World Values Survey Wave 7 in Egypt: Sample Design.

The 7th wave of World Values Survey in Lebanon was executed by the Egyptian Research and Training Center (ERTC). It was established in 2000 by Dr. Abdel-Hamid Abdel Latif. It is an independent and private entity committed to providing academic scholars, policy makers, business leaders, non-governmental organizations, and market research firms with accurate and reliable information on public attitudes, values and opinions concerning influential aspects of life.

ERTC currently collaborates with partners domestically as well as in the United States, Japan, and a number of countries in Europe and the Middle East. Collaborators represent major international universities and professional research organizations, including the University of Michigan, the University of Maryland, the Gallup World Organization, and the Ford Foundation.

ERTC conducts all elements of the survey research process and relies on a variety of data collection tools including face-to–face interviews, telephone interviews, web surveys, and focus group facilitation. Center staff have professional training and experience in data processing, documentation, analyses, and report production.

The fieldwork took place from May to July 2018.

The target population was the adult civilian population 18 years of age and over and living in Egypt. The target sample size was 1,200 adults.

Egypt consists of 27 governorates which were divided into four broad groups based on geography and urban or rural status as follows;

The sample was stratified first by governorate within Egypt and then sub-stratified by urbanity. Data were retrieved from The Central Agency for Public Mobilization and Statistics (CAPMAS). Estimates to the number of households 2006 were used as an approximate measure of size for each governorate. Data for stratification that came from the Central Agency for Public Mobilization and Statistics (CAPMAS) was based on the results of the 2017 census. Interviews were allocated to stratums based on the share of the population for each stratum within the total population of Egypt.
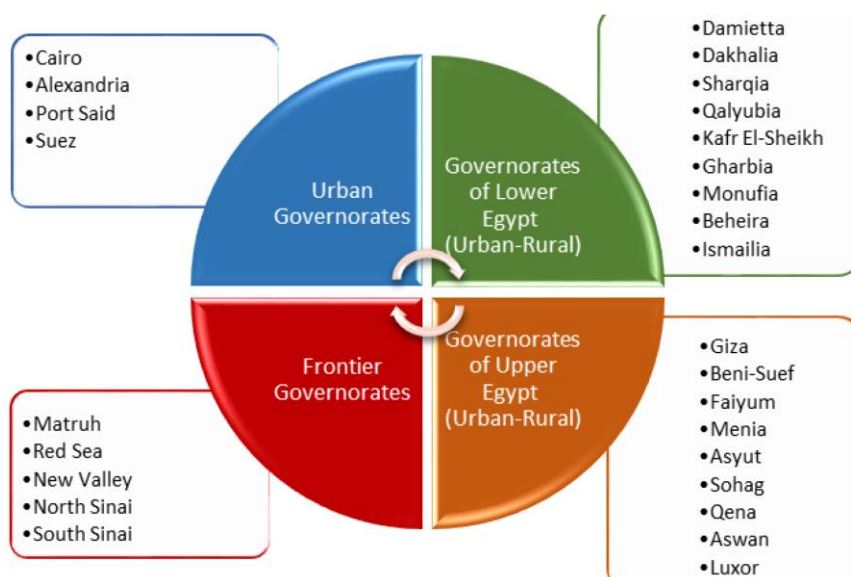
Table 1: Population Distribution (15+), 2017*

