Alternative PPI® Data Collection Methodologies

Introduction

The Progress out of Poverty Index®, or PPI, is a poverty measurement tool for organizations with a mission to serve the poor. The PPI is statistically-sound, yet simple to use: the answers to 10 questions about a household's characteristics and asset ownership are scored to compute the likelihood that the household is living below the poverty line – or above it by a narrow margin. With the PPI, organizations can identify the clients, customers, or employees who are most likely to be poor or vulnerable to poverty, integrating objective poverty data into their assessments and strategic decision-making.

Traditionally, the PPI is administered in the respondent's home. This has two major benefits: (1) it allows the enumerator to clarify or explain confusing questions or terms and (2) it enables the enumerator to visually verify certain indicators, for example, the main materials of the household's roof or walls.

Despite the widespread use of the PPI by various types of organizations, and in particular MFI's (microfinance institutions), there are some limitations that prevent its systemic application. One of the main barriers to implementation is the cost of in-home data collection; it can be prohibitive for organizations that do not have the capacity or resources to regularly visit their clients at home. With funding from the Ford Foundation, Grameen Foundation has conducted initial research into alternative PPI survey methods; initiating the process of identifying feasible alternatives to help further lower the cost of PPI implementation.

This report details the first two case studies that test alternative (or 'out of home') PPI data collection methods: at a central location in Peru and via SMS in Kenya. It is important to note that these are preliminary research efforts to address alternative data collection methodologies. Grameen Foundation will conduct further extensive testing in the coming year on these and additional forms of out of home data collection.

For now, if your organization is considering using an alternative PPI collection method, please see the Guide to Out of Home Data Collection and the PPI, available on our website, www.progressoutofpoverty.org, which will help walk you through key steps and items to consider.

General Structure of Each Study

Grameen Foundation partnered with local organizations for both tests, Juudi Kilimo in Kenya and COPEME in Peru. Once the scope of work was defined for each country, enumerators were trained on the PPI indicators and prepared for the project. Following this, each partner administered the PPI using the alternative methodology. Following the initial collection, the enumerators administered the PPI to the same set of clients, but this time the survey was given in the clients household. The responses were then compared to identify any discrepancies. If during the in-home data collection answers differed from the original answers, respondents were asked to explain the differences, helping to determine what caused the discrepancy.

The PPI is a survey of 10 multiple choice questions to determine the likelihood that individuals are below certain poverty lines. Each multiple choice answer has a score, the scores are added, and the final score translates to

'poverty likelihood', which is the likelihood the household is below a certain poverty line. Thus there are three possibilities for understanding discrepancies:

▶ Option1: People answer differently which skews their poverty likelihoods.

▶ Option 2: People answer the same, and their poverty likelihoods are unchanged.

▶ Option 3: People answer differently, but their poverty likelihoods are not significantly altered.

PPI Collection at a Central Location
July 2013
Jaen and San Ignacio, Peru

Will administering the PPI at a central location be as accurate as using in-home interviews?

For this pilot, the PPIs that were administered in-home had nearly the same results as those administered at a central location.

Process

The pilot was adminstered by COPEME a non profit association dedicated to promote the development of micro and small entrprise. They selected four of the member coffee growing cooperatives for the study as growers rotineley report to a central collection center to deliver their beans. Because growers already traveled to the collection center, COPEME used this opportunity to administer the PPI at a central location. All farmers that were asked the PPI in the collection centers were then visited at their homes within the week by a trained enumerator who re-asked the PPI questions. Responces in the central location and in-home PPI surveys were compared in order to measure dicrepncies in responses.

Eight cooperative members were trained to be PPI enumerators prior to the initial data collection at the center (two for each of the four cooperatives). The eight enumerators were selected based on their past experience with verification and certification control for the coffee cooperatives, their mobility (access to a motorcycle), and knowledge of the area. The enumerators were supervised and advised by COPEME. For each cooperative one enumerator administered the PPI at the collection center and the other administered the in-home PPI. This was to ensure that respondents did not feel obligated to give the same answer, and avoid bias on the part of the enumerator as well.

COPEME interviewed 311 of the 3,500 growers. The four cooperatives were near the City of Jean and each had their own central location.

▶ Unicafec in San Ignacio

▶ La Prosperidad in San Ignacio

▶ Coopvama in Jean

▶ Cenfrocafe in Jaen

Results

On average, respondents gave different answers to the in-home and central location surveys only 4.244% of the time.

Indicator Number	Discrepancy Rate
1	4.18%
2	5.466%
3	2.894%
4	8.682%
5	2.572%
6	10.289%
7	0.643%
8	1.608%
9	4.823%
10	1.286%
Average	**4.244%**

If a respondent changed an answer when being asked the in-home survey, the enumerator asked about why the change occurred. Though the discrepancy rate was low the major reasons for discrepancies were:

▶ Confusion on what and whom to count. For example in question 1 some respondents were unsure how to count spouses that worked away from the home during the week.

▶ Not knowing the right answer at the central location. For example in question 2 some respondents did not know the level of education attained by his or her spouse.

The low discrepancy rates had minor effect on the poverty likelihoods. Basically, for this study, data collection at a central location was as accurate as the in-home survey collection. This is likely because questions were asked by trained enumerators who could clarify any confusing terms or questions.

The results here most closely reflect option 2 discussed above; where for the most part answers remain unchanged between the two methodologies and overall poverty likelihoods are unchanged.

