

# Sierra Leone 2014 Labor Force Survey

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## *Basic Information Document*



## ACRONYMS

GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ILO	International Labour Organization
LFS	Labor Force Survey
SSL	Statistics Sierra Leone

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## INTRODUCTION

The purpose of this document is to provide detailed information on the 2014 Labor Force Survey (LFS) in Sierra Leone. Being the first labor force survey in the country since 1984, and the first since the end of the conflict, the 2014 LFS contributed to the construction of reliable employment statistics in Sierra Leone. Previously, the main source of information on the labor market was the 2004 and 2011 Sierra Leone Integrated Household Surveys, which contained limited information on the labor force. To help fill this important knowledge gap, Statistics Sierra Leone (SSL), with the support of the World Bank, the International Labour Organization (ILO), and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), designed and implemented the 2014 Sierra Leone Labor Force Survey. The survey data was collected between July and August 2014 and constitute a nationally representative sample. The 2014 LFS contains a wealth of information on labor market activities, including detailed data on household enterprises and agricultural activities.

## SURVEY INSTRUMENTS

The main topics covered by the LFS were: household composition and demographic information; education, training, and migration; unemployment and inactivity; current main and secondary economic activities; usual economic activity; industrial relations and occupational injuries; time use; family/household non-farm enterprises; and farming activities. Given the structure of the labor market in Sierra Leone, in which the vast majority of the people in the labor force are in agriculture or self-employed, two modules that are not standard LFS modules were introduced to better fit the survey to the country context. The two modules were: (i) a "non-farm enterprise" module capturing information about household businesses/income activities; and (ii) a "farm" module, which collects basic information such as crops produced, landholdings, land under cultivation, commercialization of crops, input use, and access to extension, and other agricultural services.

The survey instrument is divided into two parts, Part I - Labor Force Survey, and Part II - Non-Farm Enterprises and Farming Activities, as follows:

### **Part I**

SECTION A. Household listing and demographic information

SECTION B. Education, training, and migration

SECTION C. Current economic activity – screening form

SECTION D. Unemployment or inactivity

SECTION E. Current main economic activity

SECTION F. Current secondary economic activity

SECTION G. Usual economic activity

SECTION H. Industrial relations and occupational injuries

SECTION I. Time-related underemployment and inadequate employment situations

SECTION J. Other activities and time use

### **Part II**

SECTION K. Family/household non-farm enterprises

SECTION L. Farming activities

Part I was administered to all LFS eligible individuals, with the exception of Section J, covering other activities and time use, which applied to those ages five and above. Part II of the questionnaire was applied to the head of household only.

## SAMPLE DESIGN

The LFS is a nationally representative survey, relying on a stratified cluster sample with oversampling in urban areas. It covered 280 enumeration areas (EAs) or clusters, with 15 households selected in each for a total of 4,200 households. SSL conducted the sampling using the 2004 Population and Housing Census as the sampling frame.

In the Sierra Leone Population and Housing Census (SLPHC 2004), the labor underutilization rate was estimated at 27.5%, which at the time was considered one of the most important indicators to be produced from a labor force survey in an economy such as that in Sierra Leone. The computation of an appropriate sample size for the 2013 labor force survey was therefore based on achieving reasonable precision for this indicator using the formula:

$$n = \frac{4(r)(1-r)(f)(1+o)}{(er)^2(p)(h)}$$

Where

- $n$  is the required sample size;
- 4 is a factor to achieve the 95% confidence level for the estimate;
- $r$  is the anticipated value of the labour underutilization rate (= .275);
- $f$  is the design effect (deff) (= 1.5 from previous surveys);
- $o$  is the extent of over-sampling for non-response (= .05 for a 5% increase in sample size);
- $e$  is the permissible relative margin of error at the 95% confidence level (= .035 for 3.5% relative margin of error);
- $p$  is the proportion of the total population on which the indicator,  $r$ , is based (= .526 for an estimated proportion of the total population in the working age population from SLPHC 2004); and
- $h$  is the mean household size (= 6 from previous surveys in Sierra Leone).