| Governorate	Population 2017	Adult Population (15+)	% Adult Population (15+)
Cairo	9,461,243	6,975,194	74
Alexandria	5,170,202	3,636,477	70
Port-Said	728,180	545,356	75
Suez	728,401	493,790	68
Damietta	1,497,877	985,882	66
Dakahlia	6,494,016	3,684,010	57
Sharkia	7,167,357	3,912,059	55
Qalyubia	5,629,990	3,162,040	56
Kafr El-Sheikh	3,362,708	2,210,442	66
Gharbia	5,000,642	3,378,186	68
Monufia	4,302,438	2,805,979	65
Beheira	6,172,386	4,001,890	65
Ismailia	1,304,753	835,027	64
Giza	8,645,561	5,608,197	65
Beni-Suef	3,154,100	1,943,312	62
Fayoum	3,596,954	2,163,872	60
Minya	5,497,095	3,453,551	63
Asyut	4,383,289	2,773,402	63
Sohag	4,967,409	3,085,940	62
Qena	3,164,281	2,038,841	64
Aswan	1,473,975	976,346	66
Luxor	1,250,209	852,416	68
Red Sea	359,888	225,695	63
New Valley	241,247	161,202	67
Matruh	425,624	250,118	59
North Sinai	450,328	260,595	58
South Sinai	102,018	61,877	61
Total	94,732,171	60,481,696	

*Source: Statistical Yearbook 2017, "http://www.capmas.gov.eg"

The administrative units in Egypt are divided as follows:
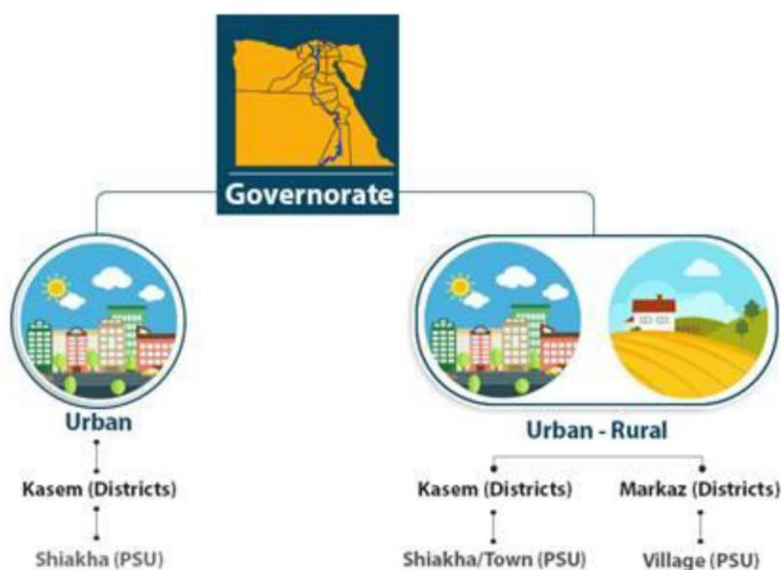
PSUs were Shiyakha in urban and mostly urban governorates, and Villages in mostly rural governorates. They were distributed across each stratum proportional to the total number of households.

22 governorates were included in the sampling framework. Remote areas were excluded (5 governorates containing only 1.8% of the total population according to the 2017 Population Census). The below Map of Egypt shows the 22 governorates;
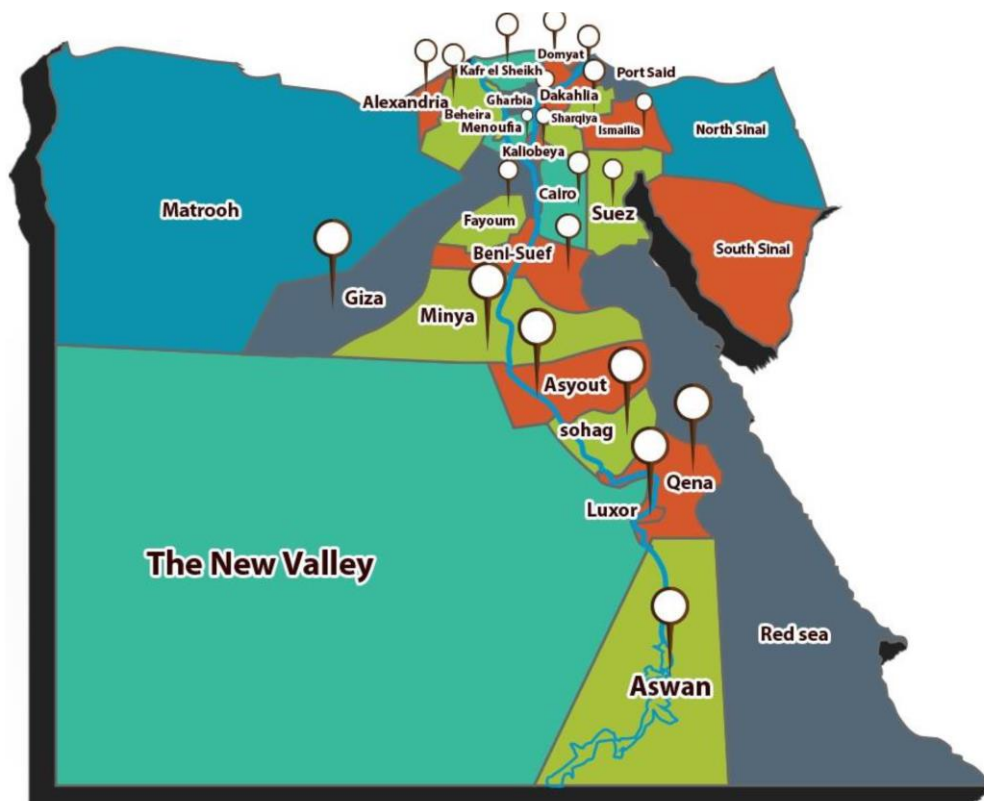
The steps to sample the PSUs (Primary Sampling Point):

