

The World Bank Listening to LAC (L2L) Pilot Project Implementation and Challenges Report

Background

The World Bank is interested in leveraging the mobile “Short Messaging Service” (SMS) technology as a means of direct communication with poor households in the developing world in order to gather rapid feedback on the impact of economic crises and other historical events on the economy of such households. With such objective in mind, the World Bank partnered with Gallup to launch the “Listening to LAC” (L2L) pilot program. A research exercise aimed at testing the feasibility of the SMS technology as a data collection method for conducting quick turnaround, self-administered, longitudinal surveys among households in Peru and Honduras. As part of this study, the World Bank also tested the feasibility of other technologies (CATI and IVR) in order to establish the comparative advantages and disadvantages of SMS, relative to competing or more established technological options.

The following report details critical aspects of the L2L pilot implementation, such as operational partners and training procedures, as well as fieldwork and technological challenges encountered. The report also discussed ethical considerations associated to such implementation.

(Note: Since the content of this report is intended for populating a broader report being prepared by the World Bank, the numbering and titles of the sections below have been created to match the structure and sequence of such report. For that reason, this report starts at numeral “III” as opposed to “I”)

III. PILOT IMPLEMENTATION

III.A OPERATIONAL PARTNERS

For the execution of field operations for the L2L pilot, Gallup engaged four different operations partners and teams, as follows:

1. Field operations sub-contractor in Peru (Directo).
Directo’s role was to execute the Face to Face data collection and panel recruitment, as well as CATI data collection and panel management, including reminders and retention attempts via telephone. Directo also handled inbound calls from panelist who had technical difficulties or needed clarification.
2. Field operations joint-venture partner in Honduras (CID-Gallup).
Similarly to the role of Directo in Peru, CID-Gallup’s role was to execute the Face to Face data collection and panel recruitment in Honduras, as well as CATI data collection and panel management, including reminders and retention attempts via telephone. CID also handled inbound calls from panelist who had technical difficulties or needed clarification

3. SMS Survey Administration & Transmission Partner (WAU Latin America)
The role of WAU was to program and transmit the SMS surveys to panelists in Peru and Honduras, to receive and process the SMS survey responses, to administer incentives to panelists in the form of mobile phone “airtime”, and to produce automated and dynamic reports.
4. IVR survey operations partner (Gallup’s internal IVR team)
The role of Gallup’s IVR team was to program, administer and process the IVR surveys in Peru and Honduras.

III.B TRAINING

Gallup conducted a total of 12 training sessions with all its operational partners prior to launching the project. The training sessions covered the following topics:

- Survey methodology workshop aimed at identifying and reflecting on the most common sources of survey errors typically encountered in projects like the L2L
- Review of the L2L project’s objectives and methodology
- Panel recruitment and management workshop, including incentive administration and other attrition containment strategies
- Detailed review of (and hands on training on) the L2L Face to Face questionnaire and recruitment protocol
- Live SMS survey self-administration session
- Live IVR survey self-administration session
- Pilot face to face survey administration followed by a simulated recruitment for the panel among a group of actual households

III.B.1 Training Materials Developed

- a. Interviewers guide for each methodology
- b. Owner’s Operation Manuals for most used cell phones
- c. Letter of agreement to participate in the panel
- d. Instruction Manuals for panelists, per the following detail:
 - i. Peru: Nine different manuals were created, one per methodology (SMS, CATI, IVR) and one for each of the 3 incentive schemes (\$0, \$1, \$5)
 - ii. Honduras: One general manual explaining each methodology , with three versions (one for each incentive scheme, \$0, \$1, \$5)

III.B.2 Human Resources

On average, 20 interviewers and 5 supervisors were trained in each country. The interviewers had to pass a rigorous evaluation in order to be eligible for the project. The evaluation consisted on: interviewing techniques, demonstrated understanding of each methodology, and mastery of the questionnaire and sampling procedures.

III.B.3 Training Schedule

The L2L training was conducted in three phases:

1. Introduction: Two day session with local project leaders, supervisors and interviewers to familiarize them with the objectives of the L2L program and the methodologies involved in it.
 - The first day was focused on the objectives, interviewing techniques, sample definition and household selection.
 - The second day focused on the methodologies to be implemented and the questionnaire
2. Hands on test methodologies and discussion of possible respondent reactions: One day session. Half day reviewing the methodologies and testing the Demos. And half day practicing the questionnaire in the field, and making the necessary modifications.
3. Final testing: Two day session. One day reviewing the final materials and one day conducting mock up interviews in the field with final materials

III.C FIELD DATA COLLECTION CHALLENGES

This section will explain the challenges encountered in the field before, during and after data collection, and how they were addressed.

