

Collecting national data through mobile phones

Sauti za Wananchi Methodology

What is Sauti za Wananchi?

Sauti za Wananchi (Voices of Citizens) is a mobile phone initiative designed to regularly collect views and perceptions on issues of public interest from a broad cross-section of Kenyan citizens. Launched in 2015, the initiative allows survey data to be gathered quickly and efficiently, at low cost. The methodology of the Sauti za Wananchi survey is explained briefly below. The full approach paper, which goes into greater depth on methodology and data collection, is available at twaweza.org/sauti.

How is it done?

The survey has two main phases:

1. Baseline survey (Household Survey)

This stage involves randomly selecting and enlisting participating households and respondents. Household and individual data is then collected to form a baseline, where mobile phones and solar chargers are then distributed to the selected individuals. Data collected in the 2015 Baseline Survey was done through a traditional household survey using a face-to-face Mobile Data Collection platform (interviewers recorded responses through a smart mobile phone).

2. Mobile phone survey (Computer Aided Telephonic Interviewing: CATI)

In this second phase, respondents selected during the baseline are contacted on the mobile phone given to them in monthly call rounds on various topics of public interest. Data collection in the mobile phone survey is done through interviews conducted from a call centre where agents use the CATI platform. These data are then analysed and synthesized into briefs which are launched to the public and made available on the Twaweza website (twaweza.org/sauti).

Sampling – Making tasty salad

To understand sampling, one can ask: how many bites of a salad does one need to check how it tastes? Do you need to eat the whole salad or just a bite or two? Even though there are lots of different ingredients all mixed in together, we can determine the taste of the whole by tasting a small part of it. In essence that is the meaning of *sampling*.

The target population for Sauti za Wananchi is all adults (18+) living in Kenya. Sauti za Wananchi uses a standard three stage survey sampling design to recruit 2,000 respondents for the call rounds. Although 2,000 might sound like a small sample for a nation of about 40 million, the number of respondents is large enough to ensure a 95% confidence interval and a small margin of error. This rigorous procedure of random sampling ensures that the panel is nationally representative. In comparison, surveys and polls like Afrobarometer, Gallup, and Pew have sample sizes of 2400, 1000-2000, and 1500 respondents respectively¹. The margins of error for our

rounds are generally between +/-2.2 and +/-3 at a 95% confidence interval.

Sampling for Sauti za Wananchi can be broken down as follows:

Stage one - 200 Enumeration Areas (EAs) are randomly sampled countrywide. EAs are the smallest sampling survey areas in rural and urban settings defined by the Kenya National Bureau of Statistics, using this sampling frame allows for a nationally representative split between rural and urban EAs.

Stage two - In each sampled Enumeration Area, all households are listed and 10 are selected randomly, (an additional two are selected as reserve after the first ten have been picked).

Stage three - One respondent (18+) is randomly chosen from all adult household members in each selected household.

How can we be sure that what you report represents the country?

The critical element is random sampling; since any Kenyan over 18 years of age has an equal likelihood of being selected as a respondent, the survey can be considered representative. Other types of surveys may have larger sample sizes but be less representative because of the way in which respondents are selected. For example online surveys may gather hundreds of thousands of responses but because only 18% of the country has access to the internet, these types of surveys can never be representative of the whole of Kenya.

In addition, Twaweza offers a number of checks and balances on our data.

- Data collected are compared, at the point of analysis, with other similar survey data from international or national sources. This can only happen if data on the same topic are available, but they help us to identify any anomalous findings.
- The call centre that contacts respondents every month is run independently of Twaweza. That makes it very difficult for Twaweza as an organisation to have influence over the results.
- In order to check that the call centre agents are not influencing responses and are recording data as it

1 <http://www.afrobarometer.org/countries/kenya-0>, <http://www.gallup.com/178667/gallup-world-poll-work.aspx>, <http://www.pewresearch.org/methodology/u-s-survey-research/sampling/>

is collected, all calls are recorded and occasional spot checks on these recordings are carried out by a Twaweza staff member.

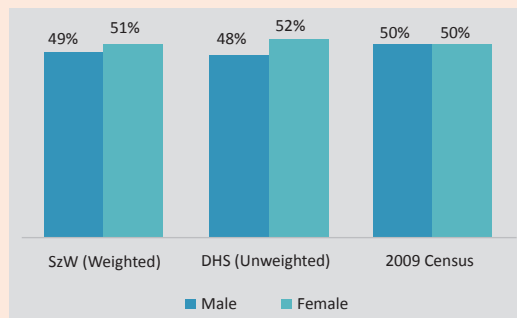
- All raw data in STATA and excel are available online so people can look into the findings one by one and carry out further analysis if interested

Who does the information come from?

