



# SILC INNOVATIONS

## RESEARCH BRIEF 4

### An Analysis of Agent Earnings in Fee-for-service Savings Groups

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#### **Project Background – SILC and the PSP model**

Savings and Internal Lending Communities (SILC) is a model developed by Catholic Relief Services for user-owned, self-managed, savings and credit groups. A SILC typically comprises 15-30 self-selecting members, and offers a frequent, convenient, and safe opportunity to save. SILC helps members build useful lump sums that become available at a pre-determined time and allows them to access small loans or emergency grants for investment and consumption.

SILC Innovations is a pilot project within CRS' broader SILC program, funded by the Bill & Melinda Gates Foundation from 2008-2012, which aims to establish local entrepreneurial capacity for sustained the spread of the savings-group model beyond the funding period. In the project design, the Field Agents (FA) responsible for forming and supporting SILC groups are recruited and paid by the project for up to one year. The FAs then undergo an examination process to become certified as Private Service Providers (PSP), who offer their SILC services to communities on a long-term, fee-for-service basis, with no further project funding. The project currently serves over 350,000 savings group members, mostly rural villagers, across the three pilot countries of Kenya, Tanzania, and Uganda.

#### **KEY FINDINGS ON AGENT EARNINGS:**

- Among earning PSPs, incomes varied widely between countries, with Kenya PSPs averaging \$103/month, Uganda PSPs \$36/month, and Tanzania PSPs \$17/month in the final quarter of research—confirming that some PSPs thrived while others struggled to earn under fee-for-service model.
- All three countries had substantial numbers of non-earning PSPs: 15 percent in Tanzania, 27 percent in Kenya, and 38 percent in Uganda in the final quarter.
- In Kenya, earnings for a slight majority of PSPs outpaced the project stipends earned during their first year, while most PSPs in the other two countries earned substantially less.
- Overall, Kenya continues to be the project's best performer and exemplar.



## Overview of Research Design

To assess the model and inform future SILC rollouts on this fee-for-service, savings-group delivery channel, CRS carried out a broad research study using a Randomized Control Trial (RCT) design. The research was set up to make a fundamental comparison between two delivery channels: the fee-for-service PSP model and the more conventional project-paid FA model. To rigorously compare the two, an experimental design established statistically comparable groups of agents across two cohorts (separated by about a year) serving members in comparable environments over approximately a one-year interval (see the additional research background section on page 10).

## Overview of PSPs Earnings

A key issue in the study was PSP earnings. What kind of living can the PSP make from charging their groups? What are patterns of group payments? How do PSP incomes compare to the stipends earned by FAs, which were based on what CRS' local partners were paying for similar work in other sectors?

In this component of the research, the fundamental comparison was not randomized PSPs against randomized FAs, since FAs did not provide a range of earnings to which we could compare the PSPs (although we do make some comparisons to the fixed FA project-paid stipends). As such, we drew on the full universe of the project's first two cohorts of PSPs, tracked in the project's Management Information System (i.e., 352 agents as of September 2011), inclusive of, but not limited to, the original randomization of PSP agents over the research interval. MIS data for all PSPs, including earnings, was collected on a quarterly basis.

Our basic examination of PSP earnings focuses on the monthly earning figures<sup>1</sup> from the final quarter of MIS data collected for this research project—that of the third quarter 2011 (Table 1).

TABLE 1 - OVERVIEW OF 3RD QUARTER 2011 PSP EARNINGS

	Number of PSPs	PSP Earners Only					PSP Non-Earners
		Fraction of Total PSPs	Fraction of total groups paying	Mean monthly income (USD)	Median monthly income (USD)	Average group payment (USD)	Fraction of Total PSPs
Kenya	131	73%	55%	\$103.19	\$75.58	\$8.63	27%
Tanzania	113	85%	69%	\$16.80	\$11.79	\$1.89	15%
Uganda	108	62%	45%	\$36.14	\$31.72	\$2.28	38%

One key point emerges right away: all three countries continue to have substantial numbers of PSPs who report zero earnings from their groups. Uganda has the highest such proportion, at 38 percent, while Kenya hovered around one-quarter and Tanzania was the lowest at 15 percent.

As this project has done consistently, we split off the subpopulation of PSPs who earned something in the most recent quarter to examine their profiles. In other words, among those who earned, how much were they earning?