Problem/ Concern (and contributing factors)	Implications	Actions Taken/ Recommended
1. Prospective panelists distrust cellular operators to waive the cost of the SMS messages	Widespread distrust could have affected the survey's take up rate and/ or increase attrition rate	<ul style="list-style-type: none"> • Reassurance language was included in the interviewer's recruitment protocol
2. Generalized, growing distrust in surveys due to frequent scams and fraud	Widespread distrust could have affected the survey's take up rate and/ or increase attrition rate	<ul style="list-style-type: none"> • Create handout with Gallup's field partner information, website, and 800 number for panelist to use in case of questions or concerns • Include World Bank's and Gallup's mission in handout
3. Respondent's perception that monthly contact would be bothersome and/or cumbersome	Widespread perception could have affected the survey's take up rate	<ul style="list-style-type: none"> • Panelist recruitment protocol emphasized that only one 5-minute survey would be required per month • The number of questions was indicated in the welcome message • Respondents were informed of a tentative survey schedule indicating the approximate dates on which they should expect to receive the monthly surveys

Problem/ Concern (and contributing factors)	Implications	Actions Taken/ Recommended
<p>4. Respondents losing track of question order because the initial words were the same for some questions, and questions remained in inbox after responded.</p> <p>(No question numbers were used during test run. A few of the order confusions occurred when respondents received other personal text messages or phone calls during survey completion A total of 26 questions were sent as part of test run The only label identifying the test SMS messages was the short code number of origin)</p>	<p>These problems could have compromised survey reliability</p>	<ul style="list-style-type: none"> • Question numbers were used in production mode • An instruction to watch question numbers was added to the recruitment protocol • No survey exceeded 10 questions
<p>5. Concern about SMS and IVR surveys being unusual experiences for most panelist, with the possibility of certain demographics (i.e. older, residents of rural locations) not feeling capable or comfortable with the task</p>	<p>Might have caused higher non-response and/or attrition in certain demographics or areas, producing a coverage bias</p>	<ul style="list-style-type: none"> • Heads of households who expressed difficulty with text messaging were encouraged to team up with a household member 15 year or older who was more comfortable with the technology
<p>6. Concern about respondents receiving the surveys at times when they are not available to respond</p> <p>(i.e. residents of rural areas who spend most of the day at farms)</p>	<p>Might have caused higher non-response and/or attrition rates</p>	<ul style="list-style-type: none"> • Aggregator's historical response pattern statistics were leveraged to make decisions on survey submission times
<p>7. Interviewer concern about the possibility of encountering multi-family households</p> <p>(more, specifically, since the unit of analysis for this study is the household, interviewers asked which family they should select as the unit of analysis in multi-family households)</p>	<p>Discretionary selection of the family for the purpose of the survey might have generated a systematic bias</p>	<ul style="list-style-type: none"> • The family of the owner/tenant of the dwelling was considered the unit of analysis

