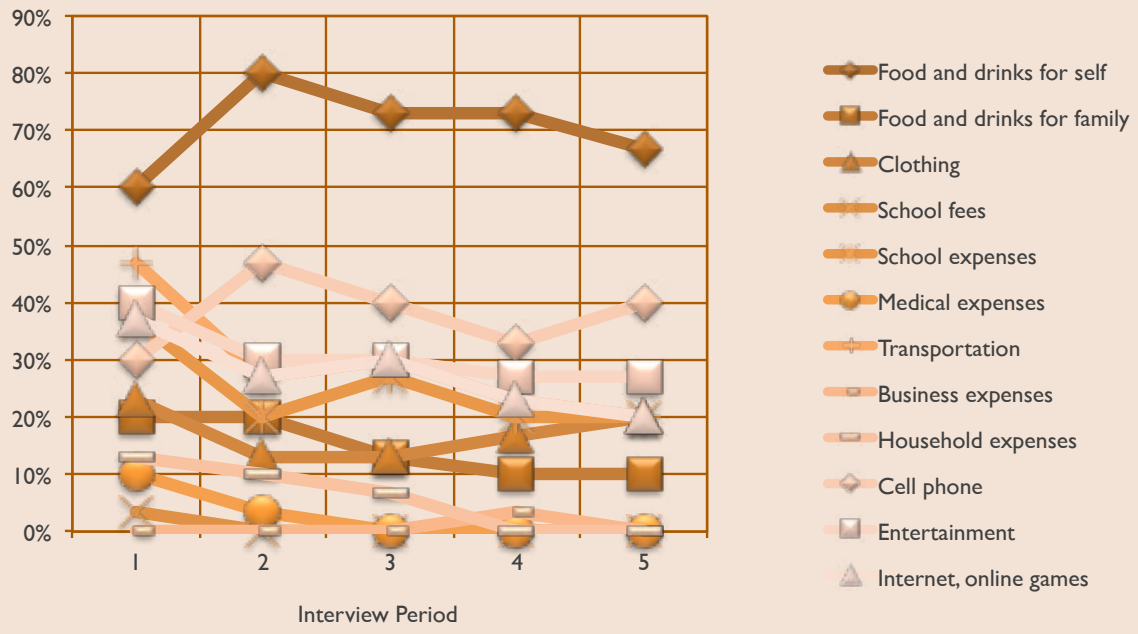
Very few the treatment or comparison group reported keeping a register of their expenses and 60–70 percent felt satisfied with how they spent their money.

Table 9: Spending Behavior Comparisons

Indicator	Baseline		Endline	
	Treatment	Comparison	Treatment	Comparison
Amount of money spent in last 7 days	$17.26	$20.76	$18.56	$20.09
Amount of money they expect to spend in next 7 days	$12.50	$22.35	$16.91	$23.01
Of the money spent in the last 7 days, amount spent on the following:				
Candy, soda, etc.	$4.32	$8.00	$5.14	$5.87
Posters, accessories, clothing, etc.	$9.20	$13.24	$6.01	$5.27
Cell phone cards	$3.38	$5.22	$0.94	$2.47
School fees or other items related to school	$6.08	$6.83	$1.17	$2.65
Did you spend money on any of the following (during the week)?				
Food or drinks for me	62%	66%	78%	57%
Food/drinks for family	34%	28%	27%	21%
School fees	8%	8%	2%	8%
School items	31%	26%	19%	27%
Medical fees	10%	17%	17%	6%
Transportation	34%	54%	31%	35%
Business costs	2%	3%	1%	1%
Household	16%	18%	7%	10%
Cell phone	27%	36%	34%	43%
Loan	1%	2%	1%	2%
House	2%	2%	2%	2%
Entertainment	29%	15%	25%	26%
Internet/electronic games	30%	23%	40%	33%
Youth that feel they will spend their money similarly in the next 7 days as they did in the last 7 days	43%	42%	49%	47%
Youth who kept track of the amount they spent in the last 7 days	20%	10%	9%	14%
Youth who felt good about how they spent their money in the last 7 days	69%	63%	66%	58%

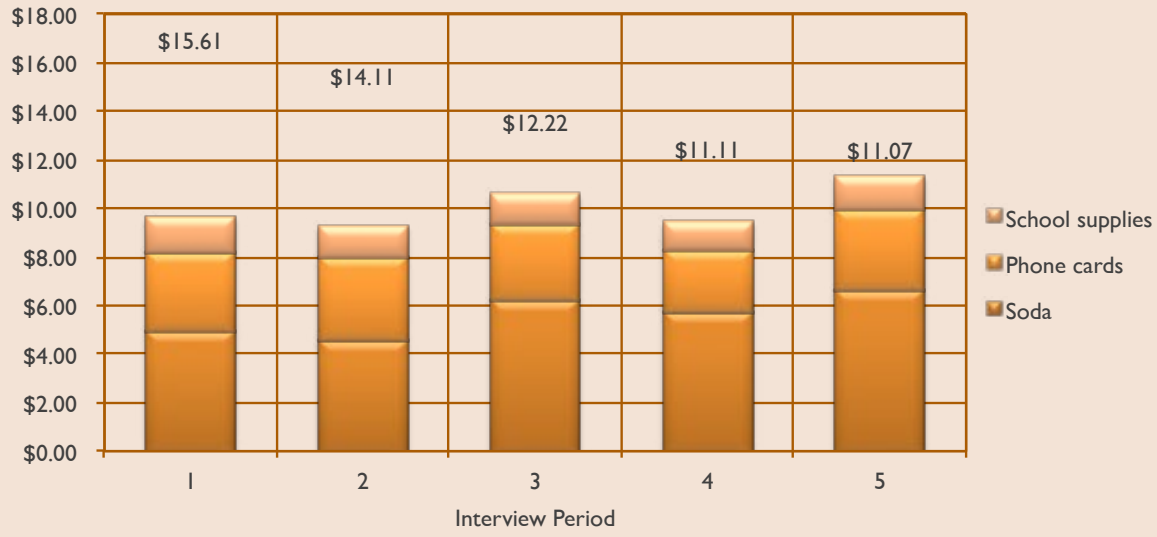
The financial-diary data supports the baseline and endline results by demonstrating that youth appear to have fairly consistent expenses over time. Treatment-group data below shows that youth reported consistently spending their money on food and drinks for themselves, followed by cell phones, entertainment and internet and online games (Figure 5).

Figure 5: Where They Reported Spending Their Money—Treatment Group Only



When asked specifically about types of expenses, the majority reported spending money at any given period on soda, with some on phone cards, and very little on school supplies (Figure 6). The amounts articulated above each bar chart represent the total amount of money they reported spending during the prior seven days. While the amounts trend downward overtime, their reported expenses for soda, phone cards, and school supplies stay fairly constant.

Figure 6: Amount Spent in Last 7 Days—Treatment Group Only



During the same period of the financial diaries, between 62 and 71 percent of the youth reported feeling good about how they spent their money in the prior seven days.

In summary, youth appear to have similar and consistent expenses during the three-month period. Further, where they report spending their money suggests that they are not highly responsible for basic need expenses; hence, parents and guardians are likely covering basic needs. While the evaluation did not ask specific questions on how to prioritize needs over wants, this data also might suggest that the financial education session on needs and wants was not effective in changing how youth spend or prioritize their own money.

Finally, similar to the prior comparisons above on age and gender (data not shown), there is no statistical difference between the amount boys and girls reported spending in the last seven days. However, older youth report spending more money compared to younger youth ($25.40 versus $12.20, respectively) and they are also reporting spending their money more frequently on almost all of the items listed below in Table 10.

Table 10: Amount and Where Youth Spend Their Money: Comparison Between Younger and Older Youth

	Younger Youth	Older Youth
Amount of money spent in last 7 days	$12.20	$25.40***
Did you spend money on any of the following (during the week)?		
Food or drinks for me	65.5%	69.4%
Food/drinks for family	15%	30.6%**
Clothing	21.2%	40.8%***
School fees	0.9%	8.3%**
School items	17.7%	27.4%
Medical fees	4.4%	16.6%**
Transportation	23%	39.5%**
Business costs	0.9%	1.9%
Household	6.2%	10.8%
Cell phone	31%	44%*
Loan	0%	2.6%
House	0%	3.8%*
Entertainment	18.6%	30.6%*
Internet/electronic games	34.5%	37.6%

Significant difference between younger and older youth outcomes: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Saving Knowledge

An important part of the program provided to participants was dialogue-based, behavior-change financial education that covered basics such as the development of savings goals (in both the short and long term), how to develop a savings plan, how to differentiate between and prioritize needs over wants, and the differences in behaviors necessary to open and manage a savings account depending on whether they were younger or older than 18 years of age. The questions in the survey asked about the items they needed to have with them to open an account and when and whether parents where needed to open an account and make deposits or withdrawals.

First, youth were asked to name two main benefits of having a savings account; the two correct answers were "security" and "earns interest." These correct answers were determined by the fact the education worked to

focus youth's attention on these two particular benefits. The remaining five knowledge indicators dealt with the process for opening and managing the individual savings accounts for youth.

Neither the treatment nor the comparison group at baseline could name the two benefits of a savings account but almost half of them could at the endline. This improvement was statistically significant for both groups. There was, however, no difference between the treatment and comparison group at endline. As per the guidelines listed under the sample methodology, a goal for knowledge change was set such that 80 percent of youth in the treatment group should have known the correct answer to this question. While improvement occurred, it was far below the goal of 80 percent.

While the treatment and comparison groups had similar low-knowledge levels at baseline regarding the five requisites needed to open a savings account, the treatment group experienced a statistically significant jump in their knowledge from baseline to endline and was statistically significantly more likely to be able to list all five requisites compared to the comparison group at endline. The 32.8 percent at endline who could answer this question correctly was still far below the goal of an 80-percent level of expected performance.

In the remaining questions, youth were asked about the role of parents in opening an account and withdrawing, and depositing money. The treatment group at endline was more likely to know that a parent was needed to open an account if the young person was under the age of 18 and that a parent was not needed if the young person was over the age 18. Both the treatment and comparison groups experienced a significant jump in knowledge between baseline and endline in the latter indicator. There was a similar significant jump between baseline and endline for both the treatment and comparison groups regarding knowledge that parents were not needed to make a deposit, even for youth under the age of 18. While the treatment group had slightly higher knowledge on this indicator compared to the comparison group, this difference was not statistically significant. There appeared to be very little knowledge change on whether, if under the age of 18, a parent was needed to withdraw money. Correct knowledge on this indicator actually decreased between baseline and endline, which might suggest slight confusion on the role of parents. The latter two indicators also did not pass the goal of 80-percent level of knowledge at endline.

Table 11: Knowledge Change Comparisons

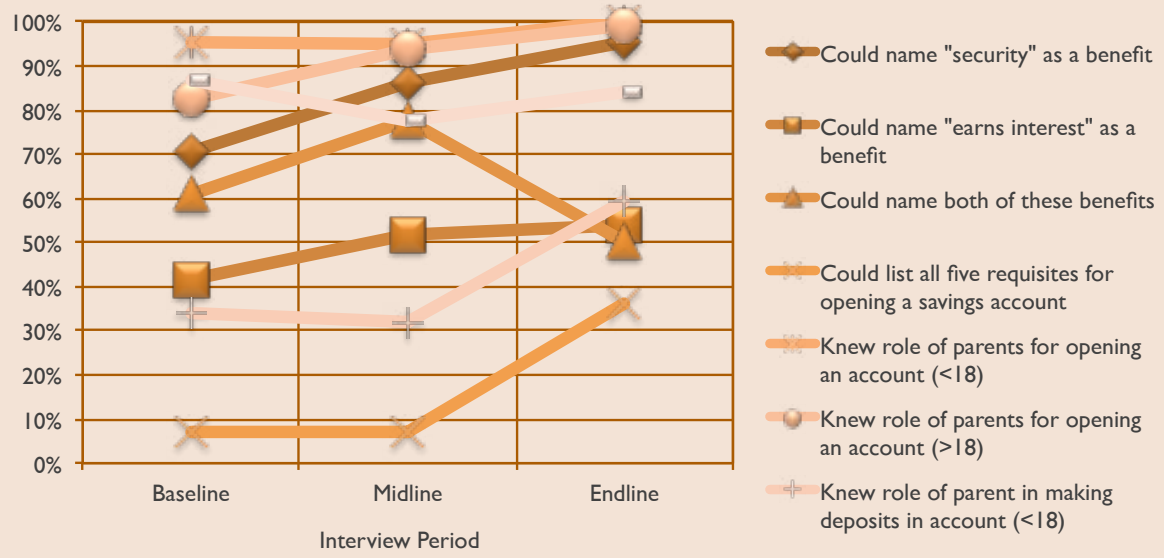
Indicator	Baseline		Endline	
	Treatment	Comparison	Treatment	Comparison
Know 2 benefits of having a savings account "earns interest" and "security"	0%	0%	45.50%^^^	40.40%^^^
Know all 5 requisites to open a savings account (parent's ID, voting card, utility bill, personal ID, photograph)	10.9%	15.2%	32.8%***,^^^	16.2%
If under 18, know parent is needed to open an account	97.8%	94.9%	100%**	93.4%
If over 18, know parent is NOT needed to open an account	79.9%	79.7%	96.2%*,^^^	88.9%^
If under 18, know parent is NOT needed to make a deposit	27.9%	18.8%	50.4%^^^	41.5%^^^
If under 18, know parent is needed to withdraw money from account	82.8%	73.0%	75.6%	67.4%

*Significant difference between endline treatment and comparison outcomes: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$*
Significant difference between baseline and endline outcomes: ^ $p \leq 0.05$, ^^ $p \leq 0.01$, ^^^ $p \leq 0.001$

In addition to treatment versus comparison and baseline versus endline comparisons, an introduction of the financial diary data adds an interesting lens to interpreting knowledge change over time. The following data only comes from the Cooperative San José youth as this was the only location where midline data was collected. The financial diary data presented in Figure 8 is from the total sample, including Cooprogreso, but it has been inserted into the San José data as a way to help interpret changes over time.

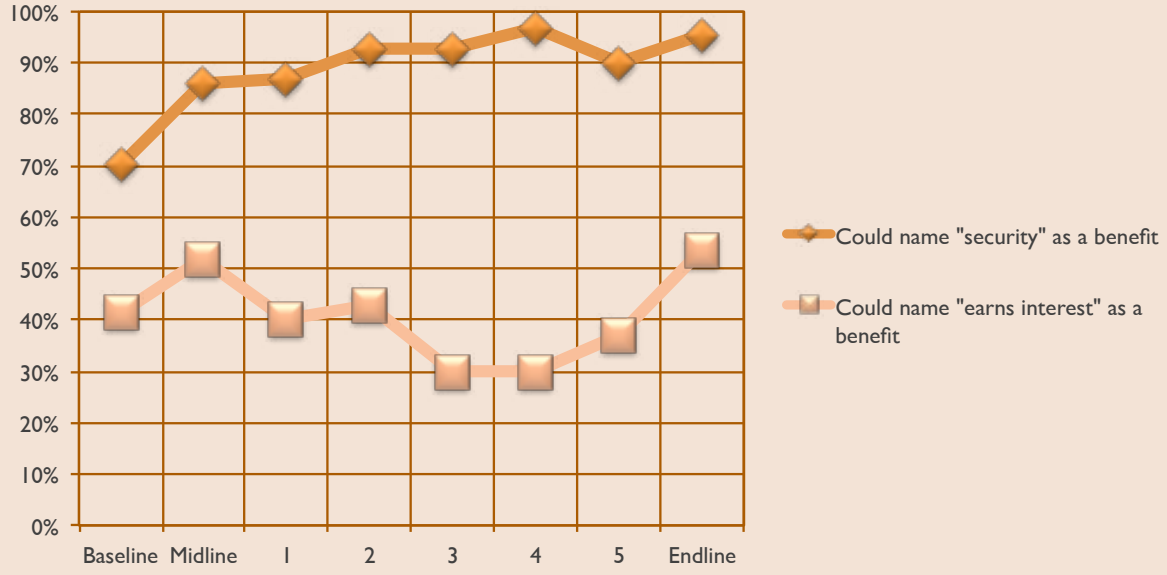
From Figure 7 below, for one-half of the indicators, there was an uptick in knowledge at the midline, which occurred approximately one year after the baseline with San José youth. Two indicators saw relatively no change (could name all five requisites for opening an account and knew parents were needed to open an account if under age 18) and two saw a decrease in knowledge change (knew parents were not needed for a deposit and parents were needed for making a withdrawal if under age 18). Some messages seemed to have worked better than others. Interestingly, when comparing the endline to the midline values, **all indicators, except for one (could name both benefits of having a savings account) experienced an additional improvement at endline.**

