[OMNIBUS PUBLIC OPINION SURVEY, FREBRUARY 2018]

Methodological report

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1. Background

This report includes information regarding the methodology of the February edition of our quarterly omnibus public opinion survey 2018.

2. Target population

Mexican adults enrolled as voters, 18 years of age or older, who reside in housing units within the national territory.

3. Interviewing mode

Face-to face interviews with structured questionnaires administered by trained interviewers through personal electronic devices (tablet).

4. Brief summary of field incidents

- Due to security reasons we stopped working in *sección electoral* 2391 in Guerrero.
- People in *sección electoral* 200 in Baja California Sur did not trust our interviewers and were reluctant to participate in the study.
- Police officers did not allow interviewers to work in *sección electoral* 939.

Sampling design

In order to achieve a representative sample, Buendía & Laredo used a multistage area probability sample design. The selection of each respondent requires a four step sampling process sketched in Tables 1, 5, 6, 7 and described under the following headlines.

5. First stage: selection of PSUs

Table 1: First stage

Stage	First
Sampling units	Sección electoral
Sampling frame	Catálogo de Información Geoelectoral (EDMSLM, INE). Estadísticos de la Lista Nominal por sección electoral (October, 2017). Cómputos distritales y de circunscripción plurinominal de la elección de Diputados Federales de 2015 por ambos principios (INE, July, 2015).

Selection method	Stratified probability proportional to size systematic sampling

Sampling units

The primary sampling units or (PSUs) are geographical areas termed electoral sections (secciones electorales). All land area in the country is divided into electoral sections, which constitute the basic territorial unit of single-member electoral districts for the registering of citizens to enroll as voters (lista nominal).

The most updated information (October, 2017) shows that national territory is divided into 68,361 electoral sections whose geographical distribution is depicted in Table 2.

Table 2: Geographical distribution of PSUs (October, 2017)

State	PSUs	Percent
Aguascalientes	602	0.88
Baja California	1,949	2.85
Baja California Sur	486	0.71
Campeche	527	0.77
Chiapas	2,041	2.99
Chihuahua	3,208	4.69
Coahuila	1,688	2.47
Colima	371	0.54
Ciudad de México	5,536	8.1
Durango	1,419	2.08
Guanajuato	3,141	4.59
Guerrero	2,749	4.02
Hidalgo	1,782	2.61
Jalisco	3,570	5.22
Estado de México	6,458	9.45
Michoacán	2,692	3.94
Morelos	907	1.33
Nayarit	960	1.4
Nuevo León	2,666	3.9
Oaxaca	2,450	3.58
Puebla	2,656	3.89
Querétaro	860	1.26
Quintana Roo	940	1.37
San Luis Potosí	1,814	2.65
Sinaloa	3,804	5.56
Sonora	1,533	2.24
Tabasco	1,131	1.65

Tamaulipas	2,009	2.94
Tlaxcala	608	0.89
Veracruz	4,815	7.04
Yucatán	1,121	1.64
Zacatecas	1,868	2.73
Total	**68,361**	**100**

Sampling frame

The sampling frame is the listing of electoral sections. The sampling frame is based on electoral sections since the lista nominal is the most updated and complete data readily available. The most recent release date was October 2017. Table 3 depicts the percentage of people living in their correct electoral section by state according to de Verificación Nacional Muestral (INE, 2015).

Table 3: People living in the correct electoral section according to the *Lista Nominal*

State code	State	Percentage of the population
	National Average	**86.1**
1	Aguascalientes	81.5
2	Baja California	77
3	Baja California Sur	80.2
4	Campeche	89.5
5	Coahuila	80.8
6	Colima	79.7
7	Chiapas	89.6
8	Chihuahua	80.9
9	Distrito Federal	88.8
10	Durango	84.6
11	Guanajuato	84.7
12	Guerrero	86.5
13	Hidalgo	89.5
14	Jalisco	81.8
15	México	89.1
16	Michoacán	85.4
17	Morelos	86.2
18	Nayarit	79.6
19	Nuevo León	83.6
20	Oaxaca	89
21	Puebla	88.1
22	Querétaro	88.2
23	Quintana Roo	84.5
24	San Luis Potosí	89.3
25	Sinaloa	83.3
26	Sonora	83.4
27	Tabasco	87.2

