

Nigeria - CGAP Smallholder Household Survey 2016, Building the Evidence Base on the Agricultural and Financial Lives of Smallholder Households

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Sampling

Sampling Procedure

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The smallholder household survey in Nigeria is a nationally-representative survey with a target sample size of 3,000 smallholder households. In order to take nonresponse into account, the target sample size was increased to 3,225 households assuming a response rate of 93%. The sample was designed to produce national level estimates as well as estimates for each of the six geo-political zones of

Nigeria is comprised of the following states:

- North Central: Benue, Federal Capital Territory (FCT), Kogi, Kwara, Nasarawa, Niger, and Plateau
- North East: Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe
- North West: Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto and Zamfara
- South East: Abia, Anambra, Ebonyi, Enugu, and Imo
- South South: Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers
- South West: Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo

Sampling Frame

Nigeria is divided into 774 local governments (LGAs) and its last housing and population census took place in 2006. In preparation for this last census, the National Population Commission (NPopC) demarcated over 662,000 enumeration areas (EAs) for the country. From these EAs, two hierarchical master sample frames were developed by the Nigeria Bureau of Statistics (NBS): the LGA master frame and the National Integrated Survey of Households (NISH). The smallholder survey used the NISH as sampling frame but retained only the EAs containing agricultural households.

Sample allocation and selection

The total sample size was first allocated to the geo-political zones in proportion to their number of agricultural EAs in the sampling frame. Within each zone, the resulting sample was then further distributed to states proportionally to their number of agricultural EAs. Given that EAs were the primary sampling units and 15 households were selected in each EA, a total number of 215 EAs were selected.

The sample for the smallholder survey is a stratified multistage sample. A stratum corresponds to a state and the sample was selected independently in each stratum.

In the first stage, EAs were selected as primary sampling units with equal probability. A household listing operation was carried out in all selected EAs to identify smallholder households and to provide a frame for the selection of smallholder households to be included in the sample. In the second stage, 15 smallholders were selected in each EA with equal probability.

In each selected household, a household questionnaire was administered to the head of the household, the spouse or any knowledgeable adult household member to collect information about household characteristics. A multiple respondent questionnaire was administered to all adult members in each selected household to collect information on their agricultural activities, financial behaviors and mobile money usage. In addition, in each selected household only one household member was selected using the Kish grid and was administered the single respondent questionnaire.

The full description of the sample design can be found in the user guide for this data set.

Deviations from Sample Design

The household listing operation identified fewer than 15 smallholder households in many sampled EAs. As a result, the sample take of 15 households per EA couldn't be implemented in those EAs. To avoid a situation where a sample falls short, the sample take was increased to 17 smallholder households where possible while retaining in the sample all smallholder households in EAs with fewer than 17 smallholder households. This yielded 3,457 sampled households.

Response Rate

The tables in the User Guide show household and household member response rates for the Nigeria smallholder household survey. A total of 3,457 households was selected for the survey, of which 3,310 were found to be occupied during data collection. Of these occupied households, 3,026 were successfully interviewed, yielding a household response rate of 91 percent.

In the interviewed households 6,643 eligible household members were identified for the Multiple Respondent questionnaire. Interviews were completed with 5,128 eligible household members, yielding a response rate of 77 percent for the Multiple Respondent questionnaire.

Among the 3,206 eligible household members selected for the Single Respondent questionnaire, 2,773 were successfully interviewed, yielding a response rate of 92 percent.

Weighting

The sample for the smallholder household survey is not self-weighting; therefore, sampling weights were calculated. The first component of the weights is the design weight based on the probability of selection for each stage. The second component uses the response rate at both household and individual levels.

The design weights for households were adjusted for nonresponse at the household level to produce adjusted household weights. Sampling weights for the multiple respondent data file were derived from adjusted household weights by applying to them nonresponse rates at the individual level. For the single respondent data file, the same process was applied after taking into account the subsampling done within the household.

Finally, household and individual sampling weights were normalized separately at the national level so the weighted number of cases equals the total sample size. The normalized sampling weights were attached to the different datasets and used during analysis.

Questionnaires

Overview

To capture the complexity of smallholder households, the smallholder household survey was divided into three questionnaires: the Household questionnaire, the Multiple Respondent questionnaire, and the Single respondent questionnaire. It was designed in this way to capture the complete portrait of the smallholder household, as some members of the household may work on other agricultural activities independently and without the knowledge of others.

The household questionnaire collected information on the following:

- Basic household members' individual characteristics (age, gender, education attainment, schooling status, relationship with the household head).
- Whether each household member contributes to the household income or participates in the household's agricultural activities. This information was later used to identify all household members eligible for the other two questionnaires.
- Household assets and dwelling characteristics.