Figure 7: Comparison of Knowledge Indicators at Baseline, Midline, Endline for San José Treatment Youth



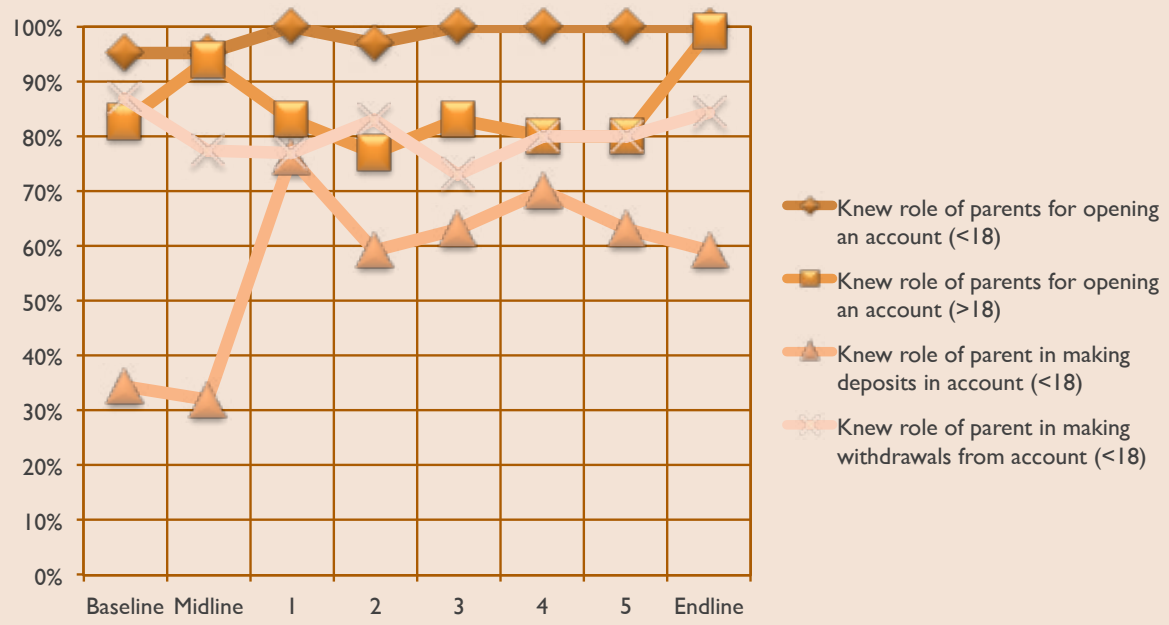
In Figure 8, looking at only the indicators on the benefits of a savings account, all data points were considered. From this it is clear that youth over time tended to report more often that "security" was a benefit; however, "earning interest" showed an initial uptick, took a dip during the financial diaries then recovered toward the endline survey. It is likely that as youth opened up savings accounts, they gained knowledge about the benefit of earning interest.

Figure 8: Comparison of the Benefits of a Savings Account—All Data Points



In Figure 9, using all data points again (as described for Figure 8), the indicator with the most visible change is the percentage of youth who ***"knew the role of parents in making deposits."*** There was very little change in this indicator between baseline and endline, but a significant jump for the youth during the financial diaries, which corresponds to a higher level of knowledge at the endline as well. **What is important to note is the fluctuation of knowledge at each point of time during the financial diaries, which suggests youth did not solidly "know" the answer to all of these questions and suggests they were guessing at the correct answer. It is also likely that much of the growing knowledge toward the endline for some indicators is influenced by more youth gaining access to and using a savings account.**

Figure 9: Comparisons of the Role of Parents and Savings Accounts—All Data Points



Because it appears that the access to and use of a savings account could be influential in additional knowledge gains, additional analysis was conducted with both the endline and the financial-diary data.

Table 12 below shows that youth who indicated they had money saved generally were no more likely to provide correct answers to the knowledge questions. Youth without savings were more likely to provide the two correct answers to the question about the benefits of having a savings account and this was statistically significant. Youth without a savings account with either Cooperative were actually somewhat more likely to answer this question correctly as well, even though the difference is not statistically significant. It appears that youth with a savings account with either Cooperative were more likely to answer correctly whether a parent was needed to make a deposit or a withdrawal if the young person was under the age of 18. Therefore, **this data indicates that the interaction with the savings account possibly increases knowledge as well, but it appears to occur more with the use of the account (as assessed through the indicators on parents involvement in withdrawals and deposits) than it does with the opening or benefits of the account (as assessed with the requisites needed to open an account or parental involvement in opening accounts).**

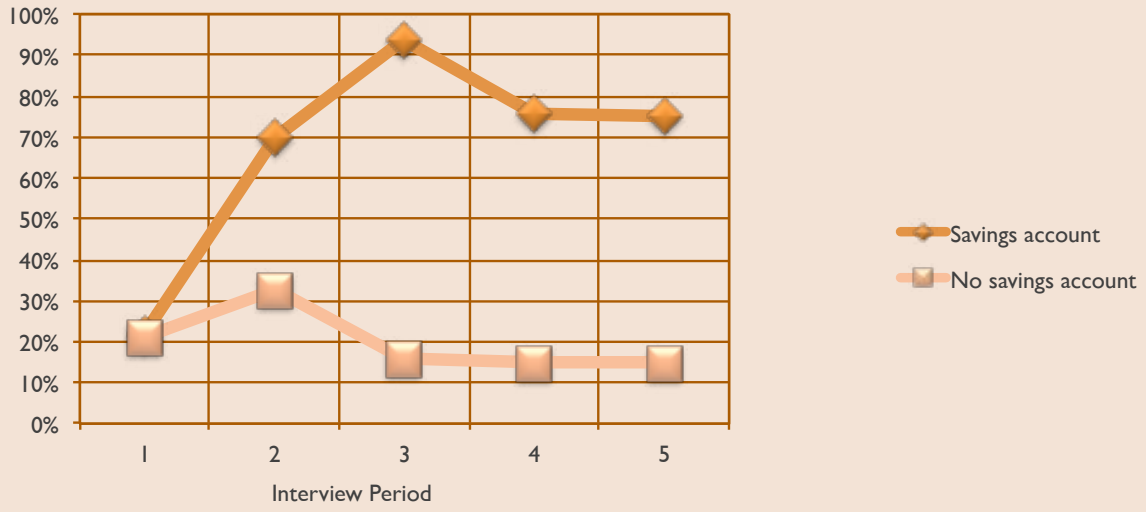
Table 12: Knowledge Change—Youth With vs. Without Savings (Generally) and With vs. Without Savings Accounts

	Had savings (generally)	Did not have savings (generally)	Had a savings account with either Cooperative	Did not have a savings account
Know 2 benefits of having a savings account "earns interest" and "security"	40.2%	49.4%	29.8%	45.1%
Know all 5 requisites to open a savings account (parent's ID, voting card, utility bill, personal ID, photograph)	31.8%***	7.4%	35.1%	32.8%
If under 18, know parent is needed to open an account	97.9%	93.8%	100%	98.3%
If over 18, know parent is NOT needed to open an account	93.5%	90.1%	94.7%	94.2%
If under 18, know parent is NOT needed to make a deposit	48.1%	40.7%	60.7%*	42.5%
If under 18, know parent is needed to withdraw money from account	78.9%***	54.3%	89.5%*	76.7%

*Significant difference between outcomes: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$*

Using the financial-data diary, figure 10 shows how this knowledge change likely occurred over time. As youth gained access to the accounts, there is a clear jump from interview period one to two for youth with a savings account and their knowledge that parents were not needed to deposit money if under the age of 18. Youth without accounts have a knowledge level that is sustained at a very low level for the five interview periods.

Figure 10: Know That You Do NOT Need a Parent to Deposit Money If Under Age 18—Savings Account vs. No Savings Account



Finally, one additional analysis was completed to compare performance at endline among the five different supervision areas for the treatment group only. As referenced in the methodology section, LQAS was used to generate the simple random sample to select clients across the five supervision areas. While four of the five supervision areas come from Cooperative San José, each supervision area stands on its own as an area of performance.

The data in Table 13 shows the same knowledge indicators of interest followed by each supervision area and the number of correct answers to each question. For example, in Ventanas, 12 out of the 30 clients could list the two benefits of having a savings account. The average for all of the treatment supervision areas combined for the same indicator was 45.5 percent. To determine whether any of the supervision areas fell below this average, the decision rule for 45.5 percent is 11.[18] This means that a supervision area must have at least 11 clients who correctly answered the benefits of having a savings account to indicate they reached or exceeded 45.5 percent. In this example, Manabí did not reach the decision rule of 11—only eight youth were able to answer this question correctly. This indicates that far fewer than 45.5 percent, likely 30 percentage points fewer, of youth in Manabí know the benefits of having a savings account after having received the education. The Manabí supervision area is highlighted in ■ to signify its lower than average performance on this indicator.

In addition, because Freedom from Hunger set 80 percent as the performance goal for knowledge indicators for the endline, decision rules for the goal of 80 percent can also be applied. For all cases below, the decision rule is 20. This means a supervision area must have at least 20 youth answering this question correctly to indicate it met the goal. For this first indicator, no supervision area met the goal of 80 percent; therefore, they are highlighted in ■ to signify they missed the goal. The supervision area of Manabí missed both the goal of 80 percent and the treatment group average of 45.5 percent.

Following this same logic, Manabí is also the only supervision area to fall below the treatment group average in three other indicators. There are three indicators where most supervision areas fall below the goal of 80 percent: know the benefits of having a savings account, can name the five requisites needed to open an account, and that a parent is not needed to make a deposit even though the youth is under the age of 18.

Table 13: Differences in Knowledge by Supervision Area—Treatment Only

	Number of Correct Answers					Average for Treatment Group	Decision Rule for the Average	Goal	Decision Rule for the Goal
	Cooperative San José				Cooprogreso				
	Ventanas	Montalvo	Guaranda & Chimbo	San Miguel & Chillanes	Manabí				
Know 2 benefits of having a savings account "earns interest" and "security"	12	16	13	13	8	45.5% (±8)	11/7*	80%	20/12

	Number of Correct Answers					Average for Treatment Group	Decision Rule for the Average	Goal	Decision Rule for the Goal
	Cooperative San José				Cooprogreso				
	Ventanas	Montalvo	Guaranda & Chimbo	San Miguel & Chillanes	Manabí				
Know all 5 requisites to open a savings account (Parent's ID, Voting card, Utility Bill, Personal ID, photograph)	5	8	10	16	5	32.8% (±8)	5/3	80%	20/12
If under 18, know parent is needed to open an account	30	30	30	18		100% (±0)	16**	80%	20/12
If over 18, know parent is NOT needed to open an account	29	30	30	18	19	96.2% (±4)	26/16	80%	20/12
If under 18, know parent is NOT needed to make a deposit	15	14	19	16	2	50.4% (±8)	12/8	80%	20/12
If under 18, know parent is needed to withdraw money from account	30	19	25	17	8	75.6% (±7)	20/13	80%	20/12

** The supervision area of San Miguel & Chillanes only had 18 survey participants, whereas all other areas had 30. Therefore, there is a different decision rule for an area of 18. The second decision rule applies to San Miguel & Chillanes only.*

*** This indicator actually has several different decision rules due to varying denominators for each supervision area. However, only the decision rule for San Miguel & Chillanes is used since it is the lowest common denominator.*

This data suggests that while some knowledge change occurred between baseline and endline, not enough knowledge change across all indicators occurred to meet the goal set at 80 percent of youth being able to correctly answer the knowledge questions. This data also suggests that the supervision area of Manabí (or Cooprogreso) did not have the same level of knowledge change as did the supervision areas for Cooperative San José, which could be explained by the shorter implementation period as referenced earlier in the report.

Savings Behaviors

Who has a savings account?

The treatment group was first provided with financial education and then offered an individual savings account, but the young person had to be responsible for opening up their own account, with the help of an adult for those under legal age (18 years old). Therefore, even within the treatment group, it was important to understand who opened a savings account and whether there was any difference between youth with a savings account and those without.

In Table 14, **while the comparison group was not technically part of the program, there were proportionally more youth in the comparison group who reported having a savings account with the Cooperatives at endline.** Exploring into the cause of this (data shown later in the report), it was found that the comparison group reported hearing about the savings accounts through their mother and father (93%) as well as through the surveyors who conducted the data-collection for this research (43%).

There were similar numbers of youth with savings accounts between the treatment and comparison groups at endline. **The treatment group was more likely at baseline and at endline to report having savings anywhere compared to the comparison group, which suggests youth in the treatment group already had a stronger tendency to save money compared to the comparison group.** The treatment group youth reported saving their money at home more at the endline than at baseline and was more likely than the comparison group at endline to report saving the majority of their money at home. It could be that the education influenced the treatment youth by helping them be more accurate in reporting where they kept their money. Given general mistrust in sharing with strangers about where money is kept, it could be that overtime, as the interaction between the young person and the surveyor increased, trust was built and the young person became more comfortable in sharing with the surveyor where they kept their money. Or finally, because youth were encouraged to save more regularly, they were able to save more at home but this did not necessarily translate into them opening a savings account. Qualitative interviews completed with the youth suggest that in reality, youth save at home first to make larger deposits later at the Cooperative. Because youth were worried about how they would be perceived when making very small deposits, they wanted to accumulate greater amounts at home before making a deposit. Therefore, this might be interpreted as the treatment group "holding" onto savings at home with the intent to make deposits later.

Table 14: Who Has a Savings Account? Baseline vs. Endline and Treatment vs. Comparison

Indicators	Baseline		Endline	
	Treatment	Comparison	Treatment	Comparison
	n=138	n=138	n=134	n=136
Have savings (anywhere)	76.10*	65.20	78.4%**	61.8%
Have a savings account with Cooprogreso or San José	—	—	27.2%	38.2%
Save money at home	43.50%	36.2%	58.2%^,***	30.2%
Youth indicate parents save at a Cooperative	46%	40%	41.8%	32.4%
	n=88	n=68	n=57	n=56
Parents indicate saving at Cooprogreso or San José****	21%	26%	61%^^^,***	21%

***** Parents who had a child under the age of 18 were asked to sign a permission slip for their child to participate in the various surveys. The denominator represents the total number of parents who had a child under the age of 18 and who permitted their child to participate in the study. The numerator represents the total number of parents who indicated they were members of either Cooperative San Jose or Cooperative Cooprogreso.*

*Significant difference between treatment and comparison outcomes: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$*
Significant difference between baseline and endline outcomes: ^ $p \leq 0.05$, ^^ $p \leq 0.01$, ^^^ $p \leq 0.001$

It appears that slightly more youth in the treatment group report that their parents are generally saving at a cooperative, at both the baseline and endline, but these differences are statistically insignificant. While similar numbers of parents of youth under the age of 18 reported having a savings account with either of the two Cooperatives at baseline, **more treatment group parents of children under the age of 18 at endline reported having a savings account compared to comparison group parents.** Therefore, an important question to answer is the role parents actually played in whether youth took up a savings account or not or how much cross-selling might have occurred from youth convincing their parents to open an account. When youth with accounts were asked whether they or their parents had their account first, the majority (92%) indicated their parents had the account first (data not shown), which suggests very little cross-selling from youth to parents was occurring, while cross-selling from parents to youth likely occurred.