The charts and graphs below profile key characteristics of the people within the Sauti za Wananchi sample in comparison to the 2014 Kenya Demographic and Health Survey (DHS). The sample is generally similar to the DHS and 2009 Census which illustrates that it is nationally representative.

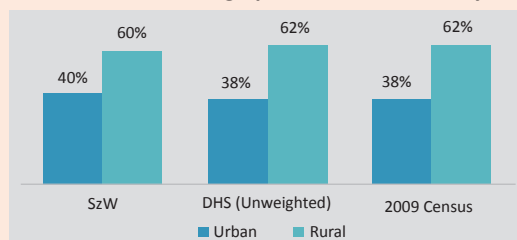
Comparison of Respondents to 2014 Demographic and Health Survey and 2009 Census

Figure 1a: Gender of respondents: Sauti za Wananchi sample, Census and Demographic and Health Survey



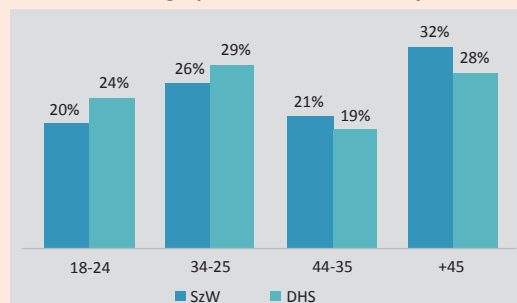
Source of data: Sauti za Wananchi Kenya Baseline Survey, 2015, Kenya DHS 2014, 2009 census data by KNBS

Figure 1b: Location of respondents: Sauti za Wananchi sample, Census and Demographic and Health Survey



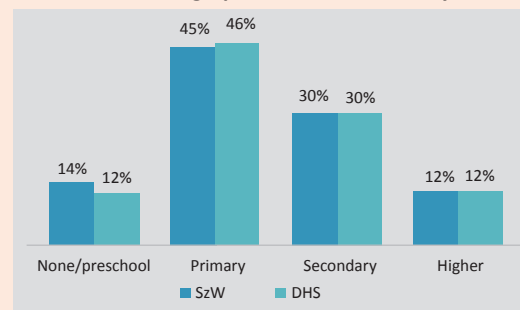
Source of data: Sauti za Wananchi Kenya Baseline Survey, 2015, Kenya DHS 2014, 2009 census data by KNBS

Figure 1c: Age of respondents: Sauti za Wananchi sample and Demographic and Health Survey



Source of data: Sauti za Wananchi, Kenya Baseline Survey, 2015, Kenya DHS 2014

Figure 1d: Education levels of respondents: Sauti za Wananchi and Demographic and Health Survey

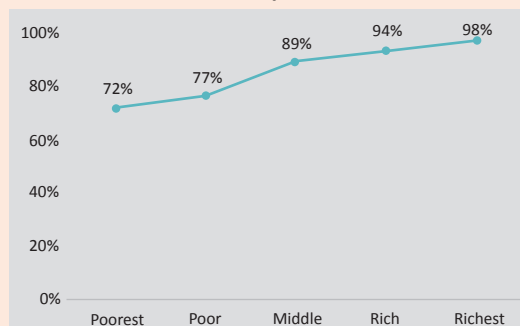


Source of data: Sauti za Wananchi, Kenya Baseline Survey, 2015, Kenya DHS 2014

But why give the respondents phones and chargers?

Providing respondents with mobile phones and solar chargers is important because omitting this step (just calling people who already have phones) would exclude the poorest individuals from the sample. In addition, only about 1/3 of the population has access to electricity at the household level. Thus, provision of mobile phones and solar chargers ensures that the sample remains representative.

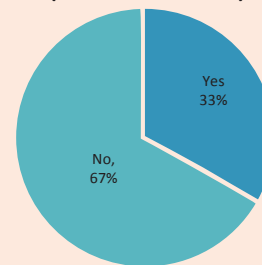
Figure 2: Mobile Phone ownership at the household across wealth quintiles



Source of data: Sauti za Wananchi, Kenya Baseline Survey, 2015

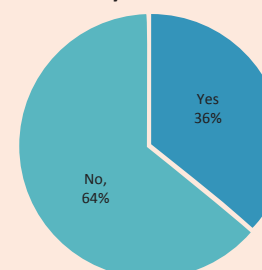
Access to Electricity

Figure 3a: Access to electricity from the national grid (Sauti za Wananchi)



Source of data: Sauti za Wananchi, Kenya Baseline Survey, 2015

Figure 3b: Access to electricity from the national grid (DHS)



Source of data: Kenya DHS 2014