<sup>1</sup> All earnings in this document are expressed in U.S. dollars using an average of exchange rates over the 2010-11 research period, as follows: 84 KSH/USD, 1,512 TSH/USD, and 2,349 USh/USD.

Kenyan PSPs were far and away the highest earners, both on a monthly basis (mean and median) and in terms of average group monthly payments.

Here we see vast differences between the three countries. Kenyan PSPs were far and away the highest earners, both on a monthly basis (mean and median) and in terms of average group monthly payments. Ugandan PSPs were earning slightly over one-third of the average Kenyan monthly earnings, while Tanzanian PSP were a distant third, with earnings about 1/6 of the Kenyan average. Curiously, as shown in Table 1, Tanzania had the highest proportion of earners among its PSPs, despite trailing distantly on the level of those earnings. The fraction of paying groups within these PSPs’ portfolios also varied substantially, from 45 percent in Uganda, to 55 percent in Kenya to a high of 69 percent in Tanzania.

It is important to note that these findings do not correlate with the relative depth of poverty in the three countries, which was also measured as part of this project. The Kenyan SILC population, for example, was shown to be the poorest of the three countries, while the Ugandan SILC population was the most affluent.<sup>2</sup>

In addition, since the research project encompassed two cohorts, we examined the disaggregated data by cohort to determine whether project learning from the first cohort led to better agent selection or process improvement for the second cohort (Table 2). To deliver the fairest comparison possible, we compared earnings “snapshots” of the two cohorts at roughly the same point in their development within the program, with data drawn from September 2010 for Cohort 1 and September 2011 for Cohort 2 (rather than simply the most recent data for both cohorts, when Cohort 2 was considerably less experienced than Cohort 1).

The results are mixed (Table 2). In Kenya, the percentage of PSPs earning goes down between cohorts, but the mean monthly earnings more than double. The same pattern is seen on percentages of PSPs who earn in Tanzania and Uganda. While the earnings for Cohort 2 in those countries also show a gain, it is a much smaller one.

TABLE 2 - EARNINGS RESULTS DISAGGREGATED BY COHORT

		Percentage of PSPs Earning	Mean Monthly Earnings (among those who earned)
Kenya	Cohort 1 (Sept 2010)	98%	\$50
	Cohort 2 (Sept 2011)	77%	\$110
Tanzania	Cohort 1 (Sept 2010)	84%	\$13
	Cohort 2 (Sept 2011)	75%	\$15
Uganda	Cohort 1 (Sept 2010)	80%	\$24
	Cohort 2 (Sept 2011)	50%	\$28

The proportion of PSPs who earn income suggests that the programs were seeing more variance in the Cohort 2 agents, including greater numbers of non-earners (see Table 3 below for additional discussion of variance) than for Cohort 1. At the same time, a core group of successful agents seems to have taken the methodology and run with it, posting relatively high earnings—enough to beat Cohort 1 on the aggregate in all three countries. This is especially true in Kenya, where Cohort 2 included the additional Western Kenya partners, whose agents were among the project’s highest earners.

<sup>2</sup> For additional details, see “SILC Innovations Research Brief 1: Poverty Outreach in Fee-for-Service Savings Groups.”

## How do PSP earnings compare to FA stipends?

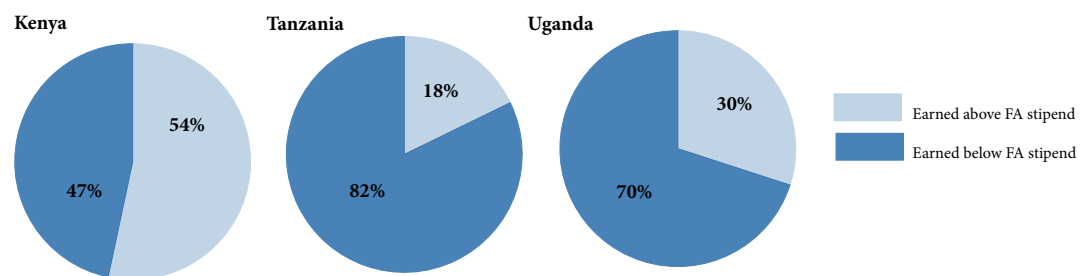
Though not directly comparable as in the randomized comparison we made between PSPs and FAs in other components of the research, it is informative nevertheless to evaluate PSP earnings against the stipends the project paid to agents in the project-paid FA phase (Table 3).<sup>3</sup>

TABLE 3 - FA STIPEND LEVELS

		Monthly FA Stipends
Kenya	Cohort 1	\$42
	Cohort 2	\$48
Tanzania	Cohort 1	\$20
	Cohort 2	\$30
Uganda	Cohort 1	\$21
	Cohort 2	\$43

Here again, we see vast differences between the three countries (Figure 1). In Kenya, a slight majority of PSPs outpaced the FA stipends. In the other two countries, PSP payments fell substantially short, with just 18 percent of PSPs in Tanzania and 30 percent of PSPs in Uganda earning more than the FA stipends.