At baseline, because the question as to whether the young person had a savings account with either of the two Cooperatives was not asked (presumably, there were no youth accounts on offer prior to this initiative), youth were asked whether they generally saved with a cooperative. In Table 15, youth in the treatment group who said they saved with a cooperative and who also had a parent who reported having a savings account with one of the two cooperatives were compared to youth who did not save with a cooperative but had a parent report having a savings account with either of the two Cooperatives. The comparisons revealed that of treatment group youth who were under the age of 18 and who reported saving at a cooperative, 80 percent of them had parents who also reported already saving with either Cooperative San Jose or Cooprogreso. Of the youth under the age of 18 who did not report saving at a cooperative, 26 percent of them had a parent who reported having a savings account with Cooperative San Jose or Cooprogreso. The differences between these comparisons were statistically significant. However, only 63 percent of the treatment group, including all ages (13–24), who reported saving with a cooperative also reported their parents saving with a cooperative, while 45 percent of those who did not save with a cooperative reported that their parents did save at a cooperative. These differences were statistically insignificant, but it trends in the same direction as the prior comparison. **This suggests that for the treatment group, it is very likely that youth who were saving with a cooperative also had parents who were saving with Cooperatives San Jose or Cooprogreso, or with some other cooperative.**

For the comparison group, there was a modest difference between the comparisons of youth under the age of 18 reporting to save with a cooperative and parents reporting whether they saved with Cooperatives San Jose or Cooprogreso. This suggests if a youth under the age of 18 reported saving with a cooperative or not, their parents were similarly likely to report having a savings account with either of the Cooperatives. When the entire comparison group (includes all ages, from 13–24) was asked to report on whether they knew if their parents saved with a cooperative, generally, almost 74 percent of youth reporting to save with a cooperative also reported that their parents saved with a cooperative. This is statistically different from the 35 percent of the comparison group who reported not saving who also reported that their parents did save with a cooperative. This suggests **for the comparison group, the youth (all ages) who reported saving with a cooperative were also very likely to report that their parents were saving with a cooperative.**

Table 15: Who Has a Savings Account? Role of Parents at Baseline

Youth indicates that he/she saves with a cooperative				
	Treatment % Yes	**Treatment % No**	**Comparison % Yes**	**Comparison % No**
Parent indicates having an account with Cooperatives San José or Cooprogreso	80%*	26.3%	50.0%	25.0%
Youth indicates a parent saves with a Cooperative	63.2%	45.1%	73.7%***	34.5%

*Significant difference outcomes: * p≤0.05, **p≤0.01, ***p≤0.001*

At endline (Table 16), there are similar trends among youth reported data, but there is also an interesting finding when looking at parents of youth under the age of 18. First of all, for the treatment group, almost half of the youth under age 18 who reported having a savings account had a parent report they had an account, while 56 percent of youth who did not have a savings account had a parent report they did have an account. This might suggest that more parents of treatment group youth who were under the age of 18 had accounts as a result of a youth account being promoted to their children, although this cannot be determined from this one data point.

However, for the comparison group, there was a clear difference between youth under age of 18 with an account also having a parent report to have an account. When looking at youth-reported data, 68 percent of the treatment group (all ages) who reported having a savings account also reported that a parent had a savings account with San José or Cooprogreso compared to 27 percent of youth who did not have an account but had a parent who had an account. The comparison group had a similar finding. Almost 90 percent of the comparison group had a parent who also had an account with either of the Cooperatives compared to 17 percent of the comparison group who did not have an account who had a parent who had an account. **All of these data points suggest that youth who have accounts with either Cooperative are also likely to have parents who are members as well.**

Table 16: Who Has a Savings Account? Role of Parents at Endline

	Youth indicates that he/she saves with a Cooperative				Youth indicate that he/she saves with San José or Cooprogreso			
	Treatment = T % Yes	T % No	Comparison = C % Yes	C % No	T % Yes	T % No	C % Yes	C % No
Parent indicates having an account with Cooperatives San José or Cooprogreso	--	--	--	--	50.0%	56.8%	57.1%*	15.0%
Youth indicates a parent saves with a Cooperative	77.3%***	35.5%	74.1%***	22.9%	71.4%**	38.4%	62.1%**	31.8%
Youth indicates a parent has an account with San José or Cooprogreso	59.1%**	25.5%	85.2%***	17.8%	67.9%***	26.8%	89.7%***	17.4%

*Significant difference in outcomes: * p≤0.05, **p≤0.01, ***p≤0.001*

Finally, the differences in gender and age were assessed across all youth (treatment and comparison groups combined, Table 17).

At baseline, boys were more likely to indicate they had money saved anywhere, compared to girls. Boys were also saving more, but these differences were not statistically significant. There were also no differences between boys and girls and whether they reported having money saved for emergencies. **However, at endline, boys were no longer more likely to report having money saved compared to girls and the amounts being saved was very similar. There were no differences between genders as to who opened a savings account with either Cooperative.**

While there were no differences at baseline between young youth (ages 13–17) and older youth (ages 18–24) in terms of who reported having savings at all and the amount they reported for total savings, **older youth were more likely to indicate they had money saved for emergencies** (40 percent versus 15 percent for younger youth). At endline, **older youth reported having more savings in total compared to younger youth but there was no statistically significant difference between young and older youth and whether they reported having money set aside for emergencies.** When assessing all youth at endline, there was a difference in age as to who actually had an account with either of the two Cooperatives. Older youth (40%) were twice as likely to have a savings account as younger youth (19%).

Table 17: Savings by Gender and Age

	Gender				Age			
	Baseline		Endline		Baseline		Endline	
	Boys	Girls	Boys	Girls	Young Youth	Older Youth	Young Youth	Older Youth
Have savings (anywhere)	56.3%*	37.8%	47.5%	48%	49%	44%	48%	48%
Amount in total savings	$104	$36	$83	$68	$33	$129	$45	$97***
Have money saved for emergencies	26.6%	24.3%	11.9%	9.9%	15.0%	40.0%**	9.8%	11.5%
Have an account with San José or Cooprogreso	—	—	28.1%	35.1%	—	—	18.6%	40.4%**

*Significant difference between outcomes: * p≤0.05, **p≤0.01, ***p≤0.001*

Youth were asked who influenced their decision to open a savings account. For the treatment group, the people who most influenced their decision were their mothers (89%) and fathers (43%) and friends (11%). Interestingly, the comparison group reports that their mothers (57%), the evaluation surveyors (43%), Cooperative staff (43%) and their fathers (37%) and were the most influential people in their decision to open their savings accounts. The treatment group was more likely than the comparison group to say their mothers, while the comparison group was more likely to report Cooperative staff and the surveyors as the most influential people in their decision to open a savings account. When interviewed during the qualitative, youth with accounts who were interviewed in a focus group expressed that "our mothers took us to open the account. Our mothers want us to have an account." But some youth were obviously themselves interested in opening an account. One mother shared, "My daughter went by herself to open the account and I did not help her with the documents nor the requirements. She impressed me that she wanted to open the account for her studies."

Table 18: Person Who Influenced the Young Person's Decision to Open an Account —Endline only

Person who influenced the young person's decision to open an account	Treatment	Comparison
Mother	89%**	57%
Father	43%	37%
Brother/sister	0%	0%
Other family	0%	0%
Friends	11%	9%
Cooperative staff	4%	43%***
Teacher/School	0%	3%
Surveyor	0%	43%***
Other	0%	3%
Don't know	0%	3%

*Significant difference between outcomes: * p≤0.05, **p≤0.01, ***p≤0.001*

Using LQAS as an additional analysis tool also provides an interesting view as to where the majority of savings accounts were opened with the two Cooperatives (Table 19). Of the treatment group and the number who indicated they had a savings account with either Cooperative San José or Cooprogreso, the 28.1 percent of youth with accounts are concentrated in Montalvo, the combined supervision area of Guaranda and Chimbo at Cooperative San José. Manabí, and the combined supervision area of San Miguel and Chillanes and Ventanas fall far below 28.1 percent (noted with ■ highlighting). If a goal had been set to see half of the youth opening an account, Ventanas, Montalvo, San Miguel and Chillanes and Manabí would have fallen below this goal (includes the red as well as ■ highlighted areas). In addition to looking at the treatment group, the comparison group data is provided because this data demonstrates that the majority of accounts opened occurred in San Miguel and Chillanes and Guaranda and Chimbo. The head office of Cooperative San José is located in Chimbo; therefore, it's conceivable that its proximity to the head office might explain the better outreach.

Table 19: Differences in Savings Accounts by Supervision Area—Treatment Only

	Number of "Correct" Answers					Average for Treatment Group	Decision Rule for the Average	Goal	Decision Rule for the Goal
	Cooperative San José				Cooprogreso				
	Ventanas	Montalvo	Guaranda and Chimbo	San Miguel and Chillanes	Manabí				
Have an account with San José or Cooprogreso (Treatment Group)		5	20	1	2	28.1% (±9)	4/2*	50%	11/7
Have an account with San José or Cooprogreso (Comparison Group)			13	16	0	38.2% (±11)	7/5	50%	11/7

** The supervision area of San Miguel & Chillanes had only 18 survey participants, whereas all other areas had 30. Therefore, there is a different decision rule for an area of 18. The second decision rule applies for San Miguel only.*

However, if this data is compared to the actual number of accounts opened by the time the endline surveys occurred for each supervision area (Table 20), it is interesting to see that while there is some correspondence between that actual number of accounts opened by the time the endline was completed (for example, in Manabí and Montalvo) there is less correspondence in other areas (for example, Ventanas). Obviously, the sample included in this study were youth in schools that were identified for an original roll-out of the financial education and does not include all youth to which it has been marketed. In particular, the Cooprogreso supervision area includes youth who have been in the program almost a year less than the Cooperative San José youth, which very likely explains the lower take-up of their youth savings account.

Table 20: Accounts Opened by Endline Survey

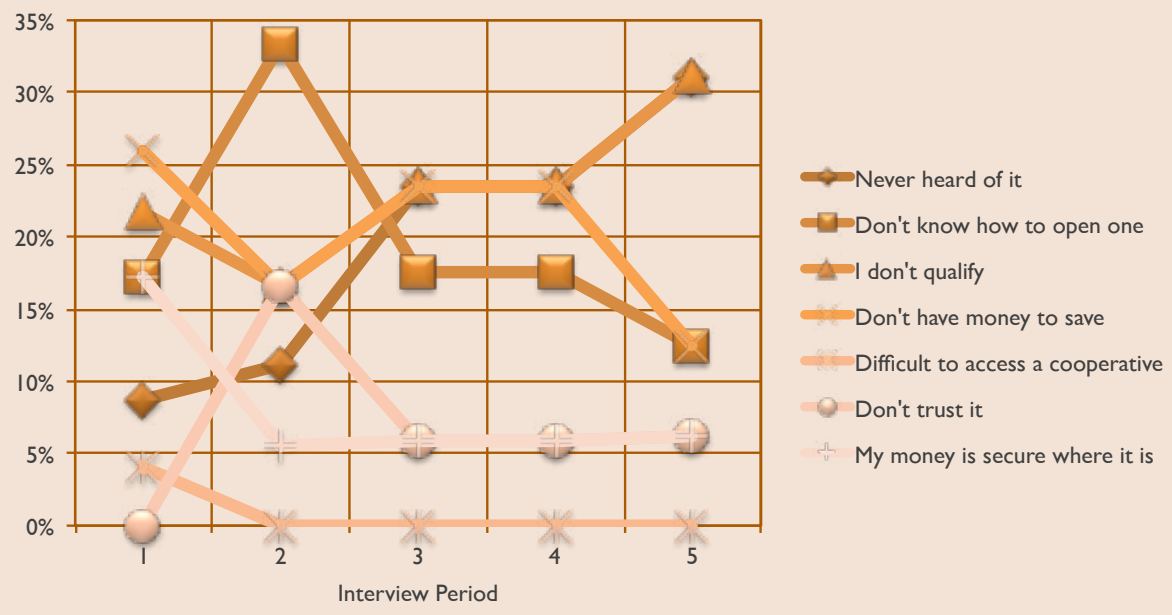
	Ventanas	Montalvo	Guaranda and Chimbo	San Miguel and Chillanes	Manabí
# of accounts opened as of endline	630	310	638	597	161

Why do some youth lack savings accounts?

While the intent in the endline was to understand more clearly reasons why youth in our sample did not open accounts, there was a data entry such that almost no information was collected from youth without accounts as to their reasons for not having an account.

However, data from the financial diaries provides reasons youth who were interviewed every two weeks chose not to open an account. In Figure 11 below, the reasons for not having an account fluctuated quite a bit. The most reported reasons for lacking an account was "not knowing how to open one," "not having money to save," "never hearing about it" and "not qualifying for an account." What is concerning is that for the treatment group, fewer youth over time should have reported "I don't qualify" and "never heard of it," however, these actually increased over time. Fewer youth towards the last interviews reported "don't know how to open one" and "don't have money to save." These answers suggest that some youth actually did not actively participate in the education sessions (therefore, they'd have less reason to report not knowing how to open one, for example) or that they were simply providing "excuses" at each point in time for why they had not opened an account.

Figure 11: Reasons Youth Do Not Have a Savings Account with the Cooperative–Treatment Only



The qualitative data also helps explain what facilitated or didn't facilitate access to the savings accounts. Youth with accounts felt those who did not take an account did not because there was a lack of publicity and felt the Cooperatives should send more communication, such as through text messages, to better advertise the accounts. Cooprogreso sent text messages to youth who had accounts but these were not available to youth without accounts. Some youth just felt little to no motivation to open an account or found saving at home easier ("maybe I haven't opened an account because I am lazy but saving at home is easier and more practical."); their parents would not or could not help them open the account ("my mother has no time and she's the one who wants me to open the account"); or they simply didn't have the money to open an account ("if they required less money to open the account, I would open one"). One mother shared, "She [daughter] doesn't have the money to open an account, and she'll need a job. I have a lot of children (five of them) and not a lot of money to go around. She wants to open an account, but I told her 'no' because she has to always make deposits."

Cooperative staff members who were interviewed concurred with the mother's statement above in that many youth who did not open an account was due to "not having parents that support them [in opening an account]." Cooperative staff, while impressed and surprised to discover many youth wanted to be independent, had some money to save and wanted have their own accounts, also said it was difficult for the youth to save. "Youth need incentives (like discounts to movies or rewards)."

How much are youth saving?

At endline (Table 21), the treatment youth reported having more money saved in total compared to the comparison group but the amount they reported having saved in the last seven days was similar to the amount the comparison group youth were reporting for the amount saved in the past seven days. The average amount in total saving for both the treatment and comparison groups is much smaller than the amount reported for average savings held in the savings accounts of the Cooperatives highlighted in Table 1. For example, Cooperative San José reports the average savings balance is $133 and Cooprogreso reports an average of $175. For San José, however, the median reported amount is $10.00, which indicates there are some youth with very high savings balances that are pulling the average up. Overall, this could reflect the potential for the savings accounts, since the $78 reported here for the treatment group, for example, is based on all youth in the treatment group reporting to have money saved at all, and does not reflect the amount held specifically in a savings account.

The treatment group reported having larger amounts saved for emergencies and were more likely to report having a week's worth of typical expenses saved, compared to the comparison group. Almost the same number of youth in the treatment and comparison groups reported having a savings goal; however, there was a significant decrease between the baseline and endline in this indicator for both groups. Finally, the treatment group at endline was more likely to report saving more proportionally (amount saved in last seven days/ amount received in last seven days) compared to the comparison group. While neither were statistically significantly different, the treatment group and the comparison group reported saving proportionally less at endline compared to baseline. The comparison group decrease was almost statistically significant at $p=0.103$.

What is not clear from the data is how to differentiate the total amount youth report saving from the amount of money reportedly saved for emergencies. For the treatment group, both the total amount saved and the amount saved for emergencies increase between baseline and endline, but fewer report having emergency savings. For the comparison group, however, there is a significant drop in those reporting having money saved for emergencies, and the amounts are significantly lower as well at endline. Therefore, it is questionable as to whether youth actually differentiate between emergency savings and savings in general.

Fewer youth reported having a savings goal and emergency savings at endline, which would be opposite to what would be expected. Perhaps this indicates youth became more knowledgeable about what is considered a savings goal and how emergency savings might differ from regular savings, or they might simply have been more truthful at endline.

