

Ethiopia 2023 Technical Document

Sampling

A stratified multi-stage cluster sample design was used to complete 1,000 face-to-face surveys.

Target Population/Coverage:

Non-institutionalized adult population (15 years of age or older) living in households. Stratification and selection used information from the 2007 General Population and Housing Census of Ethiopia. Due to ongoing conflict and security issues, Tigray, Gambella, Harari regions were excluded. The excluded areas represent approximately 7% of the total population of Ethiopia.

Stratification: The sampling frame was stratified by geographic region and population size, resulting in a total of 11 strata groups. They represent the following regions of Ethiopia: Addis Ababa, Afar, Amhara, Benishangul, Dire Dawa, Oromiya, Somali, Southern. Within each region, the sample was further divided into population size groups: Areas with pop = 1 million or more, Areas 10K-499K, Areas under 500k, Areas under 50k, Areas under 10K.

Sample Selection:

Primary Sampling Units (PSUs) are Kebeles. PSUs were selected using probabilities proportional to population size, where total 0+ population was the measure of size. A total of 100 PSUs were selected in the final sample.

Within each selected PSU a random starting point was identified. Using the right-hand rule and a fixed interval of 3 households (i.e. every third household is selected), interviewers selected eligible households until the required number of interviews were completed. Within each selected household, interviewers listed all eligible (15+ adults) individuals and the CAPI program randomly selected a respondent. In case of refusals or non-contacts, households were replaced along the random route using the same interval.

Data Collection: June 26, 2023 – August 10, 2023

AAPOR3 response rate: 74%

Weighting: The sample data were weighted to minimize bias in survey-based estimates. The weighting procedure was formulated based on the sample design and was carried out in multiple stages. A probability weight factor (base weight) was constructed to correct for unequal selection probabilities. At the next step, the base weights were post-stratified to adjust for non-response and to match the weighted sample totals to known target population totals obtained from country-level census data.

Design Effect: 1.52

Margin of error: $\pm 3.8\%$ (95% confidence level)

Population sources used for constructing weights were based on the following:

Age, Gender: U.S. Census Bureau International Data Base 2023

Region: 2007 General Population and Housing Census

Education: 2016 DHS

Age	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
15-24	33.6	31.8	32.0
25-34	29.9	25.0	24.3
35-44	17.9	18.8	18.4
45-54	10.3	12.0	12.0
55+	8.3	12.5	13.3
Education	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
No school	23.9	44.8	47.7
Primary incomplete/complete	42.1	37.4	35.6
Secondary incomplete or higher	34.0	17.7	16.7
Sex	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
Male	44.2	48.6	49.5
Female	55.8	51.4	50.5
Region	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
Addis Abeba	4.0	3.9	4.0
Afar	2.0	2.1	2.0
Amhara	26.0	25.7	24.9
Benishangui	1.0	0.9	1.0
Diredawa	1.0	0.5	0.5
Oromia	41.0	40.5	39.4
Somali	2.0	4.3	6.4
Southern	23.0	22.2	21.8