FIGURE 1 - COMPARISONS OF PSP EARNINGS TO FA STIPENDS



## Distribution and Variance of Payments

We also examined the distribution of earnings in three countries (Figures 2-4). Here again we see several divergent profiles.

Kenya shows a wide and fairly even distribution of PSP payments (Figure 2). Beyond the non-earners, which are the largest single segment, we see comparable bands spanning a range of income, from the first segment above zero (\$10-20) to the high outliers (\$200+).

Tanzania is much more asymmetrical (Figure 3). The largest segment of PSPs by far are earning incomes in the \$10-20 band—meaning most PSPs are earning something, but in a very low income bracket. From there, the distribution tapers off, with zero representation by the time we reach the \$80-100 band. Uganda (Figure 4) shows a seemingly wider and uneven distribution. The non-earner bar is about twice as high

<sup>3</sup> The increase of stipends between Cohorts 1 and 2 occurred at the country-program level, as a result of pressure from FAs who felt their earnings were too low.

as the next closest band. The next three bands (\$0-20, \$20-40, and \$40-60) are comparably represented. Then the distribution drops to nearly zero, before, picking up again in the high outlier range of \$100-200.

FIGURE 2 - FREQUENCY DISTRIBUTION OF EARNINGS IN KENYA

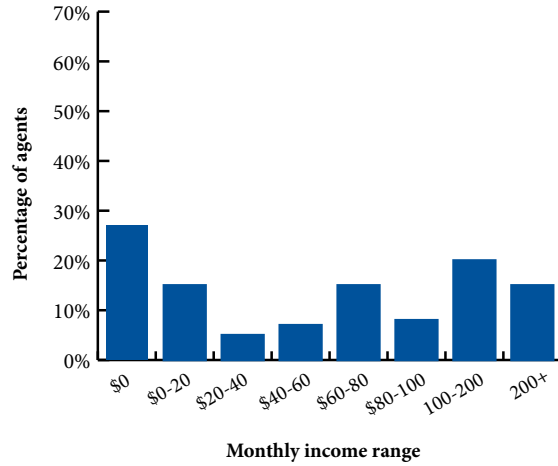


FIGURE 3 - FREQUENCY DISTRIBUTION OF PAYMENTS IN TANZANIA

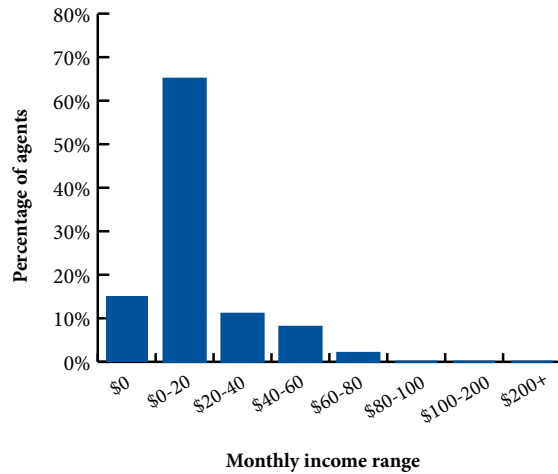
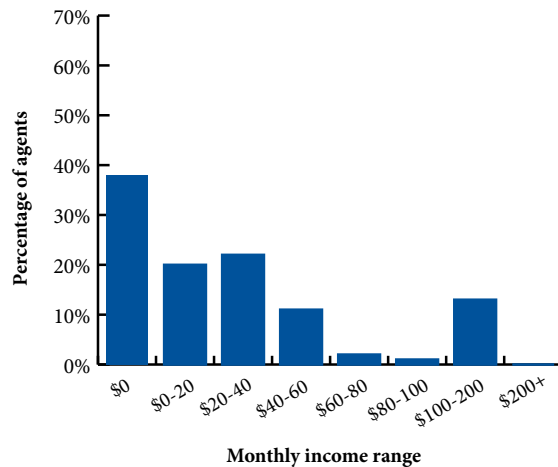


FIGURE 4 - FREQUENCY DISTRIBUTION OF PAYMENTS IN UGANDA



In terms of variance, we see that all three data sets are highly dispersed, with coefficients of variation (CV) over 100 percent (Table 4). Here Uganda holds the highest position, with the greatest variation (CV of 139 percent), though not vastly so. The consistently high range of CVs confirms that in cases of relatively high mean earnings (Kenya) and in cases of relatively low mean earnings (Tanzania), the performances of individual PSPs, as seen in their earnings, are widely scattered.