The target number of households in the sample, i.e. the sample size, was thus estimated at 4,200, based on the computed value of 4296 rounded down to 4200 for ease of use and due to budget constraints. The original allocation of the sample of 4200 households by region, local council and locality was as follows:

Domain	Households			EAs		
	Urban	Rural	Total	Urban	Rural	Total
Kailahun District	90	120	210	6	8	14
Kenema City	210	0	210	14	0	14
Kenema District	90	120	210	6	8	14
Koidu/New Sembehun City	210	0	210	14	0	14
Kono District	90	120	210	6	8	14
<b>EASTERN REGION</b>	<b>690</b>	<b>360</b>	<b>1,050</b>	<b>46</b>	<b>24</b>	<b>70</b>
Makeni City	150	0	150	10	0	10
Bombali District	60	120	180	4	8	12
Kambia District	60	120	180	4	8	12
Koinadugu District	60	120	180	4	8	12
Port Loko District	60	120	180	4	8	12
Tonkolili District	60	120	180	4	8	12
<b>NORTHERN REGION</b>	<b>450</b>	<b>600</b>	<b>1,050</b>	<b>30</b>	<b>40</b>	<b>70</b>
Bo City	210	0	210	14	0	14
Bo District	90	120	210	6	8	14
Bonthe Municipality	90	0	90	6	0	6
Bonthe District	60	120	180	4	8	12
Moyamba District	60	120	180	4	8	12
Pujehun District	60	120	180	4	8	12

Domain	Households			EAs		
	Urban	Rural	Total	Urban	Rural	Total
<b>SOUTHERN REGION</b>	<b>570</b>	<b>480</b>	<b>1,050</b>	<b>38</b>	<b>32</b>	<b>70</b>
Freetown City	750	0	750	50	0	50
Western Rural District	150	150	300	10	10	20
<b>WESTERN AREA</b>	<b>900</b>	<b>150</b>	<b>1,050</b>	<b>60</b>	<b>10</b>	<b>70</b>
<b>Sierra Leone</b>	<b>2,610</b>	<b>2,610</b>	<b>4,200</b>	<b>174</b>	<b>174</b>	<b>280</b>

However, due to the Ebola outbreak, which began in the final stages of data collection, four selected EAs were quarantined in Kailahun district, Eastern region, immediately prior to the data collection. These EAs were replaced with new EAs randomly selected following the same methodology used to select the original EAs. In addition, one additional cluster was quarantined in Bombali, Northern region (EA 210706081), and it was not possible to replace this cluster using the same randomization methodology as this occurred during the data collection. As a result, this cluster was excluded in conducting the data analysis.

#### IMPLEMENTATION

The survey field team consisted of four regional coordinators and nineteen field teams, with each team comprised of three enumerators and one supervisor. The questionnaire was administered face-to-face. Field teams were provided a list of 15 selected households and 10 replacement households for each enumeration area. Replacement households were only interviewed if the selected household was unavailable for interviewing or if, after repeated efforts made by the enumerator and supervisor, was unwilling to participate in the survey.

A series of quality control measures were put in place to ensure survey data quality. First, after the interview process was conducted by enumerators, supervisors were responsible for reviewing and editing all questionnaires administered to minimize errors of omission, legibility, and inconsistency across sections and questions. Second, supervisors gave daily updates of their team's progress via SMS to the regional coordinators. SMS messages reported key facts for monitoring progression such as date, cluster number, questionnaires edited and completed by the supervisor, total number of households replaced, number of surveys completed by enumerator, and whether the team faced unexpected issues affecting the data collection. Finally, regional coordinators carried out spot and backup checks for quality control using smartphone-based tools to check the quality completed questionnaires and cross-check key information through short follow up interview with a subsample of respondents.

#### RESPONSE RATES

Non-response rate was 1.5 percent, which is low, in particular in view of the difficulties encountered by the field teams caused by the early cases of the Ebola virus. The table below shows the original LFS sample size and the number of household interviewed per region.

Domain	Eastern region	Northern region	Southern region	Western area	TOTAL
No. of sampled households	1,050	1,050	1,050	1,050	4,200
Completed surveys	990	1,050	1,050	1,049	4,139
<i>Urban</i>	654	421	556	837	2,468
<i>Rural</i>	336	629	494	212	1,671
<b>Non-response rate</b>	<b>5.7%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.1%</b>	<b>1.5%</b>

However, the final number of households used in the analysis is 4,124 following de-duplication and other data cleaning processes.

## WEIGHTS

Sampling weights for the LFS households were calculated using the following formula:

$$\text{Household weight} = \frac{1}{P_{EA, strata} * P_{HH, EA}}$$

where  $P_{EA, strata}$  is the probability of EA being selected within strata, and  $P_{HH, EA}$  is the probability of household being selected within the EA.

