

Bulgaria 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 2011 population census provided by the National Statistical Institute as well as information on polling stations and number of registered voters from the 2022 General Directorate of Civil Registration and Administrative Services.

Stratification: The sampling frame was stratified by geographic region (NUTS2 level) and urbanicity, resulting in a total of 19 strata groups. These include six administrative regions: North-West, North-Central, North-East, South-West, South-Central and South-East. Each region is further stratified into 3 levels of urbanicity – District cities, Other urban and rural. The capital Sofia is treated as a separate stratum.

Sample Selection: Primary Sampling Units (PSUs) are electoral polling stations. PSUs were selected using probabilities proportional to population size, where the size measure is based on registered voters rescaled to the 15+ population at the settlement level. A total of 125 PSUs were selected.

Household selection was implemented using an address registry. Within each PSU addresses (residential units) were selected by either simple random or systematic sampling. 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 with the residential unit on the right of the originally selected residential unit.

Data Collection: July 21, 2023 – October 8, 2023

AAPOR3 response rate: 41%

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: 1.70

Margin of error: $\pm 4.0\%$ (95% confidence level)

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

Age, Gender: Census 2021

Education, Region: Census 2011

Urbanicity: National statistics institute 2021

Age	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
15-24	4.9	9.7	9.9
25-34	10.4	12.6	12.6
35-44	11.8	15.9	16.2
45-54	11.9	17.5	17.5
55-64	12.4	16.4	16.4
65+	48.6	27.9	27.4
Education	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
Lower secondary education and below	14.5	31.5	32.1
Upper secondary education / post-secondary non-tertiary education	61.8	47.3	46.8
Tertiary education and above	23.7	21.2	21.1
Sex	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
Male	40.5	47.1	47.6
Female	59.5	52.9	52.4
Region	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
North-West (Severozapaden)	11.2	11.6	11.6
North-Central (Severen tsentra)	12.0	11.9	11.8
North-East (Severoiztochen)	12.8	12.8	13.0
South-West (Yugozapaden)	28.8	29.2	29.2
South-Central (Yuzhen tsentral)	20.8	20.2	20.1
South-East (Yugoiztochen)	14.4	14.3	14.3
Urbanicity	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
Urban	73.6	72.9	73.1
Rural	26.4	27.1	26.9