Table 21: How much are youth saving? Baseline vs. Endline and Treatment vs. Comparison

Indicator	Baseline		Endline	
	Treatment n=138	Comparison n=138	Treatment N=134	Comparison N=136
Average amount saved in last 7 days	$8.48	$14.61	$8.70	$10.60
Total average amount in savings	$59.53	$69.25	$78.00*	$73.10
Have emergency savings	29%^^	25.4%^^^	13.4%	8.2%
Total amount saved for emergencies	$34.67	$78.28^	$37.20*	$25.70
Have a week's worth of typical expenses saved	45.7%	39.1%	47.8%***	30.2%
Have a savings goal	83%^^^	77%^^^	58%	60%
Percentage of money saved to amount received in last 7 days	51%	43%	46%*	36%

*Significant difference between treatment and comparison outcomes: * p≤0.05, **p≤0.01, ***p≤0.001*
Significant difference between baseline and endline outcomes: ^ p≤0.05, ^^ p≤0.01, ^^^ p≤0.001

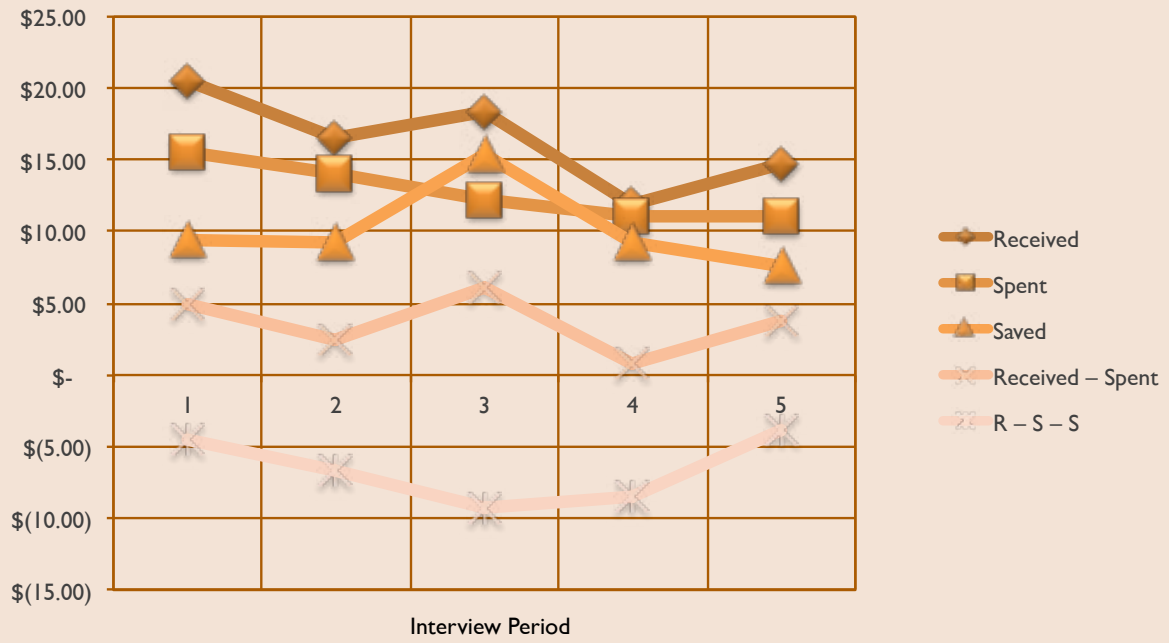
Cash Flow

Treatment group data was used to compare the "cash-flow" of money received, spent and saved in the last seven days. This cash-flow assessment is intended less as an indicator of success of the program and more of a test to see whether there are relationships between money received, spent, and saved. In Figure 12 below, the line "Received – Spent" represents the difference between the amount they reported receiving and spending, and theoretically would represent the maximum they could have saved at any given point. While other money could very likely be interjected in this model (such as total amount of money saved or borrowed) to increase the amount of money they can save or spend, there is an assumption in this model that the amount they report receiving is the maximum amount of money they had as "income" for the prior week. The line "R – S – S" represents the amount of money they would have after spending and saving the total amount they received in the prior seven days. Theoretically, one would assume they would end the week with $0.00 if they spent and saved the entire amount they received. In the graph below, **there appears to be a relationship between the amount they report receiving and saving, such that when they report receiving more money, they report saving more money. The amount they report spending seems somewhat consistent and does not necessarily directly relate to the amount of money they report receiving, suggesting their expenses for the week are somewhat constant,** even if decreasing over time (this expense decrease might have something to do with the holiday season being finished for most of the youth in this study).

What the graph suggests is that if all money were spent from the amount received in the prior seven days, the treatment group youth would have a maximum of approximately $5.00 to save each week, with some weeks having a saving "possibility" of $0.00. However, in what is reported, based on the math, the youth would end each seven-day period up to $10.00 in the red, meaning they either technically could not save the amount they did or they were using other funds (perhaps loans or other savings) to spend and save in addition to the amount of money they reported receiving. Or, this graph could simply confirm the unreliability of self-reported amounts. But **while there is likely some reliability issues of the self-reported amounts, it is promising**

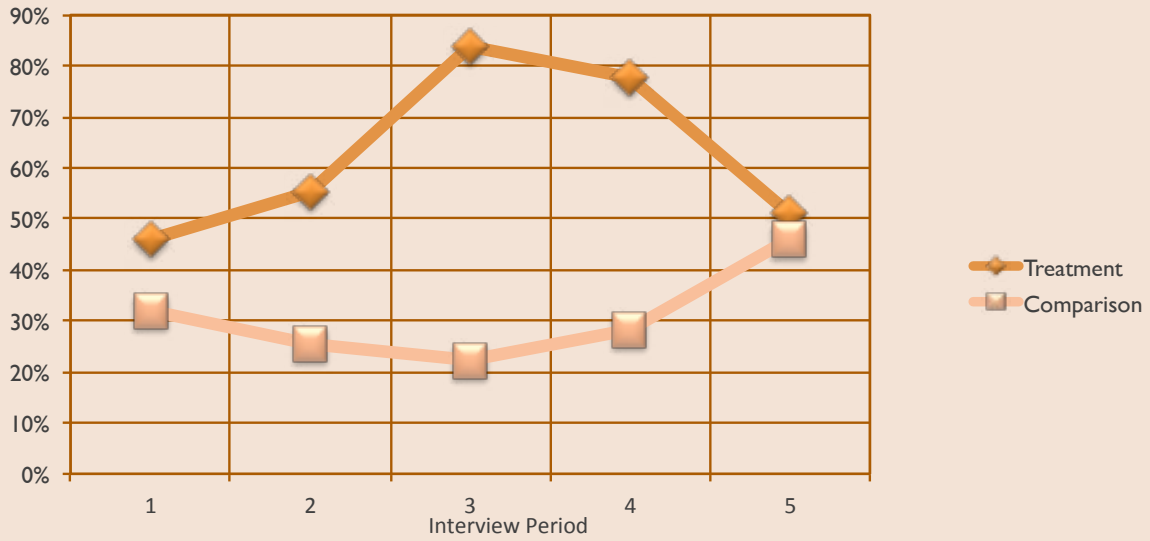
to see that there is a relationship between the amount they report receiving and the corresponding reports for amounts being saved. If the data were completely unreliable, their reported spending amounts might appear significantly more than they report receiving in any given week—this is not really seen in the data.

Figure 12: Cash Flow—Treatment Only



Finally, since it appears the treatment group is reporting saving more over time, a comparison of the proportion that they are saving to what they are receiving is presented below. From the Figure 13 below, we see the treatment group saving between 45 and 80 percent of what they received in the prior seven days, much more than the portion the comparison group is saving over time. However, towards the final data point, there is not much difference between the treatment and comparison group, again perhaps related to the growth in their access to savings accounts and changing savings behaviors.

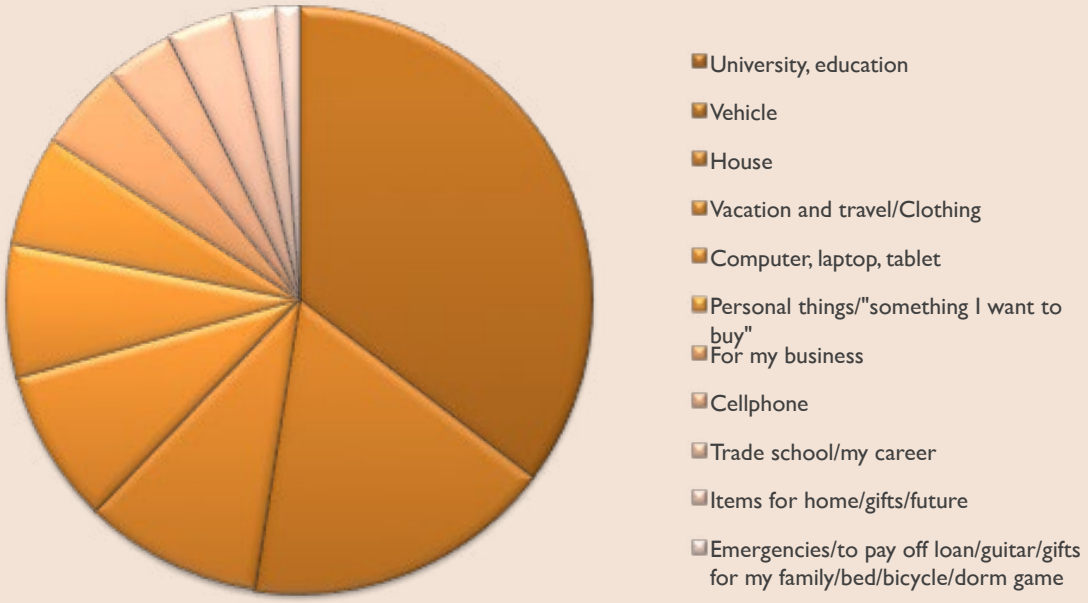
Figure 13: Amount Saved/Amount Received Ratio—Treatment vs. Comparison



What are youth saving for?

Youth were asked what they were saving for, if they mentioned having a savings goal (Figure 14). Approximately 58 percent of treatment and 60 percent of the comparison group indicated they were saving for something in particular at the endline. The majority of all youth—treatment and comparison combined—indicated they were saving for their education (29%). This was followed by wanting to purchase a vehicle (14%), a house (8%) and vacation/travel and clothing, both at 7 percent. The remaining items have values less than 6 percent.

Figure 14: What Are Youth Saving For?



While the quantitative surveys were unable to capture both their articulation of short- and long-term goals, during the qualitative studies, youth could share how their short-term goals related to their long-term goals. For example, one young person shared, "My long-term goal is to be a flight attendant. My short-term goal is to make good grades. To achieve this, I study more. I have done well with this." Another young person shared, "My long-term goal is to study at the university, and this is why I am saving my money and the [financial] education is helping me improve my savings."

From the financial diary data, it appears youth either change their mind, or are capricious, about their savings goals. The range of items is fairly consistent: most youth are saving for computers, televisions, cell phones, trips, gifts, vehicles, and clothing. However, in one interview period, they might report a laptop, and the following period (two weeks later), report saving for a new cell phone. It's unclear whether they achieved their savings goal and were necessarily able to purchase the item with their savings or whether they simply create a new savings goal for the purpose of completing the interview. Having a better mechanism to track whether certain savings goals are actually achieved would be useful to better understand the link between their savings goal and their ability to accomplish it. The financial diary methodology could technically be used for this type of tracking as long as the survey instrument was designed to reconcile responses from one interview to another. Others[19] who have used this methodology have also indicated that this would strengthen its use but would require the organization conducting the interviews to complete some basic data checks and compare responses as well as introduce additional qualitative questions to understand the reasons behind the answers.

Case Studies on Savings Goals

Juan is a 15-year-old boy from Montalvo. He participated in Cooperative San José's financial-education program and has a savings account with them as well. One of his parents is a member of Cooperative San José and has been a member for over five years. He said his parents already had an account when he received his and that they helped him open his account.

Juan was interviewed for the financial diaries between December 2012 and February 2013. Every two weeks, he was asked about whether he had savings goal. For every interview he indicated yes, and these were 1) computer, 2) video games, 3) television, 4) television, 5) video games and television.

****

Rachel is a 24-year-old woman from Guaranda. She also participated in Cooperative San José's financial-education program and has a savings account there as well. At baseline, she had a savings goal of covering some medical expenses. During the financial diaries, she indicated for all interview periods she was saving for a vehicle. For the endline, she indicated she was saving for household expenses. When asked at the endline about when she withdrew savings from her account whether it was related to her savings goals, she said yes. When asked how she spent the money from her savings account, she answered clothing, entertainment and internet games.

How do youth manage their savings accounts?

While the treatment group youth on average have more money saved in total, they make similar deposit amounts as the comparison group (Table 22). Both groups also appear to either make monthly deposits or report having never made a deposit. During the qualitative, youth mentioned saving sporadically because "I don't want to deposit small amounts. I want to have a larger deposit. I'm embarrassed when I only have 25 cents or smaller amounts." Some youth also find it difficult to make deposits into their accounts "because I'm tempted to spend it on other things." Cooperative staff indicated that deposits into savings

accounts above $100 were generally rare and most said that if youth had high amounts, it was due to their parents giving them money or making the deposits for them.

The comparison group reports withdrawing significantly higher amounts of money when they make a withdrawal; but both groups report similarly that they primarily make monthly withdrawals from their savings account. **While significant only at the p≤0.10 level, the treatment group reports more often that when they make withdrawals, the amount is related to their savings goal.** The treatment group is also almost five times more likely as the comparison group to report that their parents make deposits into their account; the comparison group is much more likely to report making the deposits on their own.

Table 22: Savings Account Management—Endline Treatment vs. Comparison

	Treatment	Comparison
Average amount of money deposited	$29.54	$25.80
How often they make a deposit		
Daily	3%	1%
Weekly	6%	13%
Monthly	30%	33%
Only when I have extra money	13%	17%
Only when someone gives me a gift	2%	4%
Never	44%	31%
Average amount of money withdrawn	$20.03	$35.13*
How often they make a withdrawal		
Daily	4%	4%
Weekly	10%	17%
Monthly	57%	44%
Have only withdrawn money 1 or 2 times	13%	11%
Have not made a withdrawal yet	13%	11%
When they withdraw money, is the money related to their savings goal?	45%	31%
Young person deposits money in savings account	56%	83%**
Parent deposits money in savings account	41%***	9%

*Significant difference between treatment and comparison outcomes: * p≤0.05, **p≤0.01, ***p≤0.001*

The role of technology was explored during the qualitative assessment with the youth and with the Cooperative staff to determine the role it could or was playing in facilitating savings deposits. Cooperative San José was beginning to capture savings in the field using Smartphones. When the staff was asked how this facilitated the savings, one said, "The technology is great because the youth like technology and it seems interesting to them. They want to try it and see how it serves them. It helps me promote the product as well as helps them make deposits." "It makes the transactions much quicker and the youth like it because they do not have to visit the Cooperative. They call me so I can visit them in the community and do the transactions there."

Financial Attitudes and Perceptions

One of the most interesting areas about the youth were their motivations to save as well as their attitudes and concerns about having enough money to cover expenses and their overall perception of their financial situation.

Client satisfaction

First, youth who indicated they had a savings account with either of the Cooperatives were asked about their satisfaction with their accounts as well as with the Cooperatives generally (Table 23). **It appears that the treatment and the comparison groups have similar levels of satisfaction with their savings accounts, with the likelihood that they would continue to be a member of the Cooperative in the future and the likelihood that they would recommend the Cooperatives to friends and family.**

Table 23: Client Satisfaction—Endline Treatment vs. Comparison

	Treatment	Comparison
Highly satisfied with their savings account	28%	24%
Somewhat satisfied with their savings account	63%	59%
Very likely to continue with the Cooperative in the future	56%	58%
Somewhat likely to continue with the Cooperative in the future	35%	40%
Would recommend the Cooperative to friends and family	91%	91%

*Significant difference between treatment and comparison outcomes: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$*

When youth were asked during focus-group discussions about their satisfaction, they felt that the "Cooperatives shouldn't just see this as a business. It's not only to help youth, but entire families." As has been mentioned throughout this report, youth wanted more marketing, they wanted more sophisticated text messages that encouraged them to save and make better financial decisions and they wanted more interaction with the Cooperatives (such as through Facebook). They wished they could access their account in more locations and wished that they had ways to make deposits without traveling to the Cooperative. Also, they disliked the long wait times when visiting the Cooperative.

Financial Perceptions

Youth were asked about their satisfaction with their personal and family financial situations as well as preoccupation with being able to cover various expenses. From the data below in Table 24, the treatment group at baseline seemed more financially satisfied and less financially worried compared to the comparison group. At baseline, the treatment group reported being less motivated to save in the coming month, compared to the comparison group; however, **at endline, the treatment group was significantly more motivated to save compared to the treatment group at baseline, and compared to the comparison group at endline.**

Both the treatment and the comparison groups at the endline appeared less worried about their ability to cover school and household expenses, **but the treatment group was significantly less worried compared to the comparison group at endline.** While not assessed at baseline, the treatment group youth at endline also reported feeling less financial responsibility and reported that their families worry less often about money than families in the comparison group.

Table 24: Financial Perceptions—Baseline vs. Endline and Treatment vs. Comparison

Indicators	Baseline		Endline	
	Treatment n=138	Comparison n=138	Treatment N=134	Comparison N=136
Feel satisfied with their personal financial situation	63.8%	54.4%	70.2%*	56.6%
Feel satisfied with their family's financial situation	67.9%	58.7%	77.6%	68.4%

Indicators	Baseline		Endline	
	Treatment n=138	Comparison n=138	Treatment N=134	Comparison N=136
Feel very motivated to save in the coming month	29.0%	47.1%^	44.8% *, ^^	34.6%
Worried last week about ability to pay school expenses	29.0%^^^	38.4%^^^	11.2%	19.9%***
Worried last week about ability to pay household expenses	40.6%^^	43.5%^^	12.7%	25%***
Feel they have a lot of financial responsibility	—	—	16.4%	29.4%*
Feel they have a lot of financial pressure	—	—	14.2%	17.7%
Feel their families worry more about money than other families	—	—	4.5%	19.1%***

*Significant difference between treatment and comparison outcomes: * p≤0.05, **p≤0.01, ***p≤0.001*
Significant difference between baseline and endline outcomes: ^ p≤0.05, ^^ p≤0.01, ^^^ p≤0.001

What are the relationships between having savings, savings accounts and financial attitudes?