To account for higher likelihood of more populated EA's being selected,  $P_{EA, strata}$  is calculated as,

$$P_{EA, strata} = \frac{n_{EA, strata} * N_{HH, EA}}{N_{HH, strata}}$$

where  $n_{EA, strata}$  is the number of EA's selected within the strata,  $N_{HH, EA}$  is the total number of households within that EA, and  $N_{HH, strata}$  is the total number of households across all EAs in that strata.

Household selection probability was calculated using,

$$P_{HH, EA} = \frac{n_{HH, EA}}{N_{HH, EA}}$$

The inverse of this probability is then applied to the probability weights, therefore increasing the weight for underrepresented groups.

## DATASET

The dataset is compiled into five data files corresponding to one each for the above-mentioned questionnaire sections and for the sample weights:

- merged A to J
- merged K
- merged L1-24
- merged L25-26 and L27-34
- weights

The variables `ea_code` and `hh_id` together uniquely identify each household. In addition to the household unique identifiers, the variables `A_0`, `K_0`, `plot_id`, `crop_id`, and `L_00` are the unique identifiers for each household member, household enterprise, household plots and crops, and livestock assets, respectively. The variable `wt_hh` is the household weight.

## KEY DEFINITIONS

### Household members

The LFS recognizes as household members all individuals who usually live and eat together or, more precisely, who usually share shelter and eating arrangements.

### LFS eligible

Potential respondents in surveyed households are considered LFS eligible if they are at least five years of age and spent at least four nights each week in the surveyed household during the previous four weeks.

### Working-age population

Persons between 15 and 64 years

### Labor force participation

Sum of the employed and the unemployed.

### Labor force participation rate

Ratio between the labor force and the working-age population.

### Inactivity

Individuals who are not in the labor force, that is, they are neither employed nor unemployed.

### Inactivity rate

Share of the working-age population that is not in the labor force.

### Employed

The employed population is defined as individuals who worked for at least one hour in the last full week previous to the interview (Monday to Sunday) to produce goods or provide services for pay or profit in nonfarm self-employment, wage employment, agricultural activities, or as paid apprentices. Individuals who only worked in own-use production, as unpaid trainees, as volunteers, or in nonproductive activities are not considered employed.

Respondents who were temporarily absent from economic activities during the previous full week are also considered among the employed. This latter group includes individuals who were absent from work because of poor health, vacation, or maternity or paternity leave, individuals who were away from work for either less than a month or one to three months, or individuals otherwise still receiving pay, but not working.

### Employment rate or employment-to-population ratio

Proportion of the country's working-age population that is employed.

### Unemployment

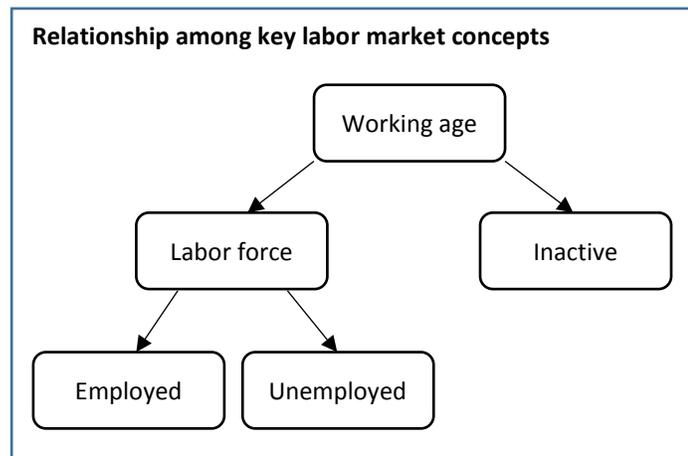
ILO unemployment is based on three criteria, namely, individuals who are (1) without employment, (2) currently available for work, or (3) seeking employment. Individuals are considered to be without employment if they did not work in the previous full week and have no economic activities to which to return. Currently available for work means that the individuals were available for work during the previous full week or are available to undertake work during the next two weeks if the opportunity arises. Seeking work is defined as looking for a job or trying to start one's own business.

### Unemployment rate

Proportion of all individuals currently in the labor force that are unemployed

### Time-related underemployment

Percentage of individuals who are working part time, but who wish to work more. This covers individuals who: (1) worked an average of less than 8 hours a day for five days during the previous full week, (2) expressed a willingness to work more, or (3) gave economic reasons for not working more hours (for example, lack of business activity, lack of finance).



