GALLUP

The World Bank Listening to LAC (L2L) Pilot Project
Sample Design for Honduras

Background

The Listening to LAC pilot program is 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 Latin America.

The purpose of this document is to provide a complete and comprehensive description of the procedure used to draw the sample for Listening to LAC project using the 2011 Gallup World Poll as a sampling frame.

Sample Design Premises

The sample design was guided by the following criteria:

1. The sample should be nationally representative including both, urban and rural areas;
2. The L2L must adopt the sampling frame used by the GWP because the project objectives call for a comparison of data collected by both surveys, at the level of Secondary Sampling Units (SSU's).
3. The unit of analysis should be the household

Technical Note on Oversampling Households Around the Poverty Line

The World Bank requested a disproportionate sample design that over-represents households around the poverty line. That is, households placed in the 40 percent of the income distribution that symmetrically bands the national poverty line: 20% above and 20% below. According to such request, 60 percent of the interviews had to be conducted within this income band.

Typically, disproportionate designs such as the one requested by the World Bank are recommendable when the survey objectives call for robust readings of a phenomenon that is not abundant in the population under study. As previously noted, the phenomenon of interest in this case would be the responses from households that are close to the poverty line.

According to the INEI – Honduras's National Statistics Office-, in 2010 sixty percent of the Honduran households fell below the country's poverty line (INE 2010)[1], which means that households with income levels close to this parameter are rather abundant in the country.

Another important aspect in judging on the need for oversampling households around the poverty line, would be the fit of the sampling frame being used for adequately representing the country's income distribution. Therefore, in order to evaluate how close the GWP's sampling frame reflects such distribution, income estimates from this survey have been examined for the period 2008-2010. Additionally, the average

1 Instituto Nacional de Estadísticas (INE) de Honduras. Encuesta Nacional de Hogares 2010

price of the food basket (which is the indicator used by the INE as the national poverty line) has been examined for the same period as a reference point. The table below shows the results of such analysis:

	Lower Limit / 58th percentile (Lempiras)	Higher Limit/ 62nd percentile (Lempiras)	Midpoint (Lempiras)
60th percentile of monthly HH income distribution*	**3,950**	**4,700**	**4,325**
Price of basic food basket 2008-2010 (average for month of December)**			**4,532**

(*) Source: Gallup World Poll Surveys of Honduras 2008-2010 (average for the period, based on three annual measurements of n-1,000 cases each). Total sample size n=3,002. Sampling error +/- 1.75% at 95% confidence level.
(**) Source: Centro de Investigaciones Económicas y Sociales IES-COHEP, Based on data from SECRETARÍA DE TRABAJO Y SEGURIDAD SOCIAL, DIRECCIÓN GENERAL DE SALARIOS; SECRETARÍA DE INDUSTRIA Y COMERCIO

As the above table shows, the average national poverty line for the period under study (L.4,532) falls within sampling error of the 60th percentile of the income distribution reported by the GWP survey. This suggests that the GWP sample accurately reflects the country's income distribution, as it relates to proportions of households above and below the poverty line. Therefore, a robust enough sample size of this segment should be expected by using such sampling frame.

Based on the above, Gallup deems unnecessary (and recommends against) oversampling households around the poverty line as part of this study.

The "Gallup World Poll" Sample Design

As the 2010 Gallup Word Poll is being used as a sampling frame, a brief description of this survey's sampling design is in order.

The GWP uses the Honduras Census as its sampling frame. The least disaggregated territorial unit reported by the country's National Institute of Statistics (entity that conducts the census), are geographic conglomerates known as "barrios"/ "aldeas"/ "caseríos" and "colonias" (translated on the table below as "neighborhoods"). Therefore, these neighborhoods are the Primary Sampling Units (PSU's) in the GWP sample design. Within each PSU, Gallup selects "random origins" (starting points in the field) from which interviewers follow a systematic random route for selecting households. These "random origins" are also known as Secondary Sampling Units (SSU's). In every survey administration, Gallup selects 125 such SSU's.