TABLE 2

Poverty Line	Average In-Home Likelihood	Average Collection Center Likelihood	Differences in Average Likelihoods
National Poverty Line	52.58%	53.06%	0.48%
150% of National Poverty Line	79.84%	80.16%	0.32%
National Food Poverty Line	15.31%	15.54%	0.23%
USAID "extreme"	27.15%	27.51%	0.36%
$1.25/day 2005 PPP	0.91%	0.95%	0.04%
$2.50/day 2005 PPP	14.07%	14.30%	0.23%

The difference between at in-home and collection center surveys were not statistically significant. The differences are all less than .5% and indicate that the poverty likelihoods nearly identical for both collection method types.

Because average poverty likelihoods were relatively unchanged, this indicates that delivering the PPI in a frequently visited central location could be a viable option for organizations that are not able to do in-home PPI data collection.

PPI Collection via SMS
August - October 2012
Murang'a & Nkubu, Kenya

Will administering the PPI using SMS be as accurate as using in-home interviews?

Overall, there was a 30% discrepancy rate between the SMS data collection and the in-home follow up survey. However when translated to poverty likelihoods, the differences were not significant. Due to the relatively small sample size, and issues related to administering the PPI survey via SMS; strong conclusions regarding the viability of SMS as an alternative to in-home collection cannot be drawn from this pilot. While valuable lessons were drawn from the pilot test, further testing will be carried out in 2013-2014.

Process

The PPI was sent to 300 clients of Juhudi Kilimo, an agricultural services organization, using a SMS survey platform administered by mSwali. Of those clients, 73 responded and received a follow up face-to-face interview administered by an enumerator. Responses to the SMS and in-person PPI surveys were compared in order to measure discrepancies in responses.

Participants were divided into three groups:

▶ Informed of survey in advance and self registered; received air time as a reward for completion.

▶ Informed of survey in advance and self registered; did not receive reward for completion.

▶ Were not informed of survey in advance; received air time as a reward for completion.

For all three groups, follow up in-person interviews were conducted in the clients' homes. At this time the ten PPI questions were asked. Enumerators asked if respondents understood the question. If SMS answers varied from the response given in-person, the enumerator asked why there might be a difference in the responses.

Results

On average, respondents gave different answers to the SMS and follow up survey 29.60% of the time. For the question breakdown see Table 3 below.

TABLE 3

Indicator Number	Discrepancy Rate
1	36.49%
2	37.84%
3	66.22%
4	22.97%
5	22.97%
6	20.27%
7	8.11%
8	14.86%
9	8.11%
10	58.11%
Average	29.60%

Major reasons for discrepancies, as indicated by follow up questions:

▶ Translation error in question 10, due to a faulty translation of the word "frying pan" into Kiswahili.

▶ Confusion around key terms; respondents indicated they did not understand some of the SMS questions.

Despite the high average discrepancy rate, poverty likelihoods did not vary significantly; answers were different but final poverty likelihoods were similar. The fourth column in Table 4 indicates that the differences in the average likelihoods are relatively small (all less than 4.4%).

The results here reflect the previously mentioned Option 3: people answer differently, but their poverty likelihoods are not significantly altered.

TABLE 4[*]

Poverty Line	Average In-Person Likelihood	Average SMS Likelihood	Differences in Average Likelihoods
National Poverty Line	4.4%	6.0%	-1.5%
150% of National Poverty Line	17.3%	21.3%	-4.0%
National Food Poverty Line	0.6%	0.7%	-0.1%
USAID "extreme"	0.8%	1.0%	-0.2%
$1.25/day 2005 PPP	1.7%	2.5%	-0.8%
$2.50/day 2005 PPP	16.8%	21.2%	-4.4%

When testing using the $2.50 and $1.50 lines (above) there was no statistically significant differences between the two methods (at a 95% confidence level). This was not the case using the USAID extreme poverty line where there was a statistically significant difference between in-person and SMS samples.

Because average poverty likelihoods were relatively unchanged, this indicates that delivering the PPI via a SMS platform could be a viable option for organizations that are not able to do in-home PPI data collection. However, a low sample size, translation errors, and a high discrepancy rate means further testing is required to determine the overall viability of SMS PPI data collection.

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[*] Note that this Kenya survey was of a relatively well off population (the poverty likelihoods are low, thus there is little chance that these individuals are poor according to the PPI). It is possible that a similar discrepancy rate (30%) would have a greater effect on poverty likelihoods amongst a sample that was 'poorer'. This will be addressed in research in the coming year.

Conclusions

Outlined below are some benefits and drawbacks of each approach to PPI collection.

	BENEFITS	DRAWBACKS
CENTRAL LOCATION **Peru Study**	▶ Perception of central location will dictate turn out ▶ High turnout if location is already frequented by respondents or centrally located ▶ Less time-consuming and costly than in home surveys ▶ Enumerators can clarify confusing questions ▶ Allows for lack of literacy	▶ Perception of central location will dictate turn out ▶ Possible low turnout if location is not normally frequented by respondents ▶ Rural locations may face lower turnout because of travel required ▶ More time consuming and costly than SMS or mail ▶ Interviewer bias ▶ Possible time-consuming data tabulation
SMS **Kenya Study**	▶ Low cost and low labor (after initial investment) ▶ Easy to compensate respondents ▶ No interviewer bias ▶ Data is easy to tabulate ▶ Less time-consuming	▶ Requires client literacy ▶ Bias toward houses with mobile phones ▶ May be difficult to articulate survey purpose ▶ Client mistrust in revealing personal information via SMS ▶ Inability to clarify questions or terms ▶ Can require compensation for airtime used when responding to survey ▶ Difficult to control participation; low response rate (only 29% of people who received the SMS survey responded) ▶ Initial expertise and funding required to create SMS platform
IN HOME **Standard**	▶ Enumerators can clarify terms and questions ▶ High response rate ▶ Enumerators can verify answers with observations ▶ Allows for lack of literacy	▶ Challenges in locating client homes ▶ Time and money intensive when compared to SMS ▶ Interviewer bias

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