TABLE 4 – VARIANCE IN PAYMENTS

	Overall PSP Mean	Standard Deviation	Coefficient of Variation
Kenya	\$75.62	97.00	128.28%
Tanzania	\$14.27	15.70	110.03%
Uganda	\$22.44	31.09	138.56%

### Trend Analysis on Payments

The analysis thus far has focused on the figures that emerged in the research project’s final observation in September 2011. Since we have quarterly observations that extend back almost two years from that end point, it is important to add the perspective of how these earning patterns evolved over time. For that purpose, we have graphed the quarterly observations of two key metrics: percentage of PSPs who earned in a quarter (Figure 5), and the average monthly earnings among PSP earners in a quarter (Figure 6).

FIGURE 5 - PERCENTAGES OF PSPS WHO EARNED OVER TIME

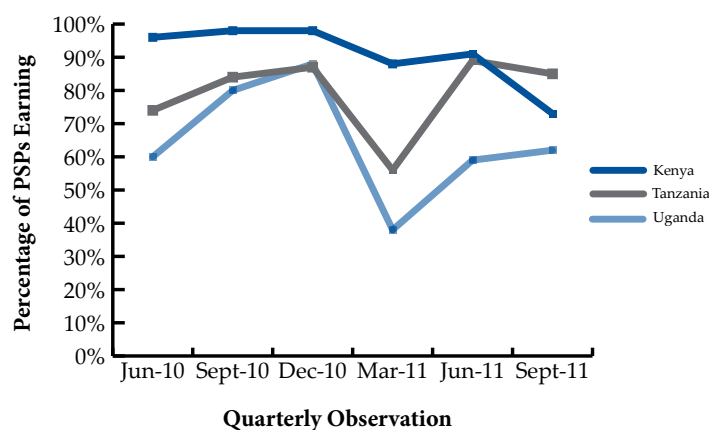


Figure 5 is marked by a sharp mid-point dip and subsequent correction in the cases of Uganda and Tanzania, while Kenya shows a steadier pattern, with a significant decline between June and September 2011.

It is important to note that at the mid-point of both graphs—between December 2010 and March 2011—was when Cohort 2 was added to the MIS measurements. To some extent, one would expect a dip in the percentage of PSPs earning between those points, as the new PSPs phased in and adjusted to the demands of the fee-for-service system,

followed by improvements in subsequent quarters. That period also tends to reflect a seasonal lull in savings-group activity following the highs of the Christmas season, which contributed to this dip among Cohort 1.

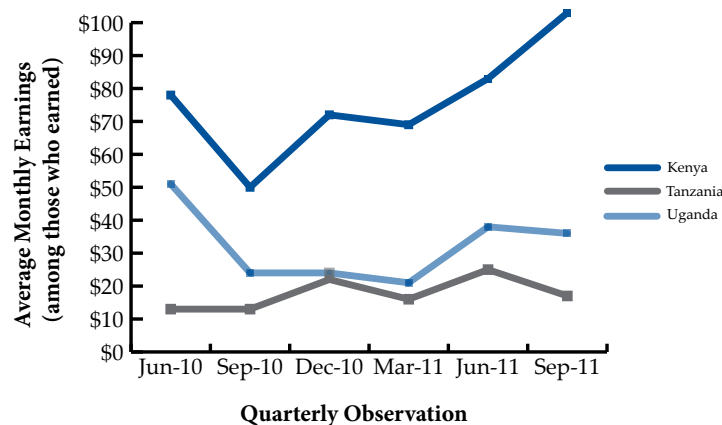
However, only in Tanzania do the subsequent improvements overtake the high point in earnings that occurred before Cohort 2 was phased in. In other words, Kenya and Uganda never recovered to the high point of earning percentage seen in December 2010, and even Tanzania shows a dip in the final quarter that leaves its project-end percentage roughly equal to the December 2010 mark.