As assessed earlier in the paper in the relationship between having a savings account and knowledge change, similar questions were asked about the relationship between motivation to save, satisfaction with savings amounts and whether a young person reported saving (in general), saving with a Cooperative or saving with either San José or Cooprogreso (Table 25).

It appears that youth who reported being very motivated to save were more likely to report having savings anywhere. Almost statistically significant (p=0.10), youth who were motivated to save were also likely to indicate they saved at a Cooperative in general, but there was no statistical difference among levels of motivation and whether they saved specifically at Cooperatives San José or Cooprogreso.

Also, youth who reported being very satisfied with the amount they had saved were more likely to report having savings and indicate they saved at a Cooperative, but there was no statistical association between satisfaction levels and actually having a savings account with Cooperatives San José or Cooprogreso.

Table 25: Relationship Between Motivation to Save, Satisfaction with Amount Saved and Savings Behaviors

	Motivation to Save in Next Month			Satisfied with Amount Saved		
	Very	Somewhat	Not	Very	Somewhat	Not
Have savings (anywhere)	85.1%***	54.2%	37.5%	85.7%***	81.9%	29.3%
Indicate they save at a Cooperative	24.3%	14.2%	12.5%	11.9%*	24.3%	11%
Have an account with San José or Cooprogreso	34.1%	30.6%	0%	20%	34.5%	36%

*Statistical associations between the variables: * p≤0.05, **p≤0.01, ***p≤0.001*

Qualitatively, youth reported feeling more empowered as well. Cooperative staff felt that "the project motivated them to be an individual." Parents felt their children were more motivated to save, yet sometimes they had to remind them to save. One mother shared that her daughter was quite motivated to save as well as share what she had learned from her interaction with the Cooperatives, "My daughter invited her friends to the house and told them that it was important to save to be able to move forward, and that it was important for them to support each other."

When youth reported having savings in general (Table 26), **they were almost five times more likely to report that they had sufficient money to cover a complete week of normal expenses and to indicate that they saved at a Cooperative.** Having savings in general did not appear to have a strong association with whether a young person felt satisfied with their personal financial situation or whether they worried about being able to cover school fees.

Table 26: Relationships between Having Savings (anywhere), Financial Worries, Financial Situations and Where a Young Person Saves

	Have Savings (anywhere)	
	Yes	No
Percentage who have sufficient money to cover a complete week of normal expenses	50.6***	16.2
Percentage who indicate they save at a Cooperative	27.5%***	0%
Percentage who worried last week about ability to pay for school expenses	15.7%	15.2%
Percentage who are satisfied with personal financial situation	65.7%	58.7%

*Statistical associations between the variables: * p≤0.05, **p≤0.01, ***p≤0.001*

Situations and Games

Hyperbolic discounting is the tendency for people to choose smaller amounts of money sooner compared to larger rewards later. Youth were asked whether they wanted $5 today or $10 in two weeks. This was a simple test to determine youth's tendencies for shorter- versus longer-term gains.

At baseline (Table 27), about one-half of both the treatment and comparison groups would choose to receive $5.00 immediately versus waiting for $10 in two weeks. At endline, both groups had a decrease in the percentage reporting wanting $5 immediately; suggesting that youth valued a larger, longer-term gain. The treatment group was almost statistically significantly more likely to prefer the future larger gains, compared to the comparison group (p=0.07); compared to baseline, the treatment group at endline was statistically more likely to prefer the larger, longer-term gain. This suggests that the financial education likely played a role in helping youth think more about the value of having savings and accumulating larger sums of money over time.

While low for both comparison and treatment groups, there were no differences between the groups at baseline or endline in terms of their participation in groups, except at endline, the comparison group was more likely to report belonging to a savings group. Savings groups, however, were not a focus of this research in Ecuador, unlike Mali where savings groups were the key savings mechanism.

The treatment group was more likely at baseline to report having participated in a program that shared information on how to save money, but there was no difference at the endline between treatment and comparison groups. The treatment group youth were also more likely to report that the financial-education sessions were somewhat valuable in their decision to open an account, compared to the comparison group who tended to say the education was "very valuable." It is unclear what the comparison group was defining as education sessions, however. This suggests that the value of the education for helping youth decide on opening an account was not likely the most important variable. Given the information on parental involvement, it is likely that parents and other people played a much stronger role.

During the qualitative interviews, almost all of those interviewed said they liked the education, but wanted a field trip to visit the Cooperative as well as have someone explain how to open the account. They would have liked to have seen advertisements on the television, to have engaged with the Cooperatives on social media such as Facebook, received more fliers and for some of the sessions to be longer. They also would have

appreciated learning from other youth who had already opened an account and shared their experiences with them. In addition, some of the older youth felt that some of the games were infantile and would have liked more sophisticated sessions of more in-depth content. They would have also liked to have had some sort of activity that continued the momentum of their group, "I would have liked to have had a savings club." One of the parents also shared that the benefit of the financial education sessions was that their "children captured the information better in the education sessions [compared to] home."

Cooperative staff also valued the financial education. "I like the financial education. You get to share with youth, you become their friend. They see that they can trust you. You get to motivate the youth and open doors for them." "I like that we can share with the youth, particularly during the sessions. I have confidence and respect with them."

Table 27: Situations and Games

Indicator	Baseline		Endline	
	Treatment	Comparison	Treatment	Comparison
Would choose to receive $5 immediately versus $10 in 2 weeks	54%^^	54%	38%	46%
Do you belong to any of the following organizations?				
Savings group	9%	5%	7%	14%*
Youth group	17%	17%	20%	12%
Sports group	25%	18%	6%	6%
Study group	18%	28%	6%	3%
Dancing/music/theatre group	4%	2%	1%	1%
Church group	12%	8%	2%	4%
No group	41%	46%	57%	68%
Said education sessions were very important in decision to open a savings account	—	—	9%	14.7%
Said education sessions were somewhat important in decision to open a savings account	—	—	9%**	1.5%

*Significant difference between treatment and comparison outcomes: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$*
Significant difference between baseline and endline outcomes: ^ $p \leq 0.05$, ^^ $p \leq 0.01$, ^^^ $p \leq 0.001$

Sharing Knowledge

Since the financial education strongly encourages sharing information learned through the sessions, measurements on knowledge-sharing were included. At baseline, both the treatment and comparison groups tended to more often report they were receiving or giving advice or talking to parents about money compared to the endline. The treatment group was significantly more likely to report receiving advice and giving advice on how to save at baseline, compared to the endline. At endline, the comparison and treatment groups were fairly similar. They tended to talk to others more about their future goals and less about planning for difficult times or decisions about borrowing.

Table 28: Sharing Knowledge

Indicator	Baseline		Endline	
	Treatment n=138	Comparison n=138	Treatment	Comparison
Have received advice on how to save or manage money in the past 6 months	57%^^^	46%	31%	40%
Have given advice on ways they can save and manage their money in the past 6 months	33%^	22%	21%	23%
Have talked to family members about the following in the past 6 months:				
Future goals	80%	85%	89%^	90%
Planning for difficult times	12%	16%	20%^	34%^^^
Making good decisions about borrowing	15%	13%	16%	7%
When you should borrow and when you should use savings	19%^	19%^^^	10%	4%

*Significant difference between treatment and comparison outcomes: * p≤0.05, **p≤0.01, ***p≤0.001*
Significant difference between baseline and endline outcomes: ^ p≤0.05, ^^ p≤0.01, ^^^ p≤0.001

Qualitative

Thirty youth were randomly selected to participate in the qualitative impact stories. These impact stories were designed to provide a more comprehensive view of the lives of youth in Ecuador. Youth answered questions regarding their definitions of the good life and good health, food security, intergenerational changes, satisfaction with their savings and finances in general, their dreams for their future, and their attitudes regarding their ability to achieve their goals. A few impact stories, combined with their quantitative data, are provided in the appendix.

The "Good Life"

As with impact stories collected by Freedom from Hunger with adults, youth tend to describe the good life as family, health, food, and economic opportunities. One young person said, "The good life can be explained as to be well, in all senses, family, health, economic well-being, friends, money." Youth tend to be quite optimistic about their ability to achieve the good life and most felt that the pathway to achieving it was to maintain good communication with their parents, have a positive attitude and confidence and have a job and health. When asked what they wanted to be when they grew up, most mentioned wanting to be a "professional." And this dream is also how they see themselves as having a different future from that of their parents. When asked whether they felt they would be better off, the same as, or worse off than their parents, most said better off because they would become "professionals"—unlike their parents.

When asked where they hoped they would be in five years, most felt like they would be better off and imagined themselves either working or completing their studies. "In five years, I imagine myself as an owner of a business and achieving all that I want in life."

Youth were also asked to describe their greatest personal strength and weakness. Youth frequently listed their perseverance, persistence, sincerity, honesty, diligence as strengths. As weaknesses, some youth listed their poverty, and others mentioned laziness, fear, pride, having a few vices, and not being punctual.

Generational Differences

Youth felt that their generation was better off than their parent's generation due to education, technology, and that there were many more opportunities for them compared to their parent's day. For youth who felt they were not better off, it was due to the perception that their peers seemed to lacked respect for their elders and did not want to study and because of the existence of corruption. Most youth were very optimistic about their future children's generation and felt that their children will be better off because the world will continue developing in a positive direction and this brings development, more education, and by the mere fact that they plan on working hard for their children.

Money

Most youth said their mother was the most influential person in their lives regarding the way they think about their money. When asked whether they felt a lot of financial pressure at this point in their lives, their answers depended on whether their household depended on them for their financial contribution to the household income or whether their parents paid for most of their expenses. One young person shared, "I feel a lot of pressure because we have learned the importance of money." Another shared, "I save more because of the pressure from my mother, I worry more about saving, I've saved more because I've had a job." It appears, therefore, that some "stress" can be created, either through parents or through other external factors, such as financial education, when youth learn the value of money, or are encouraged to think more about how they want to earn, spend and save.

When asked how they feel when you say the word money, many say "happy" because of their potential purchasing power. Some, however, then say they feel sad because they do not have the money they need to buy things they want. "I feel worry (when I hear the word money) because when you say money, it means you need to pay for something. You imagine many things. You have hope when you can buy things. But right now, it's not easy to buy anything."

Many of the youth when asked about their satisfaction with their savings were either somewhat satisfied or happy. Satisfaction seemed equated with having enough money to cover their expenses. Dissatisfaction related to not having enough money to buy things they wanted. Some felt that if they spent less, they might have more savings. Others felt as though they did not receive enough money to save much.

Saving with the Cooperatives

Most youth who were saving with Cooperative San José or Cooprogreso indicated they were very likely to continue with the Cooperative in the future, noting their satisfaction with their account, or the promise for other types of financial services in the future such as having access to a loan. They also mentioned that the Cooperatives taught them how to save and they felt the Cooperatives were serious and had good reputations. They would have liked a field trip to the Cooperative as a way to help them feel more confident in interacting with the Cooperative, "if they can take us to the Cooperative and explain to us how to open the account…"

However, they would like to have more locations through which to access their accounts, spend less time in waiting, and improved customer service when they go to the Cooperative. This echoes some of the findings from the qualitative study that utilized focus-group discussions with youth who had accounts.

Analysis

The *AIM Youth* project in Ecuador set out to design and encourage use of individual savings accounts and financial education for youth ages 13–24. A multi-method research agenda was implemented to triangulate findings in order to understand the benefits to the youth who participated in these services. Summarized answers to the original research questions are outlined below. The answer to question number 5, which asked "To what degree do youth have increased savings," is included in the answer to question number 1 as to whether there was an improvement in socio-financial capability since the amount of savings a young person has was considered a key indicator to increased socio-financial capability. This section will therefore examine four of the original five research questions set out in the introduction.

1. **To what degree does the combination of financial services and financial education influence intermediate and long-term outcomes for youth (as described in the benefits model)?**

Starting with this longer-term impact goal and working backwards, what does the evidence suggest?

Food Security and Poverty

While *AIM Youth* did not hypothesize that youth would experience improved food security in a year's time due to having a savings account and participating in financial education, food security and poverty were tracked primarily to understand the target population better as well as the potential for measuring food security and poverty among youth.

From the baseline to the endline, there was a measureable improvement in food security and poverty reduction among this population, as measured by the PPI and the food-security survey and it was experienced in both the treatment and comparison group suggesting that a larger macroeconomic-level shift occurred. Economic data from the International Monetary Fund does suggest that between the time when the baseline was conducted in 2011 and the endline in 2013, a period of rapid economic growth occurred.[20] As was mentioned in the introduction, in 2009, Ecuador also was suffering from a financial crisis and reduced oil revenues, which likely contributed to the reported higher levels of food insecurity and poverty at baseline, and improvements by endline. Or, as youth became more knowledgeable and comfortable with the questions, they were able to more accurately respond to their perceptions of their own food security and the various assets their household had. It is promising to see that this improvement also corresponded with them receiving more money, spending more money and reporting greater amounts in savings. This is what one might predict would occur as families experience greater levels of well-being.

As was mentioned earlier, the food-security survey and the PPI survey are both actually designed to be completed by a head of household. However, the measures were included to see whether meaningful data could be collected from youth on their own perception of food insecurity and hunger as well as their knowledge of certain characteristics and assets owned by their household that are correlated with household poverty. While adult-level data is not available to make comparisons with the youth-reported data from this study, data from a 2009 World Bank study suggested that approximately 58 percent of households in Ecuador experienced food insecurity.[21] In a study along the border of Texas in the United States, researchers found that youth reported food insecurity approximately 20 percentage points less than their parents, which demonstrates mothers trying to buffer their children from food insecurity.[22] Youth in this study were asked to report on their own experiences of food insecurity and not for the household. Therefore, the 23 percent of youth at baseline who reported food insecurity demonstrates their own experience with food insecurity and using the national-level proxy of 58 percent of adults reporting household food insecurity in 2009, this reflects

a similar trend found in the Texas research. This adds credibility to these findings that the level of food security reflected here is likely an accurate perception of the young person's experience with food insecurity. Given poverty levels and food security improve at endline, this also suggests that the improvements in the economy between 2009 and 2013 are reflected in the youth-reported data on food security and the PPI.

Economic and Civic Engagement

While the program did not aim to improve economic and civic engagement in the short run, indicators regarding whether youth were working, looking for work, their earnings and their satisfaction with their work were assessed. The data suggests that only about 30 percent of this population (all age groups combined) was working and if they did work, they were likely to work regularly. This is lower than the 43 percent average reported for 2009 among all youth between ages 15 and 24 in Ecuador.[23] This may be because most of the youth from this study appeared to still be in school either in middle or high school or at university level. They see their completion of education as key to achieving their goals of becoming "professionals" and creating a better life for themselves and their future children. As the mother stated above, she was impressed with her own daughter's desire to have a savings account so that she could save for her own education. With relatively few youth working, much of the money they "earn" is money they receive from parents to cover expenses, which tends to be for food and beverages for themselves, for transportation and for entertainment. This seems to correspond with the needs youth have for getting to and from school as well as for meals while away from the home.

Socio-Financial Capability

Socio-financial capability was assessed using savings amounts, the existence of a savings goal and having emergency savings. The treatment and the comparison group reported similarly about having savings goals and there were actually fewer reporting to have a savings goal at the endline compared to the baseline. If the results from this study are representative of the broader community of youth that could have opened a savings account, approximately 30 percent of the potential market has opened a savings account. This is slightly higher than the 26 percent of all youth between the ages of 15 and 24 who have an account with a formal institution and the 13 percent of youth who save at a formal financial institution that was reported in the Global Findex study for Ecuador.[24] While the comparison group also accessed the savings accounts through the Cooperatives, the treatment group reported higher amounts of total savings and emergency savings and reported saving more proportionally to the amount they received than the comparison group. These differences between the treatment and comparison group did not exist at baseline, which suggests a promising trend for youth who participated in both the financial education and the savings accounts. This also suggests the added value the financial education had in encouraging prioritization of savings that the comparison group youth did not have access to, even if they did take the same savings accounts. On the flip side, it could also simply be a factor of the treatment group having a longer period of "exposure" to their savings accounts than did the comparison group. In either case, if these positive behaviors are indicative of future habits, these are promising results. The reduction in those reporting having a savings goal does suggest, however, that the value of having a savings goal needs to be re-emphasized with the youth if it is believed that having a concrete goal will actually result in improved savings. Perhaps a greater emphasis in the education on the value of saving for "the unknown" is just as powerful as saving for a new cell phone, computer or their education.