The Honduras GWP sample is drawn by means of a random, stratified, multistage design. The following is a description of such design, as well as the procedures involved in selecting the sampling units all the way to the respondent level:

1. Census-defined municipalities are classified into five strata according to population size, as follows:

   I.- Municipalities with 500.000 to 999.000 inhabitants
   II.- Municipalities with 100.000 to 499.000 inhabitants.
   III. Municipalities with 50.000 to 99.000 inhabitants.
   IV. Municipalities with 10.000 and 49.000 inhabitants.
   V. Municipalities with less than 10.000 inhabitants.

2. Interviews are then proportionally allocated to these five strata according to their share of the country's population.

3. The ***First Stage*** of the design consists of randomly selecting PSU's within each of the five strata previously defined. This procedure is performed by assigning each PSU a probability of selection which is proportional to the size of its population. As a result, larger PSU's are not only more likely to be selected than smaller ones, but the number of interviews allocated to them is also greater.

4. In each PSU, one or more SSU's are then selected. The number of SSU's to be selected depends on the total number of interviews allocated to the PSU, and the number of interviews to be conducted in each SSU, as indicated by the design (a maximum of 12 in the case of the L2L survey). So, for instance, in the neighborhood known as "La Ceiba" (see table below), a total 48 interviews have been allocated. Therefore, 4 SSU's are needed in this PSU. The selection of SSU's is the ***Second Stage*** of the sample design.

5. Once SSU's have been selected, interviewers are sent to the field to proceed with the ***Third Stage*** of the sample design, which consists of selecting households by means of a systematic "random route" procedure. Interviewers start form the previously selected "random origin" and walk around the block in clockwise direction, selecting every third household on their right hand side. They are also trained to handle vacant, non-responsive, non-cooperative households, as well as other failed attempts in a systematic manner. Gallup keeps records of all failed attempts in a standard "route sheet" in order to perform sample disposition calculations and estimate the rates of contact, response, refusal, and cooperation.

   The following table offers further details about the sample, as designed for the L2L survey, based on the 2011 administration of the GWP in Honduras. Sampling units are listed up to the SSU level.

L2L HONDURAS SAMPLE	
1. Universe	All the households that exist in the neighborhoods of Honduras, as reported by the INE 2001 Census. Institutions such as military, religious or educational living quarters are not included in the universe.
2. Geographic Coverage	Includes the entire national territory, with the exception of neighborhoods where access of interviewers is extremely difficult, due to lack of transportation infrastructure or for situations that threaten the physical integrity of the interviewers and supervisors (i.e. extremely high crime rate, warfare, etc)
3. Number of Cases	1500 cases.
4. Sampling Error	±2.5 percent points for results based on the total sample
5. Calculation of sampling error:	95% confidence level (z=1.96; p=0.5 and q=0.5)
6. Sample type	Random multi-stage stratified sample, based on SSU's from the most recent census conducted in Honduras (2001).

7. Survey List

Department	Municipality	Village	Neighborhood (PSU's)	Total SSU's x Interviews (1x12)	Size of Municip. Population	Stratum
Atlántida	La Ceiba	La Ceiba	La Ceiba	12	140931	II
Atlántida	La Ceiba	La Ceiba	La Ceiba	12	140931	II
Atlántida	La Ceiba	La Ceiba	La Ceiba	12	140931	II
Atlántida	La Ceiba	La Ceiba	La Ceiba	12	140931	II
Atlántida	Esparta	Los Cerritos	El Hormiguero o Protección	12	15486	IV
Atlántida	La Masica	San Juan Pueblo	San Juan Pueblo	12	22682	IV
Atlántida	Tela	Buena Vista	Buena Vista	12	82499	III
Atlántida	Arizona	Arizona	Arizona	12	19660	IV
Colon	Trujillo	Jericó	Jericó	12	49109	IV
Colon	Bonito Oriental	El Antigual	El Tarral	12	23307	IV
Colon	Sonaguera	Isleta Central	Campo Oscuro	12	37448	IV
Colon	Limón	Limón	La Fortuna	12	8331	V
Comayagua	Comayagua	Comayagua	Comayagua	12	96450	III
Comayagua	Comayagua	Comayagua	Comayagua	12	96450	III
Comayagua	El Rosario	El Rosario	El Rosario	12	34378	IV
Comayagua	La Libertad	Santa Fe	Santa Fe	12	20333	IV
Comayagua	San Jerónimo	San Jerónimo	Col. Irlanda	12	191040	II
Comayagua	San Jerónimo	Jardines	Jardines	12	191040	II
Comayagua	Siguatepeque	Siguatepequ ue	Siguatepeque	12	64704	III
Comayagua	Villa de San Antonio	Villa de San Antonio	Villa de San Antonio	12	16758	IV
Copan	Santa Rosa de Copán	Santa Rosa de Copán	Santa Rosa de Copán	12	40309	IV