PSUs were selected within each stratum using Systematic Random Sampling technique as follows;

The sampling interval for each governorate/stratum was calculated by dividing the total number of households in the governorate by the number of PSU's needed in that governorate.

Within each governorate, PSUs ("Shiyakha" in urban governorates) were listed in ascending or descending order according to the number of households. In urban/rural governorates, PSUs ("Shiyakha/Town" were separate from "Village") were listed in ascending or descending order according to the number of households.

A random number that was less than the sampling interval was selected. The Shiyakha or Village that had the number of households equal or below that random number was the first unit selected.

The random number was then added to the sampling interval to determine the second PSU.

The sampling interval was added repeatedly to select subsequent Shiyakha or Villages until the allocated numbers of PSUs were achieved.

Governorate	No. of households	Allocated Sample	PSU	% Urban	PSUs Urban	PSUs Rural
Cairo	2,070,096	140	14	100	14	0
Alexandria	1,071,582	70	7	99	7	0
Port Said	141,982	10	1	100	1	0
Suez	122,431	10	1	100	1	0
Damietta	283,944	20	2	32	1	1
Dakhalia	1,264,276	90	9	28	3	6
Sharqia	1,261,502	90	9	24	2	7
Qalyubia	1,043,785	70	7	46	3	4
Kafr El-Sheikh	614,392	40	4	24	1	3
Gharbia	995,746	70	7	32	2	5
Monufia	769,451	50	5	21	1	4
Beheira	1,094,141	80	8	20	2	6
Ismailia	227,713	20	2	46	1	1
Giza	1,808,748	130	13	61	8	5
Beni-Suef	495,687	30	3	25	1	2
Faiyum	562,847	40	4	24	1	3
Menia	910,529	60	6	20	1	5
Asyut	729,302	50	5	28	1	4
Sohag	818,553	60	6	21	2	4
Qena	632,882	40	4	20	1	3
Aswan	269,899	20	2	42	1	1
Luxor	99,811	10	1	38	0	1
Total	17,289,299	1200	120		55	65

Selection of Secondary Sampling Points (households' selection):
Each PSU was divided into four quadrants and each quadrant was selected at random. One starting point was assigned within the selected quadrant. From that starting point, the interviewers walked in different directions (north, south, east, and west).

**Households' Selection (Main Sample):**
The day code and right-hand method were used for the household selection. The supervisors covered each selected PSU until the required number of interviews (8 households) was completed.