Ability to deal with life-cycle events

Ability to deal with life-cycle events, or building "resilience" among youth populations included the measurement of confidence in their ability to save for future events, having a week's worth of expenses saved up and their motivation and confidence in their ability to save for future events. Youth with savings appeared to result in greater motivation (or motivation to save in the next month was related to them being a young

person who had savings) and greater levels of satisfaction with their savings amounts. Youth in the treatment group, who have or didn't have a savings account, were also more likely than the comparison group to feel satisfied with their savings amounts, were more likely to feel motivated to save and less likely to report feeling worried about their ability to cover educational or household expenses. This suggests that some important improvements were achieved in the treatment group in terms of their perceptions and feelings about their financial situation.

Self confidence and empowerment and an improved sense of control regarding personal financial future

Self-confidence and empowerment were primarily measured qualitatively. The impact story interviews painted a picture of youth who were generally optimistic about their future, who felt they had some important strengths that would lead to them meeting their life goals as well as an enabling environment that would provide them better opportunities than their parents had, such as advancements in technology and better education. Towards the end of *AIM Youth* in Ecuador, a young girl named Carla, age 16, shared with Freedom from Hunger and the Cooperative San José that this program helped her realize "that I needed to own my own financial future. I didn't have to wait for my parents to do it for me. There were things I could do now and decisions I could make on my own."

Social Capital

When the theory of change was created for *AIM Youth*, the financial products had not yet been developed and there was a general assumption that the products Freedom from Hunger's partners would develop would likely be group-based financial products. However, the Cooperatives in Ecuador chose to develop individual savings accounts. Anticipated measures of working as a team, being active in a group therefore are less useful here given the design of the savings products. However, social capital can also be measured by the relationship the youth have with their families. There did not appear to be strong improvements in questions related to "sharing of information with their families." But both the quantitative and the qualitative data point to the importance of the role that parents play in both encouraging their children and assisting them with gaining access to and using a savings account. Most of the youth reported that their mothers (or their parents in general) were the most influential people in their lives when it came to how they thought about money, their parents were the most influential in encouraging them to open a savings account. Youth generally believe their parents are also good money managers. The quantitative data also shows that youth whose parents are also already members of the Cooperatives are most likely to have a savings account. This suggests 1) parents are a lever of change for more youth engaging with financial institutions and 2) parents could also be an interesting mechanism for building the financial literacy of their children by reinforcing key concepts through their daily interactions. In a Kenyan study highlighted in FSD Insights Bulletin,[25] study respondents highlighted that they learned by watching others and imitated positive behaviors and tried to avoid destructive ones. They also reported seeking advice from close relatives, such as parents, when needing to make financial decisions.

If youth in Ecuador already report learning the most from their mothers or parents, could financial education be delivered in a way that intentionally engages the young people and their parents together in a conversation about money? Could the parents be given tools they can use with their own children to help encourage positive financial behaviors?

Knowledge and attitudes in money management

It appears that the education was successful in knowledge change for some indicators and less so in others. The data highlighted here addressed several questions about how knowledge change likely did or did not occur. The results suggest that financial education alone was likely most successful in changing attitudes, motivations and

perceptions about one's financial situation and that in combination with actually interacting with the savings account, knowledge regarding how to manage their savings account was improved. Results from other financial education and financial services evaluations with youth also have shown that financial education provided to youth resulted in improved savings as well as some improvements in financial knowledge.[26]

What this experience does highlight is the changing perception about what "financial education" actually is. Is it only the education sessions as delivered in a formal setting, or is it indeed the collection of "touch points" that engage the young person with information and experiences that ultimately form the habits and behaviors that are predicted to lead to better financial management? For example, while youth appreciated the education sessions that were dialogue-based and designed to also teach through "playing," youth wanted field trips to the Cooperatives so that they could experience firsthand or practice going through the motions of opening an account and better understanding the process. Youth from the comparison group who did not participate in the financial education but were interviewed repeatedly during the financial diaries indicated that the surveyor was influential in their decision to open a savings account. While it is conceivable that a surveyor might have an informal discussion about what she knows about the financial services as well as could provide the young person important financial messages, this suggests that the biweekly touch points of the evaluation were also likely effective in prompting youth to think about their own financial behaviors.

2. How do these outcomes differ in regards to age and gender?

Age

Older youth reported receiving more money and were more likely to work compared to younger youth. This was a similar trend with their savings behaviors. Older youth were more likely to indicate they were saving at one of the two Cooperatives and to report higher amounts of total savings, but younger youth were just as likely to indicate they had savings anywhere and to indicate they were saving for emergencies. While it would have been encouraging to see younger youth equally reporting having a savings account, this may be a factor of the important role that parents have to play to help facilitate their active engagement with an account if they are under the age of 18.

Gender

The differences between genders were not as strong as the differences between older versus younger youth. While boys tended to report working more than girls and to report having more savings than girls at baseline, at endline, boys were no longer more likely to report having money saved compared to girls and the amounts being saved were very similar. There were no differences between genders as to who opened a savings account with either Cooperative. This suggests that the Cooperatives were successful in meeting the needs of girls and boys alike and improved the inclusion of girls into financial services. The actual data from the Cooperatives also suggest a higher percentage of the accounts opened by youth were held by girls (almost 60 percent of opened accounts at Cooperative San José were girls).

3. To what degree are youth (and their family) satisfied with the financial services?

The results from the quantitative survey suggest that more youth are "somewhat" satisfied with the Cooperatives (versus very satisfied). The qualitative data suggests that while they appreciate the savings accounts and enjoyed the financial education because it was so different from the formal education they receive in the schools, there are certain savings product attributes that would make the product more attractive, such more access points to make deposits and withdrawals, less lengthy wait times at the Cooperatives, and more interest paid by the products. Parents' level of satisfaction is also attached to the

degree to which they feel they are helping their child access the account. For example, some parents voiced their own frustration with not having enough time to help their child open an account, or to give them money to make a deposit.

4. What are the conditions that help or challenge youth's access to financial services?

This study suggests that parents are key for both the marketing of the products and facilitating access to and assistance in management of the savings accounts. It appears from this study, that the early adopters are youth whose parents are already members, thus they are already "banked" adults who have experience with financial services. If having a parent who is already involved is an important factor for youth to also become members, it will be important to decide what additional marketing or product design will be necessary to reach youth whose parents are not already members of the Cooperatives—if indeed this is a priority.

Youth also reported not having an account because of not having money to save or other "knowledge" constraints such as not knowing whether they qualified to have an account or how to open an account. These are similar reasons why youth worldwide report not having savings accounts.[27]

Finally, youth mentioned saving fairly infrequently because of the travel time and costs for making deposits. This resulted in them saving up greater amounts of money at home prior to making larger deposits. A study in Kenya also documented this behavior among adults as a reason for them making infrequent savings deposits.[28] Their research also suggested that it was possible that individuals who opened an account but did not save in the account still benefited financially as they accumulated savings earmarked for the account but that were kept at home.

Conclusion

The research with Cooperatives Cooprogreso and San José suggests that they have at a minimum initiated behaviors that could be indicative of future financial habits and success for youth in their country. Youth are saving more money, they are making use of savings accounts, and they are optimistic about their future.

This research suggests that this youth population receives fairly consistent amounts of money from parents and income from economic activities, yet still face the challenge of discipline and commitment to grow their savings in the face of competing financial "pressures," even if these pressures are their current expenses for entertainment or food and transportation for school. How do youth create the discipline (and therefore the habit) to save, in light of the small amounts of money they could save?

In Freedom from Hunger's research in Mali,[29] youth participated in savings groups, which by their very nature, are "commitment savings" devices because of the group commitment to save a certain amount at each meeting, even if very small. Discipline was therefore built into their savings product. With individual savings accounts, youth must build their own discipline to save money as well as overcome some product features or experiences with the financial institution that could be improved, such as facilitating their small savings in an easier way that does not require them to travel to make deposits at the Cooperative, using technology (which some are already doing), increasing the touch points through which youth can engage with the financial institution (some youth in the qualitative actually desired engaging with Cooperative in social media, such as Facebook), and by offering commitment savings products for youth (some Cooperatives are already doing this as well).

This learning experience along with the support of other industry results with youth (as well as with adults) suggests that the initial theory of change designed for offering integrated financial services and financial education needs to be revised. Some research[30] highlights the changing perception about how we define financial education as well as how it expands the boundaries for what types of information and (when it's delivered and the frequency) are necessary to help people make positive financial decisions and build financial capability. It is not just the delivery of the financial education sessions and simply giving youth access to savings accounts. It implies more "experiences" should be designed so youth can practice and engage with the services more deeply. Product marketing and sharing of "best practices" in financial management and savings need to be continual and should use media that youth find most acceptable such as social media. Engaging parents is an opportunity not just to build the financial capability of their children, but of the entire household. Finally, providing commitment savings products, in addition or in lieu of an individual savings account, would formalize creating creatures of habit at a younger age.

In conclusion, Cooperatives San José and Cooprogreso stand as two positive examples for others to follow in their determination to demonstrate how to reach youth as well as begin to build a stronger generation of financial clients.

Appendix

Original Financial Education Sessions for Ecuador

Saving, it's a family affair! An introduction to youth savings	
Number and Title	**Objectives** ***By the end of this session the participant will have...***
My family, our savings, our responsibilities	Identified 1 reason youth saving is valuable Listed 2 ways to support youth savings goals
My future	Established a vision for the future Chosen 2 long-term goals
My financial goals	Selected a short-term financial goal Established a timeline and amount for selected goal
Savings, why is it important?	Analyzed the importance of savings Designed a list of savings benefits
Spending—what are my priorities?	Distinguished between needs and desires Prioritized spending needs
Making a savings plan	Developed a savings plan
Savings options, what are they?	Compared and prioritized savings options
Managing my savings account	Identified savings book terminology Identified core savings account concepts
How to open a savings account	Distinguished the common steps to opening a savings account
My money, my rights	Identified rights and responsibilities associated with holding a savings account
Should I take a loan?	Compared the advantages and disadvantages of taking a loan.

Simplified Logical Framework

Simplified Evaluation Logical Framework for *AIM Youth* Research

Benefits Model Components	Research Questions	Indicators	Methods
Impact: Overarching question—To what degree does the combination of financial services and financial education influence long-term outcomes for youth?			
Food Security and Poverty	To what degree does food security and poverty improve as a result of the integrated services for youth?	Food-security score PPI (below national poverty line)	Baseline, Midline, Endline
	To what degree does food security and poverty fluctuate over time for youths' households?	Food-security score PPI (below national poverty line)	Financial Diaries

Benefits Model Components	Research Questions	Indicators	Methods
	What are youth's perceived reasons for food insecurity in their own household or community?	Description of reasons for food security	Impact Stiories
Economic and Civic Engagement	To what degree are youth working or looking for work?	Looked for work in last 4 months or last month	▪ Baseline, Midline, Endline ▪ Financial Diaries
	To what degree do earnings improve over time?	Amount of money earned in a paying economic activity	▪ Baseline, Midline, Endline ▪ Financial Diaries
	How satisfied are youth with their work?	Work is perceived to be safe	▪ Baseline, Midline, Endline ▪ Financial Diaries
		They are very, somewhat or not satisfied with their work	▪ Baseline, Midline, Endline ▪ Financial Diaries
Outcomes: Overarching question—To what degree does the combination of financial services and financial education influence short-term outcomes for youth?			
Socio-Financial Capability	To what degree do youth report saving money over time?	Saving money (anywhere)	▪ Baseline, Midline, Endline ▪ Financial Diaries ▪ Impact Stories ▪ Qualitative Interviews/FGDs
		Saving money at a Cooperative	▪ Baseline, Midline, Endline ▪ Financial Diaries ▪ Impact Stories ▪ Qualitative Interviews/FGDs
		Has a savings account with the Cooperative (San José/Cooprogreso)	▪ Baseline, Midline, Endline ▪ Financial Diaries ▪ Impact Stories ▪ Qualitative Interviews/FGDs
		Has savings at home	▪ Baseline, Midline, Endline ▪ Financial Diaries ▪ Impact Stories ▪ Qualitative Interviews/FGDs
	To what degree do savings amounts improve over time?	Amount of money saved in last 7 days	▪ Baseline, Midline, Endline ▪ Financial Diaries ▪ Impact Stories ▪ Qualitative Interviews/FGDs

Benefits Model Components	Research Questions	Indicators	Methods
		Amount of money saved in total	▪ Baseline, Midline, Endline ▪ Financial Diaries ▪ Impact Stories ▪ Qualitative Interviews/FGDs
	To what degree do youth report having a savings goal?	Has a savings goal	▪ Baseline, Midline, Endline ▪ Financial Diaries ▪ Impact Stories ▪ Qualitative Interviews/FGDs
		Description of savings goa	▪ Baseline, Midline, Endline ▪ Financial Diaries ▪ Impact Stories ▪ Qualitative Interviews/FGDs
	To what degree do you save for emergencies and how much?	Reported having money set aside for emergencies	▪ Baseline, Midline, Endline ▪ Financial Diaries
		Amount reported saved for emergencies	▪ Baseline, Midline, Endline ▪ Financial Diaries
Better Attitudes and Knowledge in Money Management	To what degree do youth have improved knowledge regarding the benefits of a savings account, how to open and manage a savings account, and the role parents play in opening and managing savings accounts?	Knows 2 benefits of having a savings account	▪ Baseline, Midline, Endline ▪ Financial Diaries
		Knows 5 items needed to open a savings accounts	▪ Baseline, Midline, Endline ▪ Financial Diaries
		If <18 years old, knows parent is needed to open an account and make withdrawal	▪ Baseline, Midline, Endline ▪ Financial Diaries
		Knows parent is not needed to make a deposit (< or > 18 years)	▪ Baseline, Midline, Endline ▪ Financial Diaries
		Knows parent is not needed to open or withdraw $ if > 18 years	▪ Baseline, Midline, Endline ▪ Financial Diaries
	To what degree are youth satisfied with their savings accounts and with the Cooperatives?	Are satisfied with savings account	Endline

Benefits Model Components	Research Questions	Indicators	Methods
		Are satisfied with Cooperative (in general)	Endline
		Would recommend Cooperative to friends and family	Endline
		Likely to continue with Cooperative in the future	Endline
	To what degree are youth satisfied with their personal and family's financial situation	Are satisfied with their personal financial situation	▪ Baseline, Midline, Endline ▪ Financial Diaries
		Are satisfied with their family's financial situation	▪ Baseline, Midline, Endline ▪ Financial Diaries
	To what degree are youth motivated to save in the future?	Are motivated to save in next month	▪ Baseline, Midline, Endline ▪ Financial Diaries
	To what degree are youth worried about paying for school fees or household expenses?	Was worried about ability to pay school fees in last week	▪ Baseline, Midline, Endline ▪ Financial Diarie
		Was worried about ability to pay household expenses in last week	▪ Baseline, Midline, Endline ▪ Financial Diarie
	To what degree do youth feel a lot of financial pressure and responsibility?	Feels a lot of financial pressure	▪ Endline ▪ Impact Stories
		Feels a lot of financial responsibility	▪ Endline ▪ Impact Stories
	To what degree do youth feel that their family worries more about money than other families?	Feels he./she worries more about money compared to other familie	▪ Endline ▪ Impact Stories
Improved Social Capital	To what degree do parents and other family members play in the decision to open up a savings account?	Indicated any of the following people played a role in the decision to open an account: mother, father, siblings, Cooperative staff, surveyors, teachers, other family, friends	Endline
	To what degree do others play in the decision to open up a savings account?	Indicated any of the following people played a role in the decision to open an account: mother, father, siblings, Cooperative staff, surveyors, teachers, other family, friends	Endline
	To what degree do youth give advice to others or receive advice about money management?	Have received advice on how to save or management money in last 6 months	Baseline, Endline
		Have given advice on ways to save and management money in past 6 months	Baseline, Endline