Problem/ Concern (and contributing factors)	Implications	Actions Taken/ Recommended
<p>8. Concern about utilizing different incentive schemes within the same conglomerates</p> <p>(Original plan was to randomly assign the 3 incentive schemes at the household level, as opposed to conglomerate level)</p>	<p>Panelists are likely to talk about their participation in the study with their neighbors. Therefore, there exists the possibility that panelists assigned to less favorable incentive schemes would drop out of the panel after learning that some of their neighbors were receiving a greater incentive</p>	<ul style="list-style-type: none"> • Incentive schemes were randomly assigned at the conglomerate level, as opposed to household level.
<p>9. Socio-political conflict and crime problems in some areas of the country selected in the sample</p> <p>(Anti-mining general strike and riots in Cajamarca, Tacna and Apurimac departments (Peru) in Nov-Dec 2011. Threats, intimidation and temporary arrest of interviewers by civilian and indigenous authorities in Huancavelica, Pasco and San Martin departments (Peru). Interviewer crews assaulted, cell phones and surveys stolen in Honduras)</p>	<p>Risk for the interviewers and supervisors Delays in fieldwork execution</p>	<ul style="list-style-type: none"> • A decision was made to delay fieldwork until stability returned to affected areas • “Centros Poblados” were substituted within the same “Conglomerate” selected. Whenever it was impossible to access the selected “Conglomerate” the corresponding interviews were not conducted. “Conglomerate” substitutions were not implemented.
<p>10. Face to face surveys from distant locations arriving at the central processing centers later than expected</p> <p>(For efficiency purposes, completed paper questionnaires need to be sent in batches. This causes that the first surveys completed need to wait until all the surveys in its region are completed before they can be sent and processed. This time lag gets aggravated whenever quality issues are detected at the central processing center or during field supervision. Therefore, this time lag limits the ability to send follow-up surveys via SMS or otherwise to these households in a timely manner)</p>	<p>This problem can negatively affect the take-up of the follow up surveys</p>	<ul style="list-style-type: none"> • For a scaled-up phase of this project, an on-site electronic capture and transmission of the F2F surveys is recommended. This could be accomplished by means of a handheld device equipped with a CAPI software • This solution could also result in reduced data processing time, as the data would be entered clean (i.e. free of skip pattern errors or out of range responses)

III.D TECHNOLOGICAL CHALLENGES

The following section explains the challenges relating to setting up 2 of the mobile communications methods (SMS, and IVR) and the decisions taken to solve them for the L2L pilot, as well as recommendations for a scaled up phase of the L2L project. No technical challenges were faced with the use of the CATI methodology.

Problem/ Concern (and contributing factors)	Implications	Actions Taken/ Recommended
<p>11. Reception delays between questions. Survey transmission “freeze up”:</p> <p>(During simulated SMS survey it was discovered that stoppage occurs when cellular phones have reached SMS storage capacity. Surveys resumed after inbox is cleaned up. In some cases, questions were received in a random order after inbox cleanup. Some delays were also experienced even when inbox had available capacity.)</p>	<p>If problem had been generalized it could have affected take up rate and data reliability. I could have also frustrated panelists and increased attrition rate</p>	<ul style="list-style-type: none"> • Aggregator made corrections to the interconnection platform in order to eliminate the possibility of panelist receiving out of sequence questions • A dedicated communication channel was used in the survey production mode in order to improve delivery times • Recruitment protocol included an instruction for the panelist to keep the inbox clean. This instruction was reminded as part of the survey’s “help” screen message • As part of the welcome message, respondents were told how many questions to expect • A “Help” message let panelists know that the survey would only finish when a good-bye message ending with the word “FIN” was received, and that incentives will apply if they complete the survey.
<p>12. Some mobile operators only allow for 140 characters per SMS messages, as opposed to the standard 160 characters</p>	<p>Uniform question wordings would not have been possible had this problem not been solved. All questions would have had to fit into 140 character format affecting question quality/ richness</p>	<ul style="list-style-type: none"> • Negotiations had to be conducted with mobile operators so that all panelists could benefit from the 160 character format for this study regardless of their SMS plan
<p>13. Data integration difficulties due to differences in data sources and data handling approaches on the part of the four operation partners involved in the project</p>	<p>Labor intensive data standardization and coding processes. Manual, ad-hoc designed data handling processes generated countless errors</p>	<ul style="list-style-type: none"> • Further standardized processes and templates for data capture and reporting • These processes require complex automation which is currently inexistent due to the unique, ad-hoc nature of this project