28	Tamaulipas	83.4
29	Tlaxcala	91.5
30	Veracruz	88.7
31	Yucatán	86.4
32	Zacatecas	84

Information from the Geoelectoral Information Catalog, acquired in October 2017 from the National Electoral Institute, augmented with the following sources was assembled to create the sampling frame:

- Catálogo de Información Geoelectoral (EDMSLM, INE)
- Estadísticos de la Lista Nominal por sección electoral
- Cómputos distritales y de circunscripción plurinominal de la elección de Diputados Federales de 2015 por ambos principios (INE, July 2015).

Selection method

Stratification Each PSU in the sampling frame is assigned to a nonoverlapping sample stratum based on the following variables:

1. **Region of the country**
2. **Urban/ not urban status**

Strata based on region encompass five geographical regions (multi-member districts or circunscripciones). These regions are used to assign representatives with a Proportional Representation criteria and have a very similar number of registered voters. The main purpose of this stratification is to increase the regional dispersion of the sample.

Table 4: Geographical regions (*Circunscripciones*)

Circunscripción	States
One	Baja California, Baja California Sur, Chihuahua, Durango, Jalisco, Nayarit, Sinaloa, Sonora
Two	Aguascalientes, Coahuila, Guanajuato, Nuevo León, Querétaro, San Luis Potosí, Tamaulipas, Zacatecas
Three	Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco, Veracruz, Yucatán
Four	Ciudad de México, Guerrero, Morelos, Puebla, Tlaxcala
Five	Colima, Hidalgo, Estado de México, Michoacán

Figure 1: *Regional strata (Circunscripciones electorales)*

Strata are also defined according to the state of urbanity of the electoral section (Urban/Not Urban). The purpose of this stratification is to reduce the variance of estimates that may be statistically related with the urbanity of electoral sections.

Urban section: It is located in an urban locality and it is formed by well-defined blocks. Urban sections have street names and a series of public services such as tap water and electricity. Usually both street names and public services are officially recognized by the local authorities. These sections are graphically represented on the sectional urban map.

Rural section: A rural electoral section is constituted by one or many rural localities that on their own cannot form an electoral section. These sections are characterized by the preeminence of open places that are dedicated to primary economic sectors. The public services in these localities are either limited or inexistent. We collapse rural and mixed section together to form strata.

Mixed section: These sections are geographical areas that are divided by a series of blocks that form part of an urban locality; however, one or many rural localities are also present. Due to the fact that these sections are a combination of the characteristics described in urban and rural sections, it is common to witness an interaction of spaces dedicated to primary economic sectors and housing units. We collapse rural and mixed section together to form strata.

Sampling method Within each stratum, electoral sections are selected conducting a systematic sampling with probability proportional to its size (PPS). The size of electoral sections is the number of

registered voters (lista nominal). As the number of registered voters varies from one electoral section to other, PPS enables selecting individuals with equal chances controlling the sample size so it is the same across other hypothetical samples. This is done by changing the first and further selection chances in such a way that when multiplied together, the probability is equal for every element. We combine PPS with a systematic sampling approach.

6. Second stage: area segments sampling

Table 5: ***Second stage***

Stage	Second
Sampling units	In urban electoral sections, blocks are our second-stage sampling units (SSUs). In rural and mixed sections, the SSUs are clusters of homes.
Sampling frame	Catálogo de Manzanas del INE (AC-01R, INE). Estadísticos de la Lista Nominal por manzana (INE). Planos por sección individual (INE).
Selection method	Systematic sampling method with probability proportional to size.

Sampling units

In urban electoral sections, blocks are our second-stage sampling units (SSUs). A block is defined as a geographic space delimited by streets or avenues. In rural and mixed sections, the SSUs are clusters of homes.

Sampling frame

SSUs are identified and assigned to interviewers through cartographic maps extracted from the sources below:

Plano por sección individual urbano (Source: INE): This product represents the blocks and physical features of a single electoral section. The level of detail in each map allows identifying with more precision the addresses of respondents.