1. To select the first household, the day code was used. To determine the day code, digits of the day were added up until only one number remained (EX: if November 13, 1+3=4, so day code is 4).
2. The number of houses of the day code was skipped and next house was selected, counting from the right (EX: in this case, skip 4 houses, and select the 5th house.)
3. After the selection of first house, each additional house was determined by the skip pattern.
- Urban areas – Skip 4 and select the 5th
- Rural areas – Skip 2 and select the 3rd

Rural Area
April 13 (1+3 = 4)

5th House

Next House

Urban Area
April 13 (1+3 = 4)

5th House

Next House
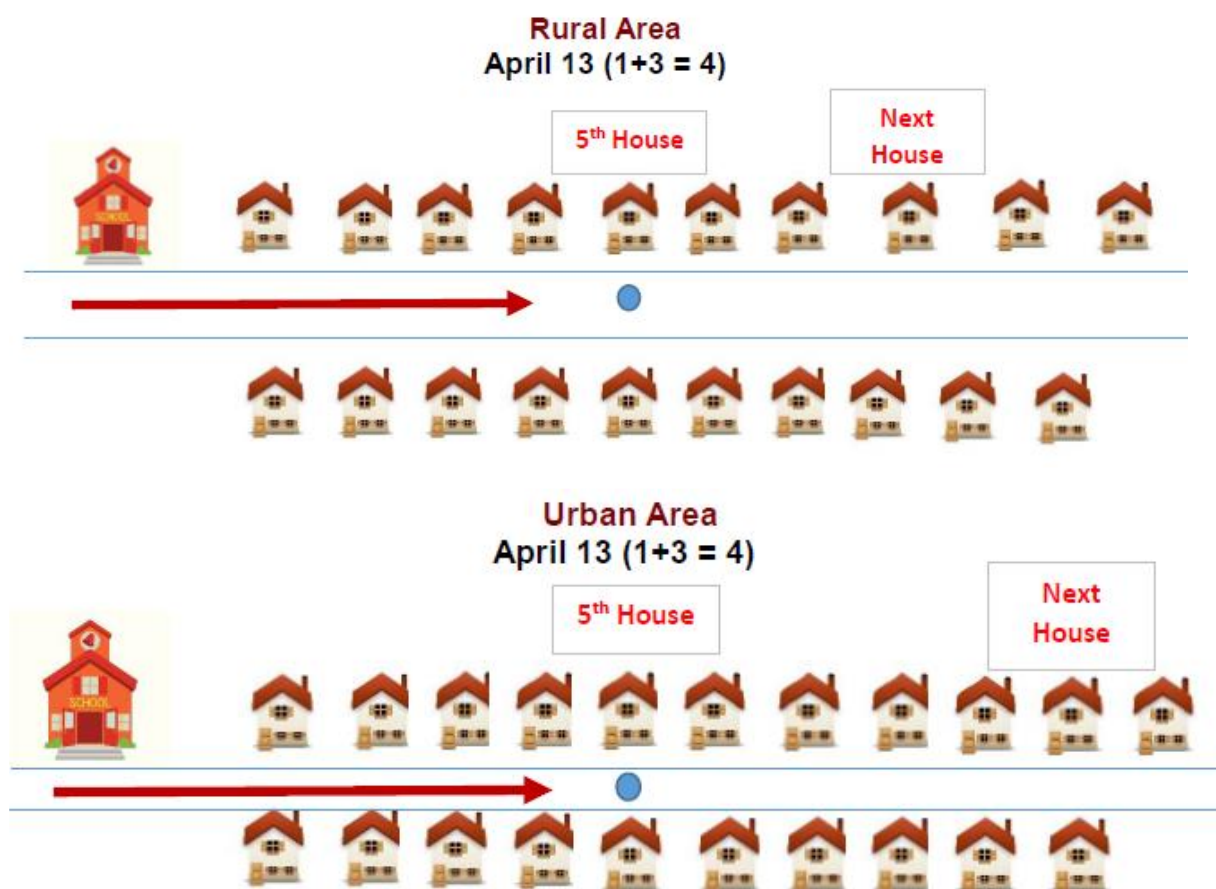
4. In the case of a multi-level apartment building:

- The interviewer alternated between starting at the top and bottom floors.
- One interview was conducted per floor, following the skip pattern.
- Only two interviews were completed per building.