Problem/ Concern (and contributing factors)	Implications	Actions Taken/ Recommended
<p>14. Delayed approval by cellular phone carriers of bulk short-code messaging under standard business model (with no charge for users)</p> <p>(Although the option of long-code messaging was available, it was not implemented due to the risk of carriers possibly treating the surveys as "spam" and shutting down traffic)</p> <p>(In order to implement a short-code solution, carriers require that an aggregator -third party company interconnected with the carrier's transmission protocol- be involved as an intermediary)</p> <p>(Excessive bureaucracy on the part of cell phone carriers complicated the project execution)</p>	<p>Delayed commencement of the project in both countries</p> <p>If long-code solution had been implemented, a temporary traffic shut down on the part of the carriers could have disrupted the timeliness of survey submission, which was an essential feature of the methodological design. A permanent or prolonged traffic shut down could have compromised the feasibility of the project altogether</p>	<ul style="list-style-type: none"> • In order to roll out a scaled-up version of this SMS panel project, upfront negotiation with cellular phone carriers and aggregators is strongly recommended
<p>15. Lack of automation of sample and incentive administration</p> <p>(Due to the ad-hoc and unique nature of this project, the processes for managing the sample and crediting the incentives to panelists had to be done manually, which caused errors and delays)</p>	<p>The first months of the implementation a few panelists were not credited their incentives in a timely fashion, while others were credited double incentive. In some cases, incentives were credited but notifications to panelists were not sent on time. Had these problems been generalized, it could have negatively impacted attrition rate</p>	<ul style="list-style-type: none"> • In order to avoid these problems in a scaled up version of the project, sample and incentive manipulation would need to be automated
<p>16. Inability of cellular accounts associated to fixed monthly payment plans to receive incentives in the form of "airtime" replenishment</p> <p>(only phones activated under a "pay-per-use" plan can be replenished with "airtime")</p>	<p>A potentially higher take-up or attrition rate among panelists subscribed to monthly payment plans could have caused a misrepresentation of middle-upper socioeconomic groups in the panel</p>	<ul style="list-style-type: none"> • Alternative incentives were given to panelists with monthly plans (offer "airtime" to any pre-paid cell phone in the household) • This problem is less likely to limit the inclusion of panelists with monthly plans in the future, since these cell phone users are likely to be the first ones to migrate to smartphones, which offer multiple possibilities for alternative incentives (i.e. free apps, e-money etc.)

Problem/ Concern (and contributing factors)	Implications	Actions Taken/ Recommended
<p>17. Inability of cellular phones to call 800 numbers in some countries</p> <p>(Setting up a 1-800 help line for panelists facing technical difficulties completing the surveys, or having concerns about their legitimacy was essential to this project)</p>	<p>Not being able to troubleshoot technical issues or have questions/ concerns answered might result in increased panelist attrition</p>	<ul style="list-style-type: none"> • Implement a paid phone number solution and compensate panelists with “airtime” • Set up an attrition management process by which non-responsive panelists receive calls, notifications and reminders. However, such process should not replace the in-bound help line
<p>18. Outbound IVR calls being missed or not properly identified by panelists</p> <p>(Unlike SMS messages -which stay on panelist’s phone inbox for a long time after being received- outbound IVR calls are missed if the panelists don’t answer them immediately. Also, occasionally, IVR recordings may start playing before respondents actually have the phone next to the ear, which may result in respondent not understanding or identifying the call properly and hanging up)</p>	<p>These issues may contribute to explain the lower response rate observed for IVR relative to SMS and CATI.</p>	<ul style="list-style-type: none"> • It is recommended that Outbound IVR be used in conjunction with SMS. A text message containing a survey invitation and the phone number to call would be sent to panelists so that they could perform an inbound call whenever they are ready to answer the survey • However, inbound IVR might not work if the central IVR box is located in a different country, as some most countries do not allow dialing into foreign toll free numbers. Therefore, IVR infrastructure would need to be housed in each participating country, which could be costly and impractical

V. ETHICAL CONSIDERATIONS

The following sections highlight some ethical considerations associated with the L2L survey model.

- Due to the fact that mastery of the SMS technology is more prevalent among younger individuals, there is a possibility that household surveys be responded by unauthorized minors. Therefore, the survey sponsoring and administering entities must ensure that proper authorization is sought from the head of the household or the minor's legal representative before engaging in surveying such minors.
- Due to the sensitiveness of the data transmitted in SMS surveys such as the L2L survey, it is imperative that the SMS transmission protocol has the proper data encryption mechanisms in place to avoid third parties possibly re-constructing the information sequences and eventually accessing private information from respondents.
- SMS "bulk" messages such as SMS surveys must always be sent to respondents who have previously granted their consent to be accessed via SMS (such as in the case of a pre-recruited panel). Sending SMS surveys to random, unknown mobile phone subscribers might infringe anti-spam regulations in certain countries.
- Survey administering entities must perform due diligence to ensure that mobile phone subscribers receiving SMS surveys will not incur any costs for responding the surveys, without previous notification that such costs might possibly be incurred, or without having agreed on mechanisms to provide fair compensation to respondents.