Some of this can be explained by seasonality considerations, as mentioned above. We know that the final yearly quarter tends to be the highest earning for PSPs. This is due to the fact that most groups in East Africa share out in December, and the fee-for-service PSPs tend to be called upon to assist (and thereby get paid) at share-out; also, some groups pay their PSPs only at share-out. While we do not have the December 2011 observations to compare to the December 2010 peak, we can substitute for this by examining the year-over-year comparison from the preceding quarter. When comparing September 2010 to September 2011, we see the 2011 means fall well below those of the previous year in Kenya and Uganda, and it is essentially equal to the previous year in Tanzania—in other words there is no evidence of improvements year-over-year.

The evidence suggests two possibilities: 1) that those who earned in the project’s first year did not necessarily remain earners until the end of the measurement period; or 2) that the newer agents (e.g., Cohort 2) did not provide as much of a boost to productivity as initially expected, which is consistent with the figures presented in Table 2.

Figure 6 (average monthly earning for those that reported earnings) shows a somewhat different pattern. Here again we see a mid-point dip as Cohort 2 joins in, but a much milder one. Kenya shows a curious dip in the second quarterly measurement, but the net pattern start-to-finish is one of increased earnings over time. Uganda and Tanzania’s patterns are flatter, with essentially no growth over the research period. We acknowledge that the difference in patterns between Figure 5 and 6 may be linked at least in part to the difference in the measure, in the sense that measurements for Figure 6 exclude the non-earners in each country, while Figure 5 includes them.

FIGURE 6 - AVERAGE MONTHLY EARNINGS AMONG THOSE WHO EARNED IN A QUARTER OVER TIME





## Understanding the Trend, Part I: Alternative Payment Schemes and Part-time Work

So how does one interpret or explain these findings? From an operational perspective, we continue to strive to understand the evolving livelihoods of PSPs to the fullest extent possible, and in this endeavor we often find new evidence that helps us frame and sometimes reinterpret findings such as these.

One area that has come to light is the propensity of some PSPs to accept alternative payment schemes that, to some extent, may lead to underestimations of their true earnings. These practices have been reported anecdotally in all three countries, but seem particularly prevalent in Tanzania, which (perhaps non-coincidentally) shows the lowest monthly earning means.

In Tanzania, we have evidence that many PSPs accept substantial in-kind “gifts” from their groups as payments at the end of cycles. For example, in Mbulu, one of five regions served by SILC in Tanzania, a recent survey into payment patterns found that four of the five randomly-selected groups there gave an end-of-cycle gift of unspecified value to the agents. Likewise, a recent qualitative investigation carried out by MicroSave in Tanzania found that PSPs there commonly received end-of-cycle gifts of wide-ranging scale, from food and clothing, to cash, and even substantive assets like a motorbike, and fired bricks sufficient to construct a three-room house.

The confounding factor in these cases is not that the payments occur in lump form at the end of cycle, nor that they take in-kind form, as the agents have been instructed to record end-of-cycle payments and to estimate value for in-kind payments as a routine part of their data recording. Rather, the issue is that agents are apparently disinclined to record them because they think of them as “gifts” rather than earnings. The project continues to work with the agents so that the value of these “gifts” gets properly recorded.

A second area that has helped shape our understanding of PSP livelihoods is the issue that some agents see their PSP work as a part-time endeavor. As such, it commonly functions in a complementary manner alongside their other income-generating or subsistence activities, from trading to farming. In our randomized control trial, there is emerging evidence that PSPs are substantially more inclined than project-paid FAs to devote only a fraction of their time to SILC work, as part of a diversified livelihood portfolio. One might speculate that the challenges and uncertainties of having to earn from groups discouraged a certain number of PSPs from making SILC the centerpiece of their livelihood strategies, compared to FAs, who had the certainty/consistency of the project-paid stipend.<sup>4</sup>

Moreover, PSPs are favoring a part-time approach to SILC work that prioritizes efficiency. Compared to FAs, they are serving larger groups, on average, and they are spending a smaller fraction of their working hours in order to do it. In other words, they are streamlining inputs to their SILC work, perhaps as they move toward optimizing their cost/benefit calculation.<sup>5</sup>

From an operational perspective, the hope is that heightened PSP efficiency will lead foremost to higher net productivity and earnings relative to FAs. Thus far, that has not happened, which may be related to challenges inherent in the market (see next section)

<sup>4</sup> See full discussion in “SILC Innovations Research Brief 2: Agent Productivity in Fee-for-Service Savings Groups.”