Benefits Model Components	Research Questions	Indicators	Methods
		Shared advice that parents have given	Impact Stories
	To what degree do youth talk to their family about money management?	Have talked to family members about their future goals	Baseline, Endline
		Have talked to family members about planning for difficult times	Baseline, Endline
		Have talked to family members about making good decisions about borrowing	Baseline, Endline
		Have talked to family members about when you should borrow and when you should save	Baseline, Endline
Ability to Deal With Life-cycle Events	To what degree do youth have a week's worth of expenses saved up	Have a weeks' worth of expenses saved up	▪ Baseline, Midline, Endline ▪ Financial Diaries
	To what degree do youth have enough money saved to cover a significant event, such as a wedding	Have enough money saved to cover a major event	▪ Baseline, Midline, Endline ▪ Financial Diaries
	To what degree do youth feel confident about their ability to save for future events?	Feel confident about ability to save for future events	▪ Baseline, Midline, Endline ▪ Financial Diaries
Self-Confidence and Empowerment and an Improved Sense of Control Regarding Personal Financial Future	To what degree do youth feel more self confidence and empowerment regarding their personal financial future?	Feel optimistic about the future	▪ Impact Stories, ▪ Qualitative Interviews/Focus-Group Discussions
		Feel he/she has strengths to achieve goals	▪ Impact Stories, ▪ Qualitative Interviews/Focus-Group Discussions
		Can break long-term goals up into short-term goals	

LQAS Table

LQAS Table: Decision Rules for Sample Sizes of 12–30 and Coverage Targets/Average of 10%–95%

Sample Size*	Average Coverage (Baselines) /Annual Coverage Target (Monitoring and Evaluation)																	
	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
12	N/A	N/A	1	1	2	2	3	4	5	5	6	7	7	8	8	9	10	11
13	N/A	N/A	1	1	2	3	3	4	5	6	6	7	8	8	9	10	11	11
14	N/A	N/A	1	1	2	3	4	4	5	6	7	8	8	9	10	11	11	12
15	N/A	N/A	1	2	2	3	4	5	6	6	7	8	9	10	10	11	12	13
16	N/A	N/A	1	2	2	3	4	5	6	7	8	9	9	10	11	12	13	14
17	N/A	N/A	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15
18	N/A	N/A	1	2	2	3	5	6	7	8	9	10	11	11	12	13	14	16
19	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20	N/A	N/A	1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17
21	N/A	N/A	1	2	3	4	5	6	8	9	10	11	12	13	14	16	17	18
22	N/A	N/A	1	2	3	4	5	7	8	9	10	12	13	14	15	16	18	19
23	N/A	N/A	1	2	3	4	6	7	8	10	11	12	13	14	16	17	18	20
24	N/A	N/A	1	2	3	4	6	7	9	10	11	13	14	15	16	18	19	21
25	N/A	1	2	2	4	5	6	8	9	10	12	13	14	16	17	18	20	21
26	N/A	1	2	3	4	5	6	8	9	11	12	14	15	16	18	19	21	22
27	N/A	1	2	3	4	5	7	8	10	11	13	14	15	17	18	20	21	23
28	N/A	1	2	3	4	5	7	8	10	12	13	15	16	18	19	21	22	24
29	N/A	1	2	3	4	5	7	9	10	12	13	15	17	18	20	21	23	25
30	N/A	1	2	3	4	5	7	9	11	12	14	16	17	19	20	22	24	26

N/A: not applicable, meaning LQAS cannot be used in this assessment because the coverage is either too low or too high to assess an SA. This table assumes the lower threshold is 30 percentage points below the upper threshold.

: shaded cells indicate where alpha or beta errors are 10%.

: shaded cells indicate where alpha or beta errors are 15%.

Impact Stories

Juan[31]

Juan is a 15-year-old boy from Montalvo, Ecuador. He participated in Cooperative San José's financial education program and has a savings account with the Cooperative as well. One of his parents is a member of the Cooperative and has been a member for over five years. He said his parents already had an account when he received his and that they helped him open it.

When assessing his poverty level, he was consistently no more than 4.8 percent likely to fall under the national poverty line during the five interviews of the financial diaries, suggesting that his family is relatively well-off compared to his entire cohort of peers that had an average poverty likelihood of 24 percent. At no point during the interviews did he report any food insecurity. There are eight people in his household and only two of them, likely his parents, work to support them.

Juan's definition of the good life is to have money, good health, and the well-being of his family. When he was asked to share what he felt necessary to achieving the good life, he said, "To have an acceptable financial

situation, to have a house, a kitchen, and a savings account." He wants to be a systems engineer when he grows up because he likes technology and computers. He feels confident he'll achieve this goal because all he has left is high school and his university studies.

When asked to name his greatest strength, he shares that he learns quickly and this helps him reach his goals; his greatest weaknesses are that he has too many chores and duties to complete.

Juan thinks his parents have achieved their life goals because they are professionals. He also thinks they manage their money well because they know how to distribute it. When asked what they share with him when they talk about money, he shared, "Son, you have to save money. The lesson is that you shouldn't spend money on vanities because afterward, you'll have nothing." He feels his family worries more about money compared to other families because they don't spend their money on unnecessary things. However, when asked what he might do differently compared to his parents, he said he'd save more for health.

He thinks his diet is healthy because he doesn't eat a lot of things that can hurt him. His definition of good health is "to eat well, do sports" and he thinks his health is good because he gets his medical checkups. While his family's health has been good during the past year, he worries a lot about their health because "they could get sick, and they'd have no money saved for emergencies."

He thinks youth are better off today compared to his parent's time because there are more educational opportunities. He thinks his children will have it even better because "there will be more technology and more wisdom."

He feels that he has a lot of financial pressure because his parents, who have been the most influential people in how he thinks about money, have taught him to save and "that life is difficult." While he feels financial pressure, he doesn't have a lot of financial responsibility because he doesn't have to cover his own expenses. He worries a lot about money because "you have to save money, to have anything."

When asked about what he felt when the word "money" was mentioned, he shared that he felt "worried, because sometimes there is money, and sometimes there isn't. You have to think before you act. But you have to keep hope because today there may be nothing, but tomorrow, something." He reports being satisfied with the amount of money he has saved because he recently began saving money.

The one financial crisis he remembers in his family is when his family was not paid on time for their work. While this was a crisis for their family, they didn't reach out to anyone for help.

While he doesn't consistently report working during the six interview periods, he either indicated he worked in agriculture or at home. He didn't look for work at any point during the financial diary surveys.

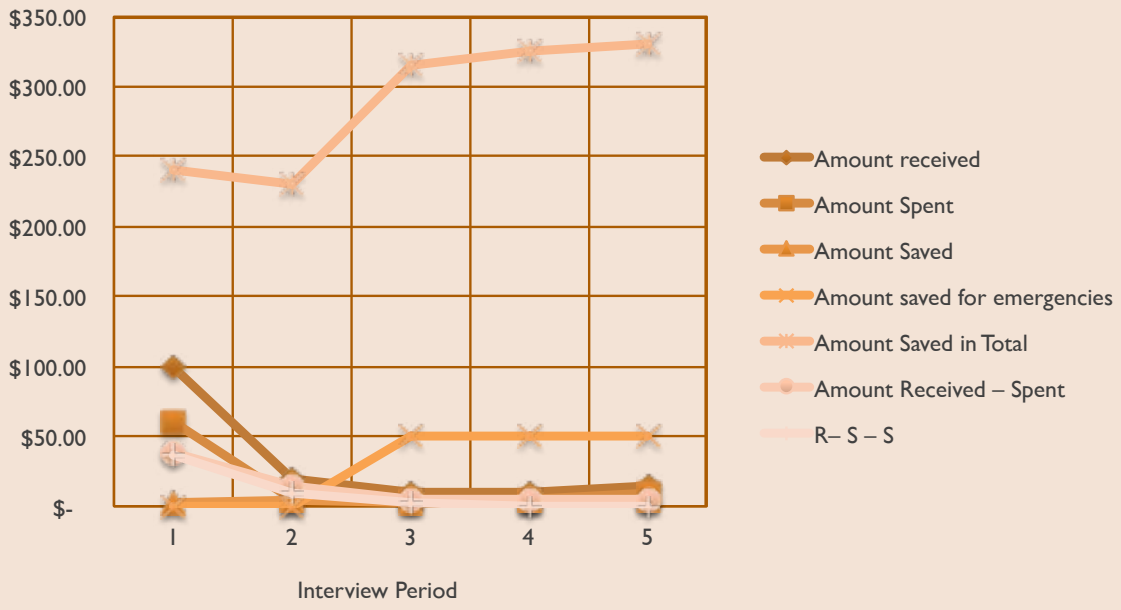
What he likes about the Cooperative is that it offers a savings account to younger people, however, he dislikes that it is far away. He says his savings haven't really changed since having an account, because "I'd save anyway." The most important thing he learned from the education sessions is that it was important to have a savings plan and that "you should save for basic services." He'll continue saving with San José in the future because "I will continue saving to achieve bigger things in the future."

When we look at Juan's cash-flow analysis, for the most part, he reports his total savings increasing significantly over time (between $240 at its lowest and $350 at its highest), but the amount he reports saving in the prior seven days is between $3 and $5. This suggests that either his report of this total savings amount is exaggerated (if you assume that the amount he's saving weekly is contributing to the overall savings total amount), or that his parents are putting money in his savings account. He also doesn't report any emergency savings for the

first two periods, but then reports having a savings amount of $50 for emergencies in the last three interview periods. The dip in the second interview period in his expenses, savings and spending might be due to the fact that the winter/Christmas holiday fell between interview one and interview two.

When comparing his estimates for the amount received, spent, and saved,[32] at no point does he overestimate the amount saved and spent, compared to the total amount of money he reported receiving the prior seven days. This suggests he has a fairly accurate "budget" or accounting of his money.

Figure A: Juan's Cash Flow



When asked about his savings goals each interview period, he lists a computer for the first period, video games, then a television for the next three interview periods, with the last period also reporting video games again. He reports spending most of his money on transportation, food for himself or his household and cell-phone expenses.

He also reports sharing with friends and family important points about saving at each interview period. The list below is what he shared at each interview:

"[Friends], you should save money."

"Uncle, we should save money for any possible emergency."

"[Friends], saving is the best option to help you achieve your goals."

"[Friends], you have to save money to have a good future."

"[Friends], if you don't save money, you will not have money."

Karla

Karla[33] is an unmarried 24-year-old young woman from Chillanes, Ecuador. Karla was interviewed as part of the comparison group from Cooperativa San José. Although we lack her financial-diary data, we have her baseline (November 2011) and endline survey data (June 2013) as well as a qualitative interview that was conducted at the same time as the endline survey.

Karla thinks the definition of "the good life" is to "have total well-being, to be protected and to have good health and finances." She thinks that to achieve the good life, "you have to have humility, have to be a good worker and to always maintain the peace." Money, health and love are also things you need to have a good life. She feels confident she will achieve the good life because she is going to work hard and be dedicated to achieving it.

When Karla gets older, she wants to be a professional. She is studying and preparing to become a professional and she has confidence that she will achieve this goal. She thinks her greatest strength is her optimism and her greatest weakness is being a "sleepyhead." When we first met her in 2011, she indicated she was finishing level 10 of high school and in 2013, she was at the university.

In 2011, she was classified as chronically food-insecure. In 2013, approximately one-and-a-half years later, she was classified as food-secure. She felt that it wasn't difficult for her family to find enough food and she felt her diet was very nutritious. It is unclear what happened during the years between the interviews that changed her food-security status. Her poverty status experienced a similar improvement. In 2011, it was 71 percent likely that her household was to fall below the national poverty line (based on the PPI) and 35 percent likely to fall below the 2.50 poverty line. However, in 2013, her poverty status improved such that she is only 1 percent likely to fall below the national poverty line. Most of this change in her PPI status appears to come from her moving into a new home. At baseline, she didn't report having a television or a blender. At endline, she reported having these two items plus she upgraded to a higher quality toilet, roof, but added a family member who was under that age of 16. At endline, she indicated she had a $1,000 loan with a bank whose purpose was to construct a new home, which likely directly contributes to the ownership of new assets and an improvement in her financial situation as measured by the PPI . It is unclear; however, what ultimately was the cause of her ability to make such significant improvements in a year's time.

Karla shares that her family, mainly her mother, has had a great influence on how she thinks about and manages her money. She thinks they handle their money well because there is always enough money for the interests of the family. The most important thing they've taught her about money is that "money is a useful thing but not necessary." She thinks her family worries about money as much as her friends' families do. They worry simply because money is so necessary. She shares that the major crises that her family has had to overcome were deaths in her family. They overcame them by being with her family and relatives.

Karla feels there is a lot of pressure to be responsible with her finances and she has a lot of financial responsibility, but only for her own personal expenses. When she hears the word "money," she feels happy, but she only feels happy if she has money because if she doesn't, she becomes filled with worry. She feels somewhat confident that she has the level of skills and information needed to make good financial decisions; she is learning and will do her best.

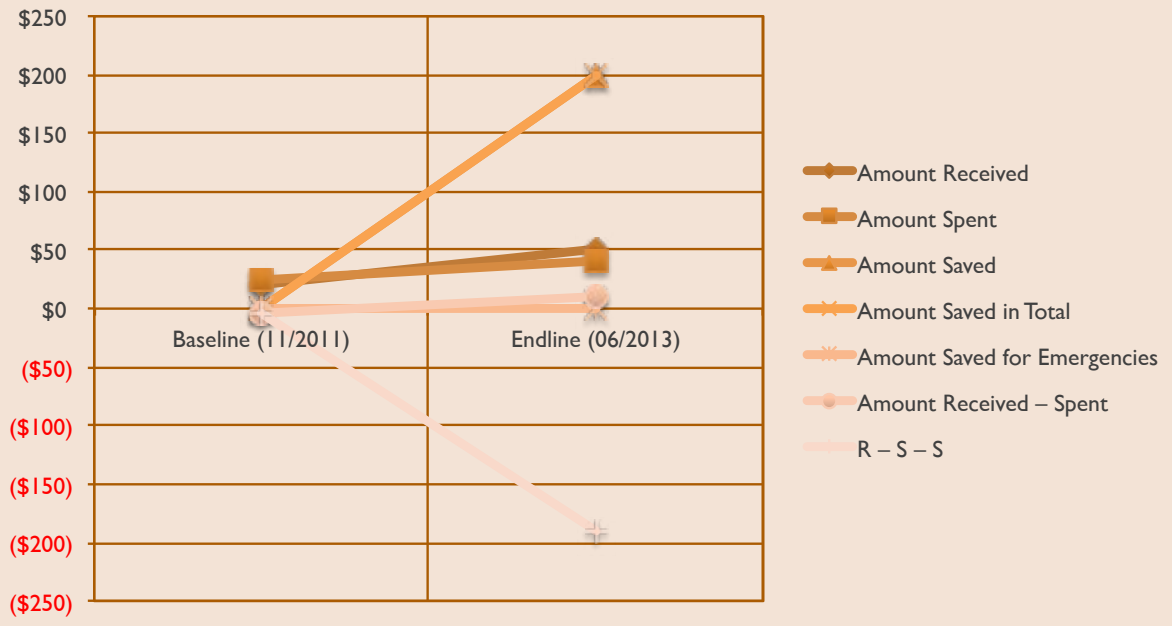
In 2011, she was receiving approximately $20 per week and estimated she'd receive $24 in the next week. She reported working in agriculture and everything she earned (less than $25 per month), was meant for her household. She somewhat liked the work she was doing, but she didn't think it safe. She reported spending approximately $24 in the week prior to the survey and felt she'd spend a similar amount the following week.

Most of what she spent her money on was for her transportation and food. At baseline, she indicated neither of her parents was saving at a financial institution and she was also not saving any money. While she reported not feeling motivated to save, she did have a savings goal, which was to complete her studies at the university. She didn't really feel comfortable talking to her parents about money. She didn't really consider herself a good saver and reported that she did not have enough money saved to cover a week's worth of typical expenses much less for a big event or emergency. She didn't feel satisfied with her personal or family's financial situation.

In June of 2013, Karla was attending the university. She reported receiving $50 in the week prior to the survey (almost double the amount she reported in 2011), but thought she'd receive $100 in the week to come. She didn't report working or looking for work. However, she did report doing some daily work when asked about the type of work she did, but she indicated she didn't do it often during the school year. She liked this work somewhat and thought it was safe. She reported spending $40 in the past week. She normally spends her money on school, food, clothing and sometimes on internet games and entertainment. She thought she'd spend $20 in the coming week, which was similar to the amount she reported spending in 2011. She shared that she didn't expect spending her money in the same way in the coming week as she did in the prior week.

Unlike 2011, she reported that she had a parent saving at a Cooperative who started saving there about a year ago. She also reported having a savings account with Cooperative San José and she reported opening the account in the last three to six months. In the week prior to the survey, she reported saving $200 and says she has $200 in total in saving. She's somewhat satisfied with this amount savings. The majority of her savings is with the Cooperative and she opened this account because she wanted a secure place in which to save and she wanted something to help her achieve a savings goal. Her "cash-flow" analysis, though presenting data at only two points, is provided below.