Figure 2: *Individual section representation*

To identify and analyze rural sections, the following product is used:

Plano por sección individual rural/mixto (Source: INE): These maps contain the rural and mixed sections individually. There are certain items exclusive of rural sections such as codes and names of the rural cities, head of section, main road links, physical and cultural features, borders and various codes.

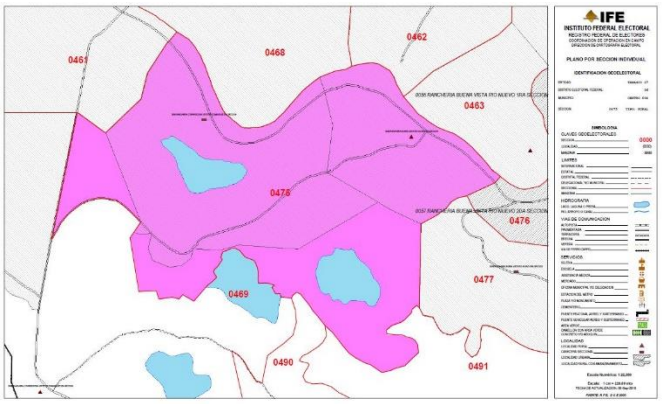

Figure 3: *Individual section representation (Rural section)*

Selection method

Within each sampled PSU, two blocks are selected through a systematic sampling method with probability proportional to size from the Catálogo de Manzanas (INE).

In rural PSUs, the human settlement is divided into quadrants using boundaries such as roads, rail-road tracks, rivers, or other reference relatively fixed and easily identified. Two "main" quadrants are selected in which 5 interviews will be conducted; the rest of the interviews will be conducted in the quadrants left (two, each). We propose to number the quadrants starting with the upper-left quadrant and continuing clockwise. Then, select the main quadrants (in which 5 interviews will be conducted) depending on the questionnaire number. If the last digit of the questionnaire number is even, then the selected quadrants will be 2 and 4; on the other hand, if we have an odd number as last digit, then the selected quadrants will be 1 and 3. Human settlements in selected areas (SSUs) are identified and assigned to interviewers through the "Ubica tu casilla" Google-IFE app, which offers a map/satellite/terrain view of all electoral sections in the country. Housing units that are widely separated from others may be left out of the eligible units.

After stage one and two of selecting PSUs and SSU, the original sample was the following:

State	N° of seccion	Municipality name	Number of SSUs
Aguascalientes	146	AGUASCALIENTES	2
Baja California	105	ENSENADA	2
Baja California	194	ENSENADA	2
Baja California	1290	PLAYAS DE ROSARITO	2
Baja California Sur	200	LA PAZ	2
Campeche	4	CAMPECHE	2
Coahuila	909	SALTILLO	2
Coahuila	1509	ZARAGOZA	2
Colima	259	MANZANILLO	2
Chiapas	405	CHIAPA DE CORZO	2
Chiapas	828	OCOSINGO	2
Chiapas	1518	TONALA	2
Chiapas	1102	SALTO DE AGUA	2
Chihuahua	203	CAMARGO	2
Chihuahua	1886	JUAREZ	2
Distrito Federal	596	COYOACAN	2
Distrito Federal	657	COYOACAN	2
Distrito Federal	878	GUSTAVO A MADERO	2
Distrito Federal	1584	GUSTAVO A. MADERO	2
Distrito Federal	1648	GUSTAVO A. MADERO	2
Distrito Federal	1724	IZTACALCO	2
Distrito Federal	3977	TLALPAN	2
Distrito Federal	5238	VENUSTIANO CARRANZA	2
Durango	762	LERDO	2
Durango	969	PANUCO DE CORONADO	2
Guanajuato	716	CORTAZAR	2