Copan	Copán Ruinas	Copán Ruinas	Copan Ruinas	12	29378	IV
Copan	Cucuyagua	Ojos de Agua	Ojos de Agua	12	11398	IV
Copan	Florida	Plancitos o Berlín	Plancitos o Berlin	12	24983	IV
Copan	Nueva Arcadia	Los Tangos	Los Tangos	12	30136	IV
Copan	Santa Rita	Santa Rita	Santa Rita	12	44085	IV
Cortés	San Pedro Sula	San Pedro Sula	San Pedro Sula	12	515458	I
Cortés	San Pedro Sula	San Pedro Sula	San Pedro Sula	12	515458	I
Cortés	San Pedro Sula	San Pedro Sula	San Pedro Sula	12	515458	I
Cortés	San Pedro Sula	San Pedro Sula	San Pedro Sula	12	515458	I
Cortés	San Pedro Sula	San Pedro Sula	San Pedro Sula	12	515458	I
Cortés	San Pedro Sula	San Pedro Sula	San Pedro Sula	12	515458	I
Cortés	San Pedro Sula	San Pedro Sula	San Pedro Sula	12	515458	I
Cortés	San Pedro Sula	San Pedro Sula	San Pedro Sula	12	515458	I
Cortés	Potrerillos	Potrerillos	Potrerillos	12	17728	IV
Cortés	Choloma	Choloma	Choloma	12	176789	II
Cortés	Choloma	Choloma	Choloma	12	176789	II
Cortés	Choloma	Choloma	Choloma	12	176789	II
Cortés	Choloma	La Jutosa	La Jutosa	12	176789	II
Cortés	Omoa	Nuevo Tulián	Nuevo Tulián	12	30148	IV
Cortés	Puerto Cortés	Puerto Cortés	Puerto Cortés	12	103033	II
Cortés	Puerto Cortés	Bulichampa	Los Pizotes	12	103033	II
Cortés	Puerto Cortés	Puerto Cortés	Puerto Cortés	12	103033	II
Cortés	San Antonio de Cortés	Las Crucitas	El Pimiental	12	19158	IV
Cortés	San Manuel	La Sabana	La Sabana	12	30740	IV
Cortés	Santa Cruz de Yojoa	Peña Blanca	Peña Blanca	12	65901	III
Cortés	Villanueva	Calán	Calán	12	91613	III
Cortés	Villanueva	Santa Ana de Chasnigua	Las Vegas	12	91613	III
Cortés	La Lima	El Paraíso	Col. Lupo Nuevo	12	62443	III
Choluteca	Choluteca	Choluteca	Choluteca	12	134452	II
Choluteca	Choluteca	El Trapiche	La Trinidad	12	134452	II
Choluteca	Choluteca	Choluteca	Choluteca	12	134452	II
Choluteca	Choluteca	San Martín	San Martín	12	134452	II
Choluteca	Concepción de Maria	El Papalón	El Papalón	12	24406	IV
Choluteca	El Triunfo	El Triunfo	El Triunfo	12	35830	IV
Choluteca	Marcovia	Las Arenas	Las Arenas	12	37824	IV
Choluteca	Namasigue	Tierra	Las Marías	12	25144	IV

