Hungary 2023 Technical Document

Sampling
A dual frame (landline and mobile phone frames) was used to complete 1,006 telephone surveys. About 80% of the completes were from the mobile phone sample whereas landline completes accounted for the remaining 20%.

Target Population/Coverage:
Adult population (15 years of age or older) who have mobile phones for personal calls or live in households with landline. It excludes business phone numbers. The coverage error (percentage of target population not accessible for sampling) is expected to be less than 10%.

Stratification: The landline sampling frame was explicitly stratified by the seven regions (Central Hungary, Southern Transdanubia, Southern Great Plains, Northern Hungary, Central Transdanubia, West Transdanubia, Northern Great Plains). The mobile sampling frame was implicitly stratified by the five mobile service providers in the market. For the landline sample, allocation across strata was proportional to the 15+ population size in each stratum based on Hungarian Central Statistical Office 2019. For mobile sample, allocation across the strata was proportional to their market shares in terms of the count of mobile numbers they can possibly generate.

Sample Selection: A simple stratified sample design was used for selection of landline phone samples. In the case of landline, a sample of specified size was drawn using list-assisted Random Digit Dial (RDD) procedures independently within each explicit stratum. In the case of mobile, sample of specified size was drawn using pure Random Digit Dial (RDD) procedures among the mobile sampling frame. All sampled landline and mobile phone numbers were pre-screened for working status.

For respondents contacted by landine telephone, random respondent selection within the household was done by asking for the person aged 15 or older who will have the next birthday. For respondents reached on mobile, there was no random selection, just confirmation that they were 15 or older to participate in the survey.

For the purpose of data collection, the total initial sample was split into random subsamples (replicate samples) and released sequentially based on the progress of interviewing in different strata. The goal was to release an optimum amount of sample each time to achieve a high response rate while completing the targeted number of interviews within the field period.

Data Collection: June 5, 2023 – July 12, 2023

AAPOR3 response rate: 6%

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 account for selection of telephone numbers from the respective frames and correct for unequal selection probabilities as a result of selecting one adult in landline households and those reached via mobile and for dual-users coming from both the landline and mobile frames. 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. The standard demographic variables used for post-stratification are: age, gender, education, region.

Design Effect: 2.15

Margin of error: ± 4.5% (95% confidence level)

Population sources used for constructing weights were based on the following:
Age, Gender: Hungarian Central Statistical Office Jan1 2023 projections based on 2022 census
Education: 2011 Census, Hungarian Central Statistical Office (KSH)
Region: 2022 Preliminary Census Report

Age	SAMPLE_UNWTD	SAMPLE_WTD	TARGET
15-24	4.5	10.6	12.5
25-39	15.6	20.6	21.9
40-54	17.5	26.7	27.4
55-64	24.1	15.6	14.0
65+	38.4	26.5	24.2
Education	**SAMPLE_UNWTD**	**SAMPLE_WTD**	**TARGET**
Incomplete Secondary or Less	6.4	24.5	31.7
Upper Secondary / Non-Tertiary Post-Sec	45.4	56.0	51.3
Tertiary	48.2	19.5	17.0
Sex	**SAMPLE_UNWTD**	**SAMPLE_WTD**	**TARGET**
Male	40.9	47.0	47.6
Female	59.1	53.0	52.4
Region	**SAMPLE_UNWTD**	**SAMPLE_WTD**	**TARGET**
Central Hungary	31.1	30.2	31.5
Southern Transdanubia	9.3	9.3	9.0
Southern Great Plains	12.9	12.9	12.6
Northern Hungary	11.2	10.9	11.2
Central Transdanubia	11.0	11.2	11.0
West Transdanubia	10.2	10.5	10.3
Northern Great Plains	14.1	14.9	14.4