### Broad unemployment

Those who were not working, were available for work, but were not looking for a job. The concept of broad unemployment is distinguished from the ILO definition of unemployment insofar as the latter requires an individual to actively be searching for work to be considered unemployed.

### Discouraged job seekers

Discouraged job-seekers are individuals who want to work and are available to work, but did not seek employment for labor market-specific reasons such as failure to find a suitable job; lack of experience, qualifications, or jobs matching the skills of the individuals; and lack of jobs in the location; or the individuals are considered too young or too old by prospective employers.

### Wage employment

Those employed whose employment status is either regular, casual, or seasonal paid workers, or paid apprentices.

### Self-employment

Those employed whose employment status is self-employment, irrespective of whether or not they have regular employees. Members of producer cooperatives are also classified as self-employed.

### Unpaid work

Individuals who worked without pay for at least one hour in the last full week previous to the interview (Monday to Sunday) to produce goods or provide services. Unpaid apprentices and unpaid help are classified under unpaid work.

## NOTES ON VARIABLE CONSTRUCTION

To calculate key indicators, the following variables were considered:

<i>Concepts</i>	<i>Concept subcomponents</i>	<i>Corresponding variables in LFS database</i>
Employed	(i) Worked in the past week	Option 1 in C.2 (Confirm if respondent had any economic activity during the last completed week).
	(ii) Temporarily out of work	Options 1, 2, or 3 in D.2 (Main reasons for being absent from job), or option 1 and 2 in D.3 (Time length being away from work), or option 1 in D.4 (Receiving pay or returns while not working)
Unemployment	(i) Without employment	“No” option in D.1 (Have economic activities to return to)
	(ii) Currently available	“Yes” option in D.9 (Available to work last week or in the next two weeks)
	(iii) Seeking employment	“Yes” option in D.5 (Looked for a job or tried to start business in the last 4 weeks)
Inactive	(i) Not employed	Option 2 in C.2 (Had any economic activity in the last week)
	(ii) Not unemployed	“No” option in D.5 (Looked for a job or tried to start business in the last 4 weeks) or “No” option in D.9 (Available to work last week or in the next two weeks)

<i>Concepts</i>	<i>Concept subcomponents</i>	<i>Corresponding variables in LFS database</i>
Discouraged	(i) Without employment	“No” option in D.1 (Have economic activities to return to)
	(ii) Currently available	“Yes” option in D.9 (Available to work last week or in the next two weeks)
	(iii) Not seeking employment due to labor market– related reasons	Option 5, 6, 11, and 14 in D.6 (Main reasons for not looking for work in the last 4 weeks)
Time-related underemployment	(i) Worked less than 8 hours per day in the last week	E.6 (Average hours per day spent on main activity) plus F.7 (Average hours per day spent on secondary activity)
	(ii) Expressed willingness to work more	Option 1 in I.1 (Wish to work more)
	(iii) Main reasons for not working more is “economic”	Options 1, 2, 3, 6, 7 in I.3 (Reasons for not working more)
Formality of employment	(i) Formality of paid employment	If an individual is in paid employment (Option 1, 2, or 8 in E.9, employment status) the job is formal if with “1” in E.12 (Type of contract) and “Yes” option in E.16 (Employer contribute to pension) and “Yes” option in E.17 (Medical benefits) are selected.
	(ii) Formality of self-employment	If an individual is in self-employment without regular employees (Option 3 or 4 in E.9, employment status) then she or he has informal employment.
Formality of nonfarm household enterprises	The enterprise is not registered	Informal if Option 6 in K.18 is selected.

### Income poverty

The income poverty measure used in the 2014 LFS is estimated by dividing household income by the number of consumption units in the household. Household income is constructed by combining all income sources captured in the LFS (wage income, household enterprise profits, and agricultural income) for all household members. To estimate the number of consumption units within the household each adult was counted as one unit and each child as 0.5 units. Although this measure excludes income from other sources (financial income, rental income, remittances, transfers), it potentially captures all the sources of labor-generated income available to the household.

### OBTAINING DATA

The micro data for the 2014 Labor Force Survey (LFS) in Sierra Leone can be downloaded from the World Bank’s microdata catalogue. The original LFS data was collected by SSL with technical assistance from the World Bank’s Social Protection and Labor Global Practice, ILO, and GIZ.

### Questionnaire