Guanajuato	1000	IRAPUATO	2
Guanajuato	1854	LEON	2
Guanajuato	2377	SAN FELIPE	2
Guanajuato	2531	SAN JOSE ITURBIDE	2
Guerrero	110	ACAPULCO DE JUAREZ	2
Guerrero	2391	TELOLOAPAN	2
Guerrero	1520	IGUALA DE LA INDEPEN	2
Hidalgo	1362	TIZAYUCA	2
Hidalgo	1502	TULANCINGO DE BRAVO	2
Hidalgo	1682	ZIMAPAN	2
Jalisco	593	GUADALAJARA	2
Jalisco	1466	GUADALAJARA	2
Jalisco	1815	MAZAMITLA	2
Jalisco	2025	EL SALTO	2
Jalisco	2164	SAYULA	2
Jalisco	3109	ZAPOPAN	2
Jalisco	3257	ZAPOTILTIC	2
Estado de México	130	ALMOLOYA DE JUAREZ	2
Estado de México	272	ATIZAPAN DE ZARAGOZA	2
Estado de México	523	COACALCO DE BERRIOZA	2
Estado de México	637	COATEPEC HARINAS	2
Estado de México	703	CUAUTITLAN IZCALLI	2
Estado de México	1254	NEZAHUALCOYOTL	2
Estado de México	1778	ECATEPEC DE MORELOS	2
Estado de México	2001	HUIXQUILUCAN	2
Estado de México	4003	LA PAZ	2
Estado de México	4666	TEXCOCO	2
Estado de México	5515	TULTITLAN	2
Estado de México	5605	TULTITLAN	2
Michoacán	2097	TURICATO	2
Michoacán	607	HUETAMO	2
Michoacán	2569	ZINAPECUARO	2
Michoacán	2581	ZITACUARO	2
Morelos	169	CUAUTLA	2
Nayarit	916	TEPIC	2
Nuevo León	562	GUADALUPE	2
Nuevo León	608	GUADALUPE	2
Nuevo León	703	GUADALUPE	2
Nuevo León	864	LINARES	2
Nuevo León	2442	APODACA NUEVO LEON	2
Oaxaca	3	ACATLAN DE PEREZ FIG	2
Oaxaca	1503	SAN PEDRO MIXTEPEC	2
Oaxaca	2308	VILLA DE TAMAZULAPAM	2
Puebla	326	CUAUTLANCINGO	2
Puebla	856	OCOTEPEC	2
Puebla	1661	SAN ANDRES CHOLULA	2
Puebla	1814	SAN PEDRO CHOLULA	2
Puebla	1866	SAN SALVADOR EL VERD	2
Querétaro	203	EL MARQUES	2

Querétaro	308	QUERETARO	2
Querétaro	356	QUERETARO	2
Querétaro	561	SAN JOAQUIN	2
Quintana Roo	872	BENITO JUAREZ	2
San Luis Potosí	610	MOCTEZUMA	2
San Luis Potosí	955	SAN LUIS POTOSI	2
San Luis Potosí	1307	SOLEDAD DE GRACIANO	2
Sinaloa	903	CULIACAN	2
Sinaloa	925	CULIACAN	2
Sinaloa	1574	CULIACAN	2
Sonora	341	HERMOSILLO	2
Sonora	880	CAJEME	2
Tabasco	416	CENTRO	2
Tabasco	786	JALAPA	2
Tlaxcala	160	SAN FRANCISCO TETLAN	2
Tlaxcala	329	NATIVITAS	2
Veracruz	1340	CHICONQUIACO	2
Veracruz	2426	MINATITLAN	2
Veracruz	2957	PAPANTLA	2
Veracruz	3374	SAN ANDRES TUXTLA	2
Veracruz	3932	TIHUATLAN	2
Veracruz	4262	VERACRUZ	2
Yucatán	939	TIZIMIN	2
Yucatán	1016	VALLADOLID	2
Zacatecas	1115	PINOS	2

7. Third stage: Sampling of housing units

Table 6: Third stage

Stage	Third
Sampling units	Housing units represent our sampling units
Sampling frame	Household cluster within the block selected.
Selection method	Random start systematic method

Sampling units

Housing units represent our sampling units. A housing unit is defined as a house, apartment, mobile home, group of rooms, or single room that is occupied (or, if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall.

Sampling frame

Housing units may not be easily seen when walls or other barriers are present. For example, housing units in multi-units structures are difficult to identify. The presence of mail boxes, utility meters (water, gas or electricity) and multiple entrances are used as observational clues on the presence of multiple units. However, hidden entrances, gated communities, or locked buildings may be missed.

Selection method

Once blocks in urban electoral sections have been identified and selected, housing units per block are selected using a systematic method by means of a spiral method and clockwise walking. Each block is covered starting by the northeast corner using a sampling interval of 3 housing units, while the blocks are walked clockwise. Once a questionnaire is completed, the interviewer moves to the next side of the block; therefore only one interview is conducted on each side of the block.

