

Sierra Leone - High Frequency Cell Phone Survey on the Socio-Economic Impacts of Ebola 2014-2015

Statistics Sierra Leone

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Overview

Identification

ID NUMBER

SLE_2014-2015_HFCPS_v01_EN_M_v01_A_OCS

Overview

ABSTRACT

As of June 7, 2015, Sierra Leone had reported more than 12,900 cases of Ebola Virus Disease (EVD), and over 3,900 deaths since the outbreak began. The Government of Sierra Leone, with support from the World Bank Group, has been conducting mobile phone surveys with the aim of capturing the key socio-economic effects of the virus. Three rounds of data collection have been conducted, in November 2014, January-February 2015, and May 2015. The survey was given to household heads for whom cell phone numbers were recorded during the nationally representative Labour Force Survey conducted in July and August 2014. Overall, 66 percent of the 4,199 households sampled in that survey had cell phones, although this coverage was uneven across the country, with higher levels in urban areas (82 percent) than rural areas (43 percent). Of those with cell phones, 51 percent were surveyed in all three rounds, and 79 percent were reached in at least one round. The main focus of the data collection was to capture impacts of EVD on labour market indicators, agricultural production, food security, migration, and utilization of non-Ebola essential health services.

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

Households

Scope

NOTES

The scope of the study includes:

- Employment
- Business
- Farming
- Prices
- Food security
- Remittances and travel
- Health
- Trust
- Assets
- Ebola knowledge
- Education
- Social support

TOPICS

Topic	Vocabulary	URI
Agriculture & Rural Development	FAO	
Food (production, crisis)	FAO	
Migration & Remittances	FAO	
Health	FAO	
Aid effectiveness	FAO	

Coverage

GEOGRAPHIC COVERAGE

National

UNIVERSE

All households from the 2014 Sierra Leone Labor Force Survey which provided cell phone numbers.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Statistics Sierra Leone	Government of Sierra Leone

OTHER PRODUCER(S)

Name	Affiliation	Role
Innovations for Poverty Action		Technical Assistance
World Bank Group		Technical Assistance

FUNDING

Name	Abbreviation	Role
World Bank Group	WBG	Financial Assistance

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of Chief Statistician	OCS	Food and Agriculture Organization	Adoption of metadata
Development Data Group	DECDG	The World Bank	Documentation of the DDI

DDI DOCUMENT VERSION

SLE_2014-2015_HFCPS_v01_EN_M_v01_A_OCS_v01

DDI DOCUMENT ID

DDI_SLE_2014-2015_HFCPS_v01_EN_M_v01_A_OCS_FAO

Sampling

Sampling Procedure

The sampling frame for the cell phone survey was the Sierra Leone Labor Force Survey (LFS) 2014. The LFS is a nationally representative stratified cluster sample survey conducted in July and August 2014 and includes the oversampling of urban areas. As part of the LFS, a total of 4199 households in 280 enumeration areas were interviewed. Interviewers collected the phone number, if available, for the head of household, and 2,764 households interviewed in the LFS included phone numbers. All available numbers from the LFS were included in the cell phone survey. The phone numbers were reported for 43 percent of rural households and 82 percent of urban households. Those households reporting numbers are unevenly distributed across the sample though there is at least partial coverage in all districts, ranging from 93 percent in Freetown (Western urban) to 30 percent in Kailahun district.

Response Rate

Overall, the response rate was higher than expected given the nature of the survey and the difficult conditions under which it was conducted. In Sierra Leone, of the 4,199 households interviewed in the LFS, 65.8 percent (2,764 households) recorded a cell phone number for the household head, and, of those, 80.0 percent responded to at least one round of the cell phone survey. The unweighted sample was 59.1 percent urban (2,483 households) and 40.9 percent rural (1,716 households). Of urban households, 81.4 percent (2,021 households) listed a cell phone number for the household head, and, of those, 88.1 percent (1,780 households) responded in at least one of the three rounds of the cell phone survey. Of rural households, 43.1 percent (740 households) listed a cell phone number for the household head, and, of those, 58.1 percent (430 households) responded in at least one of the three rounds.

Weighting

The base weights for the cell phone survey were the probability weights from the Labor Force Survey (LFS). Sampling weights for the LFS households were calculated by,

$$\text{Household weight} = 1/(\text{PEA, strata} * \text{PHH,EA})$$

where PEA, strata is probability of EA being selected within strata, and, PHH,EA is probability of household being selected within the EA.

To account for higher likelihood of more populated EA's being selected, PEA, strata is calculated as,

$$\text{PEA, strata} = (\text{nEA, strata} * \text{NHH, EA}) / \text{NHH, strata}$$

where nEA, strata is number of EA's selected within the strata, NHH,EA is the total number of households within that EA, and, NHH, strata is total number of households across all EAs in that strata.

Household selection probability was calculated using,

$$\text{PHH,EA} = \text{nHH, EA} / \text{NHH,EA}$$

To compensate as much as possible for non-response and low coverage rates, an attrition adjustment was applied. A propensity score adjustment, which uses the available characteristics of the household head from the LFS (age, gender, location, and employment sector) to calculate an aggregate probability of response, was calculated. These calculations need to be done separately for each combination of data sets, meaning the attrition calculations between the LFS and round 1 would be different than those between the LFS and round 2, which would also be different than those between the LFS and households that answered in both rounds 1 and 2. As an example the results of this analysis between the LFS and round 1 of the cell phone survey are presented in Table A1 in the appendix of the Basic Information Document. The inverse of this probability is then applied to the probability weights, therefore increasing the weight for underrepresented groups. As a final step, a post-stratification correction was applied, adjusting the weights to match known population totals at the district and urban/rural levels.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2014-11-12	2014-11-25	Round 1
2015-01-22	2015-02-04	Round 2
2015-05-01	2015-05-12	Round 3

Data Collection Mode

Computer Assisted Personal Interview [capi]

Data Processing

Data Editing

The datasets were cleaned and compiled by teams from Innovations for Poverty Action and the World Bank's Poverty Global Practice and Social Protection and Labor Global Practice.

Data Appraisal

No content available