<sup>5</sup> Ibid.

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and the short time period since the PSP began functioning. In any case, market-driven interventions must be prepared to accept a variety of outcomes, and the pattern here falls squarely into that category.

### **Understanding the Trend, Part II: Having to Pay vs. Getting Things for Free**

There is another very simple explanation as to why PSPs have lagged behind FAs on both productivity and earnings: PSP work is harder than FA work, because they have to compel groups to pay. FAs have the luxury of offering their services at no cost to any groups that want it. It is difficult to dispute the appeal of receiving something of apparent value for free. It is the ultimate cost-benefit equation: all benefit and no cost.

PSPs are essentially salespeople, and salespeople in any culture can attest to the challenges of that profession, especially in the early years. Success depends on many factors, including one's territory, connections, and force of personality. Some will make the cut; some will not. In other contexts, the underperformers might quit or be fired in the early phases. In East Africa, where jobs are scarce and the program does not systematically force out low performers, there is probably some tendency for the underperformers to "hang on" indefinitely, thereby dragging down the performance means and elevating the variance, as noted previously.

In East Africa, there are two additional complicating factors to note. First, much of a SILC constituency (like much of the developing world) has been exposed to a tradition of free aid and aid-based services, usually linked to foreign NGOs, dating back decades. This is especially true in current post-conflict Northern Uganda, where foreign NGOs are deluging the population with free services. Second, in all cases of PSPs, this exact SILC service was offered for free at some point in the recent past in the areas where PSPs are now working, either by the PSPs themselves (in the FA training phase) or another agent. PSPs must work through any such collective memory of free services. By way of the project's qualitative work, PSPs themselves are confirming that simply convincing groups to pay continues to be a challenge in many instances.

### **Conclusion: Kenya is "Best Performer"**

Clearly these results suggest the PSP model works better in some settings than others. Tanzania stands out as our most problematic country program on earning levels, even though a greater proportion of agents are earning something than in the other two countries. Uganda's results are more mixed.

In our productivity analysis,<sup>6</sup> Kenya has emerged a strong leader on payments. While the news from Kenya is not uniformly positive, with high variance and a quarter of agents in the non-earner category at the end of the research period, the majority of agents have outpaced FAs on earnings. Cohort 2 shows improvements over Cohort 1, and payment means have grown substantially since the start of the project. Overall, Kenya appears to be emerging as a leader for what PSPs can achieve, and demonstrates what program managers can expect, in terms of earnings, from this fee-for-service delivery channel at this early stage of the model's deployment.

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<sup>6</sup> Ibid.

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## **Additional Research Background**

### *a. Design of the RCT*

The study's experimental design was intended to create statistically comparable cohorts of agents, serving villages and households in comparable environments. Among FAs who successfully completed their examination and qualified to be certified as PSPs, some were randomly assigned for immediate certification (treatment), while others were randomly assigned to remain as FAs for an additional 12 months (control), before officially becoming PSPs. The treatment and control agents were equally qualified, and were supervised and supported in the same way. The only difference was how they were paid – by the project (control) or by the SILC groups (treatment).

The design thereby controls for observable and unobservable differences between agents, their supervisors and areas of operation. Through randomization, the treatment PSPs and the control FAs are statistically comparable and any differences in performance and outcomes can be attributed to the delivery channel.

A total 333 agents were selected for the study. The household survey focused on a subset of 240 such agents and the villages they served.

### *b. Research questions/issues*

The RCT compares PSP and the FA delivery channels along the following dimensions:

- Group quality and financial performance
- Impact on group members and their households
- Poverty outreach
- Member satisfaction with agent services
- Agent satisfaction with their work and remuneration
- Competitiveness with respect to other financial service providers
- Sustainability of services to groups

### *c. Data Sources*

CRS is employing four primary data sources in the research:

1. The project's existing Management Information System, which tracks agent productivity and group financial performance (quarterly).
2. Agent self-reports on their work and income (every six months).
3. Qualitative research with agents and with group members, carried out by MicroSave, regarding satisfaction with the delivery channel and other topics (baseline/endline).
4. A household survey, designed in collaboration with Professor Joe Kaboski of Notre Dame University, and administered by Synovate, of both SILC members and non-members in 240 villages to establish impact (baseline/endline).



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