Figure B: Karla's Cash Flow for Last 7 Days



The major differences between 2011 and 2013 is the amount of money she reports saving. At the endline, if her cash flow were based on the amount she reported receiving, spending and saving, she would be overspent by approximately $190. She said her parents helped her open the account by giving her money to put in it and helping her apply for her own identification card. Given this explanation, it is likely this amount of money reported saved is money they have given her to put in her savings, which allows for her being in the red by $190.

When she puts money in her account, she puts about $50 at a time and she is the one to put the money in, not her parents. She withdraws money monthly, usually about $50 at a time. She uses this savings usually for household expenses, cell-phone expenses, entertainment and internet games but she doesn't consider any of these expenses as part of her savings goal. She does have a goal, which is for her future studies, and she feels confident she'll achieve it even though she feels only somewhat motivated to save for it in the coming month. She is somewhat satisfied with the amount she has saved. She thinks she's a good saver now. She feels satisfied with her personal financial situation but not necessarily with her household financial situation. She doesn't have a loan with anyone nor does she have emergency savings.

She reports opening her savings account after receiving education sessions (it's unclear whether she actually received education sessions as provided to the treatment group or whether she perceived interactions with staff and others as "education"). She felt this information was very important in her decision to open her account. She said that the staff at San José and the surveyor who conducted the interviews were the most influential in getting her to open an account. She says she would have opened the account even if her parents hadn't supported her, but fortunately they do support her.

Karla feels that the savings program provided by Cooperative San José is very interesting, very informative and recreational, and she likes everything about it. She is very likely to recommend Cooperative San José to others because the "Cooperative is serious and official." She's also very likely to continue being a member because, in her opinion, the Cooperative "is a very good thing." What she likes the least is the fact that there are very few access points for her account. She'd like to find easier ways to save her money.

Ricardo

Ricardo[34] is a 13-year-old boy living in Manabí, Ecuador in a household of six people. He's not married but he thinks he would like to get married at the age of 25. His definition of the good life is "to pass life well" and in order to achieve the good life, "you need to be united." He has a lot of confidence that he will achieve the good life because he likes to work.

One day, he would like to be a lawyer and he believes he will achieve this goal as long as "nothing bad happens in my life." He is studying a lot to achieve this goal. He thinks that it will be his profession that means more than the money he'll make, because he is "going to be living it." In five years, he thinks his life will be better because he'll be on his way to achieving his dream and he'll be working.

Ricardo believes his greatest strength is his intelligence and perseverance and that these will help him achieve his goals. He believes his greatest weakness is his lack of economic resources, he does not score as food-insecure and his family appears relatively better off compared to his peers. His PPI likelihood score for falling below the national poverty line was 53.2 percent at baseline and the average for all the participants was approximately 28.8 percent. At endline, he was 71.3 percent likely to fall below the national poverty line. There are people in his community who face food insecurity, particularly those with few economic resources, but he doesn't mention that his family worries about food and he also never scores as food-insecure.

Ricardo doesn't really know how healthy his diet is, but he knows that the definition of good health is "to be well." His family has had good health in the past year yet he worries about their health often because "I always want us to be healthy."

He believes his parents have achieved many of their own dreams as he has seen them do many things. He believes youth today are better off than his parents' generation because there is more freedom in everything. He hopes that the main difference between him and his parents is that he will be a professional as neither of his parents became professionals. He believes his own children will be better than him because of many things that he will be able to give them that he doesn't have now. His family has faced very few crises, so few that he can't remember how his family handled them.

When the word "money" is mentioned, he feels happy because having money will enable him to buy many things that he wants. He doesn't really like to spend money and thinks he is a good saver. He rarely thinks he falls to temptation of purchasing something he doesn't need. He indicates he is a member of a village bank and that he belongs to a savings group.

Sometimes it is difficult for him to save money and he doesn't really feel like he has strategies to help him save more money. He has enough money to cover his basic expenses, but if he had to cover a large cost or a week's worth of expenses, he would not have enough money saved. He did worry last week that he wouldn't have enough money to cover his school expenses and that his family wouldn't have enough to cover basic needs. However, in general he feels satisfied with his personal and family's financial situation. If given the choice of taking $5 today or $10 in two weeks, he'd prefer to have $5 right now.

The person who has influenced him the most on how he thinks about money is his mother, through all of her advice. He thinks his parents generally make good financial decisions. His parents do talk to him about money and they often say that he should know how to use money and not misuse it or spend it poorly. He feels little financial pressure and financial responsibility because he doesn't manage any money, his parents do. He also doesn't worry about money for the same reasons. However, he thinks his family worries more about money compared to other families because they are always worried about not spending their money unnecessarily. He believes he has the ability to make good decisions because he doesn't like to spend money just for the sake of spending it.

When we interviewed Ricardo at baseline regarding his money, he shared that he had received $20 the prior week and estimated he'd get $20 the next week. About $8 was money he could use on himself, about $8 for the family. The money he receives is generally used for both himself and his family. He indicates he works outside of the home (but he doesn't identify the work) and that he makes less than $25 when he works. He gave about half the money he earned in the past month to a family member. He says he works frequently during the school year. He likes the work and thinks it is safe. In the seven days prior to the baseline, he reported spending only $8. When asked how much he spent on specific items, he reported spending $3 on snacks, nothing on clothes or cell phones, and $8 on school materials and some money on entertainment.[35] He thinks he'll spend his money the same way in the next week and feels pretty good about how he spends his money.

In the past seven days, he indicates he saved about $15 and is pretty satisfied with his savings. He has about $11 in total saved at home and with a village bank. The majority of his money is saved at home and he indicates he saves weekly. His saving goal is to help cover the cost of his studies. He feels very confident he will achieve his savings goal and feels very motivated to continue saving into the next month. He says he has about $9 in emergency savings. He thinks his parents are confident in his ability to make good money-management decisions.

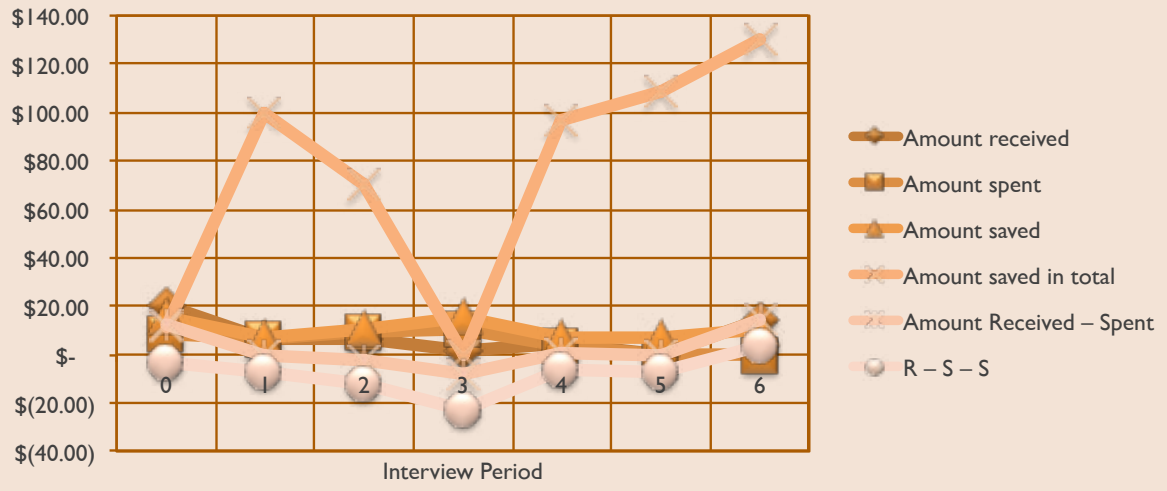
At baseline, he has fairly high knowledge of the benefits of saving in a Cooperative (security and earning interest). While he doesn't feel comfortable sharing his opinion at home, he feels trust of his community and feels comfortable entering a Cooperative.

For the financial diaries, we interviewed Ricardo every two weeks, between September 20 and December 6, 2013. As with his original interview, Ricardo measures as food-secure during the entire interview period. We learned that one of his parents saves in a village bank and at home and is not currently a member of the Cooprogreso. During the interview, Ricardo never opens an account with Cooprogreso and his reasons for not opening an account vary over the three-month period. In the first interview, he indicates he doesn't know how to open an account with Cooprogreso and that he feels his savings are safe where he currently has it (with a village bank). In the next interview, he indicates he doesn't know how to open an account and at the interviews of the following two periods (in October), he indicates he doesn't have any money to save. With the final interview, he indicates he doesn't have an account because he doesn't have all the prerequisites to open an account.

While at baseline, in May of 2012, he indicates he works frequently and a lot during the school year, however, during this three-month period, he does not work at all and also didn't look for work.

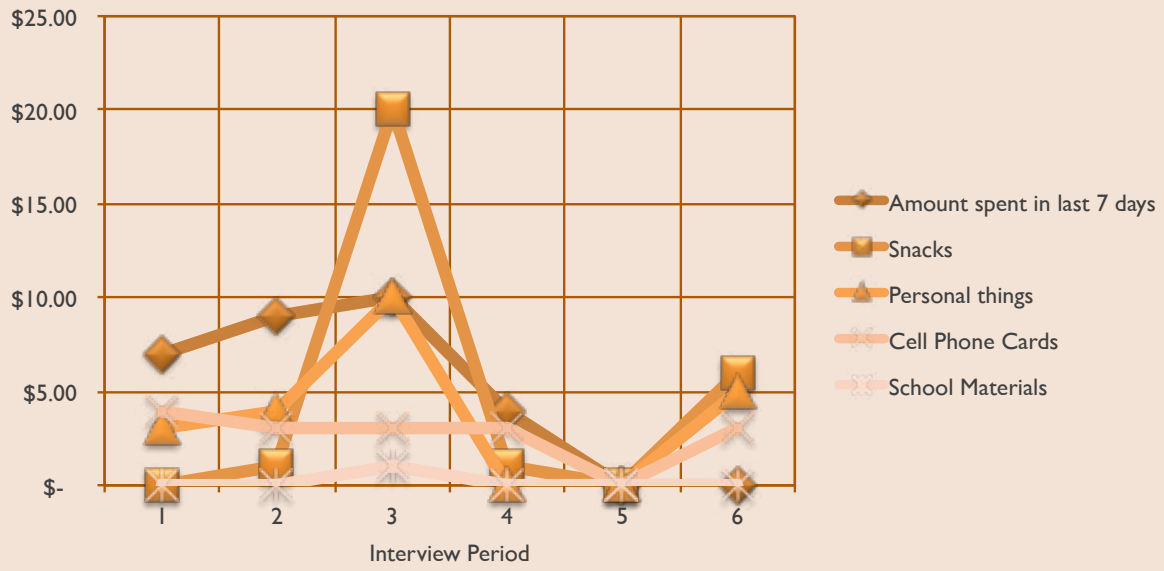
When we look at his financial transactions for the baseline (point 0) and six interview periods for the financial diaries (points 1–6) and ask him about the amount of money he received, spent and saved in the last seven days, we see that Ricardo generally reports receiving less money than he reports spending and saving, except for the baseline and the last financial diary surveys.

Figure C: Ricardo's Cash Flow



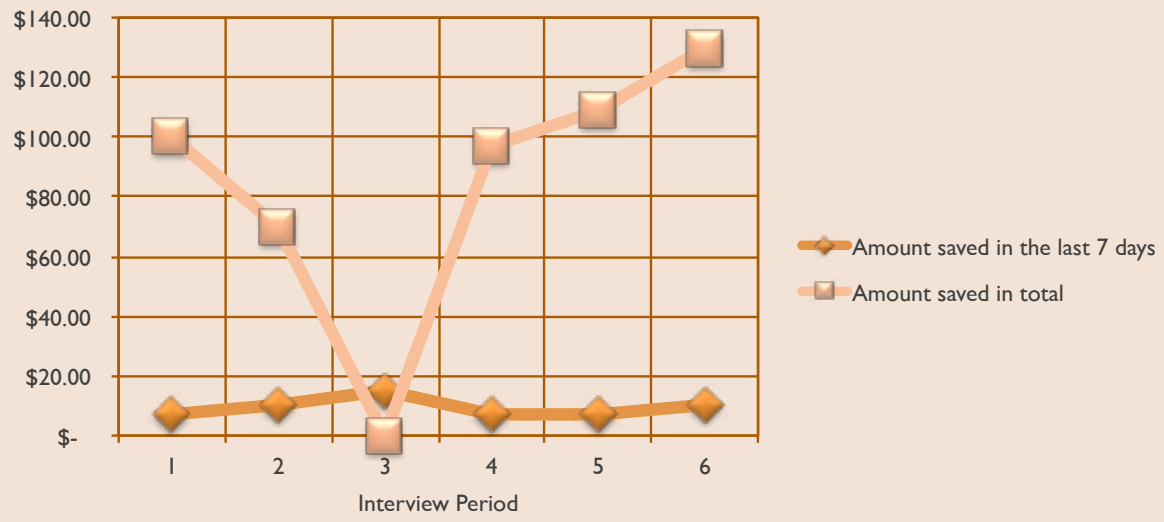
When asked to report on the amounts of money he spent on snacks, personal items such as clothing, cell-phone expenses and school materials, he reports spending more on these items than the total amount of money he reports spending for the past seven days. He reports snacks costing him approximately $200 at interview 3, but he reports receiving a total of $10 in the past seven days.

Figure D: Ricardo's Expenses of Last 7 Days



We can also see that when he is asked to estimate the amount he saved in the past seven days as well as the total amount of money he currently has saved, he appears to have quite a bit in total saved, which would reflect his perception of himself that he is a saver more than a spender—except for the third interview when his total savings takes a huge dip. The data suggests that perhaps he dipped into his savings to purchase snacks in the third interview period, but this is only a guess.

Figure E: Ricardo's Savings Amount



When asked about his savings goal for the financial diaries, his main reported savings goal for several periods was the purchase of a television. Interestingly, his PPI score fluctuates on the report on the number of color televisions in his house. In one interview period, there are two or more TVs in his household, the next period, there is one, and the following periods there are more than two TVs in his household again—which likely reflects him achieving a short-term goal of purchasing a color TV.

At baseline, he had $8 in emergency savings and at points 1 and 2 of the financial diaries, he had $20 and $30, respectively, but no emergency savings after this time. He also indicates that he has a credit, for $20 and $10 in the first two periods, and this credit is with a person. He indicates the $20 credit is for the village bank (perhaps to repay a loan with the village bank) and the $10 is for the purchase of a TV in the second period.

Overall, his confidence to talk to his parents about money fluctuates over the six interviews—some interviews he feels very confident, and others less so; however, in he generally thinks they trust his ability to manage his own money.

Regarding the savings behaviors promoted during the education, his knowledge fluctuates (varying from having correct and incorrect answers) for most of the knowledge indicators. For example, he correctly identifies that parents are needed to help youth open an account for all six interviews, but incorrectly identifies in all cases youth do not need an adult to make a deposit if you are under the age of 18. It appears he guesses about whether a person over the age of 18 needs a parent to open an account or make a deposit.

During the first financial diary interview, he reports feeling very confident about entering a Cooperative, but toward the end, he is much less confident. Interestingly, during the third interview, he reports feeling worried about covering basic family costs, which corresponds to a dip in his total savings and when he receives the least amount of money. He never indicates worrying about covering school costs during the six interviews.

He generally feels good about his personal financial situation and his family's financial situation, except for 4th interview period. He indicated he gave financial advice for two of the interview periods, but not the final four. When he did give advice, he shared that he told his friends not to spend their money and that they should save their money.

Overall, he reports in the qualitative interview that he's somewhat satisfied (instead of very satisfied) with his own savings, mainly because he really doesn't have much to save. He has enough money for his own needs, so he's somewhat satisfied with the money he earns.

While he never becomes a member of Cooprogreso, he indicates what he likes most about it is that he learned how to save even though his savings have changed very little. He's somewhat likely to become a member of Cooprogreso because it seems like a good Cooperative.

Endnotes

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31. Name has been changed to protect his privacy.
32. "Received – Spent" is the amount of money he reported receiving minus the amount spent. This is being used to estimate the total amount of money potentially saved if the only source of money was the amount he reported receiving. R – S – S is the total amount received minus the total amount spent and saved. This would be the amount he'd theoretically have left after spending and saving.
33. Name has been changed to protect her privacy.
34. Name has been changed to protect his privacy.
35. Some youth, as can be seen in the cash-flow figures, appeared to have discrepancies in the amounts they reported receiving and spending. In this case, Ricardo was asked first to report the total amount spent in the prior seven days and then to indicate the amount he spent on specific items. For some youth, these amounts were consistent, such that if they first report spending $8, they wouldn't report spending more than $8 in total on other individual items. Others were less consistent about the amounts they reported.