To complete five interviews per SSU, interviewers move to an adjacent block using the spiral method. In multi-story buildings the selection process of households is done in the same way as regular households. The maximum number of interviews to be applied inside the same building is four. However, this is only when the building occupies a whole block. When the building is located on one side of the block, the maximum number of interviews to be applied inside the building is one. After getting the interview, the interviewer will not only have to move from the building but from that side of the block as well.

8. Fourth stage: Respondent selection

Table 7: Fourth stage

Stage	Fourth
Sampling units	The sampling units are the individuals in the previously selected households.
Sampling frame	Eligible household inhabitants
Selection method	Random selection

Sampling units

The sampling units are the individuals in the previously selected households.

Sampling frame

Each sample housing unit is then contacted in person by an interviewer. Within each cooperating sample household, the interviewer conducts a short screening interview with a knowledgeable adult to determine if household members meet the study eligibility criteria. A household includes all the persons that occupy a housing unit. The occupants may be a single family, one person living alone, two

or more families living together, or any other group of related or unrelated persons who share living arrangements.

Selection method

Since the tablet can be programmed to pick a respondent from the total pool of house hold inhabitants, the interviewer simply asks to speak to the adult selected by the program. This turns previous pseudo-random procedures into a fully random selection within the household.

9. Sample size

100 electoral sections or PSUs were drawn from the sample frame and 10 interviews were conducted in each PSU.

Strata allocation

Sample size is allocated in each stratum proportional to the size of the lista nominal. Sample allocation is shown on table 8:

Table 8: Sample allocation

Region (circunscripción)	**Urbanity**	**Population size**	**Number of PSUs selected**
1	Not urban	4,383,218	5
	Urban	13,488,319	16
2	Not urban	5,632,859	6
	Urban	12,630,246	15
3	Not urban	8,007,803	9
	Urban	8,826,897	10
4	Not urban	3,564,950	4
	Urban	13,060,280	15
5	Not urban	5,436,157	6
	Urban	12,028,309	14
	Total	**87,059,038**	**100**

10. Design effect

The design effects of survey estimates can be used as tools for measuring simple efficiency and for survey planning. Typically, cluster sampling causes an increase in the variance of estimates because variance within cluster is generally lower than the variance of the population. This event tends to happen due to the fact that people living close to each other in certain zones share some life conditions (i.e. cost of rent, quality of services in a neighborhood). The "design effect", better known as deff, is then used to summarize the effect of cluster sampling in the precision of the estimates.

Therefore, the deff can be defined as the ratio of the variance of an estimate under the complex sample design to the variance of the same estimate that would apply with a simple random sample (SRS) of the same size. In other words, it can be interpreted as the number of units collected by means of cluster sampling that are equivalent to a unity selected by means of SRS. Approximately, the deff of cluster sampling can be expressed as:

$$DEFF = 1 + \rho(K - 1)$$

K is the number of elements selected in a cluster, and ρ the coefficient of the correlation within clusters. For example, the deff for each answer to the question "Please tell me if you have a very favorable, somewhat favorable, somewhat unfavorable or very unfavorable opinion of the United States?" are the following:

	Prop.	Std. error	Lower limit	Upper limit	Margin of error	*deff*
Very favorable	12.6	1.2	10.2	15.1	2.4	1.4
Somewhat favorable	26.4	1.7	23.1	29.8	3.3	1.4
Somewhat unfavorable	25.5	2	21.5	29.5	4	2.1
Very unfavorable	30.8	1.8	27.3	34.4	3.5	1.5
Does not know/ No answer	4.6	0.6	3.4	5.8	1.2	0.8

11. Nonresponse

Item nonresponse

Interviewers are instructed to accept "Don't know" and "Refused" without further probing to avoid introducing a bias in the answers. Interviewers are trained to distinguish the difference between both response categories. While the "refused" category is for respondents who explicitly do not want to give an answer to a specific question (for instance, when they do not feel comfortable with a topic), the "don't know" category is for respondents who cannot answer the question due to lack of information or for respondents who have an evident cognitive difficulty to respond it.