		Blanca				
Choluteca	San Isidro	El Caulote	El Bajío	12	6446	V
El Paraiso	Alauca	Alauca	Alauca	12	7880	V
El Paraiso	Danlí	Danlí	Danli	12	145024	II
El Paraiso	Danlí	Jutiapa	Jutiapa	12	145024	II
El Paraiso	Danlí	Danlí	Danli	12	145024	II
El Paraiso	Danlí	Santa María	San José de Guanacalí	12	145024	II
El Paraiso	El Paraíso	El Paraíso	El Paraiso	12	36546	IV
El Paraiso	Liure	Bocuire	Las Tres Ceibas	12	9707	V
El Paraiso	Soledad	San Diego	Las Lagunetas	12	9542	V
El Paraiso	Trojes	Trojes	Trojes	12	34279	IV
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	Distrito Central	Distrito Central	12	850227	I
Francisco Morazán	Distrito Central	El Piliguín	La Pacaya	12	850227	I
Francisco Morazán	Cedros	Pueblo Nuevo	Pueblo Viejo	12	17721	IV
Francisco Morazán	Curarén	El Portillo de San Juan Bosco	Llano Grande	12	17064	IV
Francisco Morazán	La Libertad	El Pedrero	El Obraje	12	20333	IV
Francisco Morazán	Orica	Guatemalit a	Guatemalita	12	10575	IV
Francisco Morazán	San Ignacio	El Escano de Tepale	El Escano de Tepale	12	7114	V
Francisco Morazán	Talanga	El Rosario o Laja Picada	El Rosario o Laja Picada	12	28543	IV
Intubuca	La Esperanza	La Esperanza	La Esperanza	12	7411	V
Intubuca	Intibucá	Azacualpa	Azacualpita	12	40144	IV
Intubuca	Magdalena	Magdalena	El Paraíso	12	4079	V
Intubuca	Santa Lucía	Santa Rita	El Coyolar	12	11712	IV
La Paz	La Paz	Tepanguar e	Piedra de Moler	12	31008	IV
La Paz	Marcala	Marcala	Mezcalito	12	21460	IV
La Paz	Santa Elena	Soloara	Llano de Maco	12	6829	V
Lempira	Gracias	El Sile	El Rodeíto	12	31422	IV
Lempira	Guarita	Guarita	Guarita	12	7769	V

Lempira	La Virtud	El Amatillo	El Amatillo	12	5978	V
Lempira	San Andrés	San Andrés	El Carrizal	12	10224	IV
Lempira	San Sebastián	San Antonio	San Miguelito	12	10545	IV
Ocotepeque	Belén Gualcho	Belén Gualcho	Belén Gualcho	12	11345	IV
Ocotepeque	San Francisco del Valle	El Sile	El Barro	12	6115	V
Ocotepeque	Concepción	Concepción	Concepción	12	3793	V
Olancho	Juticalpa	La Concepción	La Concepción	12	93726	III
Olancho	Catacamas	Catacamas	Catacamas	12	87845	III
Olancho	Silca	Santa Elena	Olivera	12	6882	V
Olancho	Gualaco	San Antonio de Pacura	Guiscoyol	12	17271	IV
Olancho	Guata	La Estancia	Monte Redondo	12	9446	V
Olancho	San Francisco de Becerra	Laguna Seca	Laguna Seca	12	6861	V
Olancho	Santa María del Real	El Guayabito	El Destino	12	8931	V
Santa Barbara	Santa Bárbara	Santa Bárbara	Santa Bárbara	12	30263	IV
Santa Barbara	Azacualpa	Agualote	Agualote	12	16152	IV
Santa Barbara	Ilama	San José de Oriente	Las Crucitas	12	8189	V
Santa Barbara	Petoa	Pueblo Nuevo	Las Crucitas	12	9521	V
Santa Barbara	Quimistán	El Venado	El Venado	12	29761	IV
Santa Barbara	San Marcos	San Marcos	San Marcos	12	26376	IV
Santa Barbara	Trinidad	La Unión		12	15897	IV
Valle	Alianza	Sonora	El Estero	12	6923	V
Valle	Aramecina	Aramecina	Aramecina	12	6035	V
Valle	San Francisco de Coray	Montecristo	Tamayito ó Monte Cristo Abajo	12	8551	V
Yoro	Yoro	Guare	Chamuscado	12	67834	III
Yoro	Arenal	Arenal	Arenal	12	4806	V
Yoro	El Progreso	El Progreso	El Progreso	12	157188	II
Yoro	El Progreso	El Progreso	El Progreso	12	157188	II
Yoro	El Progreso	Campo Coob	Campo Coob	12	157188	II
Yoro	Jocón	La Rosa	La Rosa	12	7449	V
Yoro	Olanchito	Olanchito	Olanchito	12	83749	III
Yoro	Olanchito	Nombre de Jesús	Nombre de Jesus	12	83749	III
Yoro	Sulaco	San Juan	Quebrada Arriba	12	13292	IV