5. Single-level building with multiple households / concessions:

- The tablet randomly chose a household to be interviewed in cases where multiple households lived in the same single-level building.
- Interviewers indicated the number of households in the chosen dwelling structure and interviewed the selected household, starting to count from the right.
- Only one interview was completed in each multi-dwelling structure.

Substituting Sample:

The interviewers were instructed to attempt to contact a household 3 times before substituting it. Subsequent attempts were made at least two hours apart (exceptions occurred by appointment). When the interviewer was still unsuccessful in the main household after three visits, the supervisor was instructed to select the substitute using the same interval and the right-hand rule till he/she covered 8 interviews.

Rural population was represented in the sample proportionally to census data.

The selection of secondary sampling points took place using a random procedure. First, the team determined the border of each PSU and then documented major landmarks such as a mosque, school or major building. One of these random landmarks was randomly selected as the official start by the team supervisor. Individual interviewers did not have any control over the selection of starting points.

From the selected starting point, the supervisor developed a random walk pattern for interviewers to follow. The supervisor proceeded with a right-hand rule and used a fixed interval of three households between eligible units. Interviewers covered each PSU until their required number of households was screened.

All interviewers had to follow the right-hand rule in selecting household in the walking path. To do this, once at the given starting point, the interviewer placed his or her back to the (main) entrance of the structure and moved to the right (rule: always go to the right).

After counting three households (including the starting point), the interviewers attempted a contact at the third household. This household was considered as the main household. The interviewer had to attempt a contact at this household 3 times before substituting it. If after three visits, the interviewer was not successful in the main household, he or she had to try to make a contact at the third household directly to the 10 main households.

Interviewer had to visit this household only once. When the interviewer was not successful at this household, he or she had to continue counting the three households and take the third one and so on, which he or she could only visit once. Households after the main 10 households were substitutions households.

Attempts were made on different times of the day. After three attempts, substitution of household was carried out as explained above.

When the randomly selected household member was not at home or not available at the time of the interview, second and third attempts were made. Three attempts were made at different times of the day, with at least 2 hours gap between each attempt, before the substitution of the household.

10 respondents were selected per PSU.

Once interviewer had selected a household, he/she asked whether there were members of the household who were aged 18 years old and above and permanently living in that household. If there were more than one qualified respondent, the interviewer randomly selected a respondent for the interview using the Kish grid.

In the CAPI system, details of each household member were entered into the tablet, and the CAPI program randomly selected the individual to be interviewed. All eligible household members had an equal chance of being selected for the interview. In case the person selected for the interview was absent during that visit, certain procedures were followed:

If it was the first or second visit of a main household, then the interviewer asked when he or she can come back to interview the selected household member.

If it was the third visit to that household, the interviewer did not come back and needed to replace that household. In addition, the interviewer ha to code the reason for the replacement on the tracking sheet.

At least 30% of completed interviews were validated by applying three levels of supervision/reviewing:

- Each interviewer was accompanied by a supervisor for at least one full interview, from start to finish, within the interviewer's first PSU. In subsequent accompaniments, the supervisor was present for at least 50% of the interview. Overall, 10% of each interviewer's completed interviews were accompanied by their supervisor.

- Reviewing by the quality controller. Reviewers controlled the quality of questionnaires and checked for data capturing and data validation, by checking the following:

  -Demographic Questions

  -Verifying incidence of access certain main questions.

  -Verifying captured data for random other questions.

- Back checking by phone. This involved a selection of questionnaires that were not verified in the field.

When mistakes were found during validation, all of the interviewer's questionnaires were checked to see whether the mistakes were systematic (for example, mistakes in skip patterns, wrong information in tracking sheet, etc.). If more than 25% of an interviewer's questionnaires contained mistakes, then all of his or her interviews needed to be redone by another interviewer. In addition, the supervisor re-trained the interviewer and evaluated whether he or she is truly qualified to continue survey work.