Unit nonresponse

First stage

In case a PSU is not available to conduct interviews, due to security reasons or otherwise, a new PSU with the same stratum characteristics and probability of selection, is drawn from an independent sample.

Table 10 depicts a list of substitutions implemented in this study:

Table 10: Substitutions

Original state	Original PSU	Replacement state	Replacement PSU
3	200	2	972
7	1102	20	449
31	939	20	918
12	2391	12	379
7	828	7	1461
16	2097	16	51

Second stage

A new block is selected from an independent sample within the PSU.

Third stage

In cases in which nobody opens the door of the selected household, the interviewer has to return later. One attempt will be made to interview the selected respondent before another household is substituted. In case no one opens the door again, the household will have to be replaced with the one to the right. If none answers the door of the new household or if the family members refuse to answer the interview, the interviewer will have to move to the following household. If the interview cannot be completed at the new household, the interviewer will move again and so on.

Fourth stage

If the selected respondent were to be absent or unavailable at the time, one additional attempt to interview the selected person will be made. If the respondent refuses to answer or if he or she is absent

or unavailable once again, the interviewer will have to register this contact and proceed to replace the respondent with another one of the same gender and in the same age group.

12. Response rates

Regarding outcome rates, Buendía & Laredo adheres to the guidelines established by the American Association of Public Opinion Research. Reasons for non-response will be documented by category with response rates reported by geographic location. We will provide 4 different measures of outcome rates: 1) Response Rates; 2) Cooperation Rates; 3) Refusal Rates and 4) Contact Rates.

Final disposition	Code
Complete interviews	I
Partial Interview	P
Refusal and Break off	R
Non-contact	NC
Other	O
Unknown if household/occupied	UH
Unknown, other	UO

Response rate

$$= \frac{\mathrm{I}}{(\mathrm{I}+\mathrm{P})+(\mathrm{R}+\mathrm{NC}+\mathrm{O})+(\mathrm{UH}+\mathrm{UO})}$$

$$= \frac{1000}{(1000+0)+(213+687+0)+(4+0)}$$

$$= 52.5\%$$

Cooperation rate

$$= \frac{\mathrm{I}}{(\mathrm{I}+\mathrm{P})+\mathrm{R}+\mathrm{O}}$$

$$= \frac{1000}{(1000+0)+213+0}$$

$$= 82.4\%$$

Refusal rate

$$= \frac{\mathrm{R}}{(\mathrm{I}+\mathrm{P})+(\mathrm{R}+\mathrm{NC}+\mathrm{O})+(\mathrm{UH}+\mathrm{UO})}$$

$$= \frac{213}{(1000+0)+(213+687+0)+(4+0)}$$

$$= 11.2\%$$

Contact rate

$$= \frac{(I + P) + R + O}{(I + P) + (R + NC + O) + (UH + UO)}$$

$$= \frac{(1000 + 0) + 213 + 0}{(1000 + 0) + (213 + 687 + 0) + (4 + 0)}$$

$$= 63.7\%$$

A summary of the different disposition codes is presented on the table below:

Code	Status	Frequencies
1	Interviews	1,000
1.1	Complete	1,000
1.2	Partial	0
2	Eligible, not interviewed	900
2.1	Refusals	213
2.111	Household refusals	162
2.112	Refusals with known respondent	51
2.12	Breakoffs	0
2.2	No contact	687
2.23	Unable to enter the building	3
2.24	No one at home	340
2.25	Unavailable respondent	344
2.3	Other	0
2.31	Dead	0
2.32	Physically or mentally unable	0
2.33	Language problem	0
2.36	Other	0
3	Unknown eligibility, not interviewed	4
3.1	Does not know if household	0
3.17	Unsafe/Unable to reach area	4
3.2	Does not know if respondent is eligible	0
3.9	Other	0
4	Not eligible	12
4.5	Not a household	2
4.6	Vacant household	3
4.7	No eligible respondent	0
4.9	Other	7

13. Fieldwork

Fieldwork personnel

The number of interviewers used was 76. Their characteristics were the following:

Table 11: Fieldwork personnel characteristics	
Schooling	
Highschool (complete or incomplete)	86.8%
University (complete or incomplete)	13.2%
Total	100%
Gender	
Men	55.3%
Women	44.7%
Total	100%
Age	
18 to 25	42.1%
26 to 35	31.6%
36 to 45	15.8%
46 or more	10.5%
Total	100%

Scheduling and assignment of interviews

Interviews had the following time and day distribution:

Start Time		Number of interviews	%
8:00	- 8:59	15	1.5
9:00	- 9:59	97	9.7
10:00	- 10:59	137	13.7
11:00	- 11:59	112	11.2
12:00	- 12:59	75	7.5
13:00	- 13:59	102	10.2
14:00	- 14:59	101	10.1
15:00	- 15:59	112	11.2
16:00	- 16:59	84	8.4
17:00	- 17:59	79	7.9
18:00	- 18:59	64	6.4
19:00	- 20:59	17	1.7
20:00	- 20:59	5	.5
Total		**1,000**	**100**

Date	Number of interviews	%
02/16/2018	69	6.9
02/17/2018	118	11.8
02/18/2018	119	11.9
02/19/2018	264	26.4
02/20/2018	288	28.8
02/21/2018	130	13
02/22/2018	12	1.2
Total	1,000	100

Selection and training of interviewers

The interviewers were chosen among our full-time most experienced personnel. All interviewers received full training before they begin conducting actual interviews. Training consisted on helping interviewers achieve good face-to-face interviewing skills. First, our fieldwork office focuses on teaching the interviewers some basic techniques. During this process, interviewers learned how to make contact, how to deal with reluctant respondents, how to conduct interviews in a proper and respectful manner and how to avoid influencing responses.

Secondly, practice interviews were conducted inside the office. The goal is to prepare the interviewers for all the possible scenarios they may encounter when conducting real interviews. Finally, one of the persons involved with the project met with both supervisors and interviewers to discuss each of the questions.

Methods for ensuring quality control in the field

All questionnaires were submitted to a strict monitoring process during and after fieldwork. In addition, each team of interviewers (3) had supervisor whose main responsibility will be to revise in situ the interviews conducted. Supervisions, whether verified in situ, or back checked (once the interview was finished), had the following distribution:

Type	%
In situ	25.3
Back checked	27.8
No supervision	46.9

14. Data processing

Adjustments

The weighting variable incorporates the marginal frequencies of the sociodemographic distributions adjustment factor and the sampling selection weight with a raking algorithm. This algorithm performs iterative proportional fitting, or raking, to produce a set of calibrated survey weights such that the

sample weighted totals of control variables match the known population totals. In this case, sex, age, education, labor and strata.

The adjustment of the weights is performed by adjusting each of the given control margins sequentially until convergence is achieved. In other words, for a given control variable (for example, gender), the total sizes of subpopulations are estimated, and the weights in separate categories (males, females) are multiplied by a group-specific factor (ratio of the known population total to the estimated total) so that the new set of weights produces total estimates conforming to the known totals. With the variable between 0 and 1, the weights are then multiplied by an expansion factor, so they reflect an approximate count of the total population.

According to the 2015 "Encuesta intercensal" gathered by INEGI. The total population of 18 years and more is 84,327,100.

The adjusted and unweighted percentages of age and gender are presented below:

Age-sex groups	weighted	unweighted
M-18-29	14.5	9.4
F-18-29	14.7	16.3
M-30-39	10.3	7.2
F-30-39	10.9	13.8
M-40-49	9.1	8.4
F-40-49	9.9	11.5
M-50-59	6.6	6.3
F-50-59	7.4	9.4
M-60 and more	7.6	9.7
F-60 and more	8.9	8.0
Total	**100**	**100**

Additionally, we include a weighting variable that incorporates census data about the education and occupation distribution, labeled "Weight_labor_edu". Weighted and unweighted frequencies of labor and education appear as follows:

Weighted and unweighted frequencies of labor and education appear as follows:

Education	weighted	unweighted
Elementary-middle school	59.4	59.1
High school	20.3	23.1
University	20.1	17.7
NR	0.2	1
Total	**100**	**100**

Labor	weighted	unweighted
Worker	54.3	54.6
Students	5.3	2.3
Housekeepers	26.0	30.7
Other (not working)	14.4	12.4
Total	**100**	**100**

15. Contact information

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