Both the Multiple and Single Respondent questionnaires collected different information on the following:

- Agricultural practices—farm information such as size, crop types, livestock, decision-making, farming association, and markets.
- Household economics—employment, income, expenses, shocks, borrowing and saving habits, and investments.

The Single respondent questionnaire collected the following information:

- Mobile phones—attitudes toward phones, use, access, ownership, desire, and importance.
- Financial services—attitudes toward financial products and services such as banking and mobile money, including ownership, usage, access and importance.

The questionnaires were translated into Igbo, Hausa, Yoruba and Pidgin and were pretested on 5 -7 November 2016. After the pretest, debriefing sessions were held with the pretest field staff and the questionnaires were modified based on the observations from the pretest. After the questionnaires were finalized, a script was developed to support data collection on smartphones. The script was tested and validated before it was used in the field.

Data Collection

Data Collection Dates

Start	End	Cycle
2016-11-15	2016-12-09	N/A

Data Collection Mode

Computer Assisted Personal Interview [capi]

DATA COLLECTION NOTES

Ipsos Nigeria, InterMedia's local field partner, recruited interviewers and supervisors for the main fieldwork, taking into account their language skills. Following the recruitment of field staff, training was done in two phases. First a centralized training of trainers was conducted in Lagos on 1- 8 November 2016. This training was attended by the regional trainers for the different states, the field teams for Lagos state, and the independent field quality control (QC) team directly hired by InterMedia. The training covered interview techniques and field procedures, a detailed review of the survey questionnaires, mock interviews between participants in the classroom, and field practice with actual respondents in the areas outside the sampled EAs in Owoode Apa and Iragon.

In addition, six regional training sessions were conducted by 36 supervisors trained during the centralized training session. The regional training were attended by the locally hired enumerators and QC team on 14-19 November 2016 except in Enugu and Kaduna where it was held on 21-26 November 2016.

The interviewing teams collected data for the survey on smartphones. Each team consisted of one supervisor and two to five interviewers. Intermedia's local field partner coordinated and supervised fieldwork activities along with the independent quality control (QC) team hired by Intermedia. The QC team stayed with the survey teams during fieldwork to closely supervise and monitor them.

The final data files were checked for inconsistencies and errors by InterMedia, and corrections were made as necessary and where possible.

Data Collectors

Name	Abbreviation	Affiliation
Ipsos Nigeria		

SUPERVISION

InterMedia's local field partner recruited field teams and each team consisted of one supervisor and 2 to 5 interviewers. In addition, an independent field quality control (QC) team was directly hired by InterMedia. This QC team and staff members from Intermedia's local field partner coordinated and supervised fieldwork activities. The QC team oversaw the overall quality of data collection and stayed with the survey teams during fieldwork to closely supervise and monitor them.

Data Processing

Data Editing

The data files were checked for completeness, inconsistencies and errors by InterMedia and corrections were made as necessary and where possible.

Other Processing

Following the finalization of questionnaires, a script was developed using Dooblo to support data collection on smart phones. The script was thoroughly tested and validated before its use in the field.

Data Appraisal

Estimates of Sampling Error

The sample design for the smallholder household survey was a complex sample design featuring clustering, stratification and unequal probabilities of selection. For key survey estimates, sampling errors taking into account the design features can be produced using either the SPSS Complex Sample module or STATA based on the Taylor series approximation method.

Related Materials

Questionnaires

Household Questionnaire

Title Household Questionnaire
Date 2016-01-01
Country Nigeria
Language English
Filename cgap_shh_survey_nigeria_household_qq_final_23_nov_16.pdf

Multiple-Respondent Questionnaire

Title Multiple-Respondent Questionnaire
subtitle Questionnaire for Individual Household Members
Date 2016-01-01
Country Nigeria
Language English
Filename cgap_shh_survey_nigeria_multi_respondent_qq_final_23_nov_16.pdf

Single-Respondent Questionnaire

Title Single-Respondent Questionnaire
subtitle Questionnaire for Individual Household Member
Date 2016-01-01
Country Nigeria
Language English
Filename cgap_shh_survey_nigeria_single_respondent_qq_final_23_nov_16.pdf

Reports

Working Paper- National Survey and Segmentation of Smallholder Households in Nigeria

Title Working Paper- National Survey and Segmentation of Smallholder Households in Nigeria
subtitle Understanding Their Demand for Financial, Agricultural, and Digital Solutions
Author(s) Jamie Anderson, Collins Marita, David Musiime, and Mamadou Thiam
Date 2017-06-01
Country Nigeria
Language English
Filename Working Paper_CGAP Smallholder Household Survey_NGA_Oct 2017.pdf

Working Paper- National Survey and Segmentation of Smallholder Households in Nigeria

Title Working Paper- National Survey and Segmentation of Smallholder Households in Nigeria

subtitle Understanding Their Demand for Financial, Agricultural, and Digital Solutions
Author(s) Jamie Anderson, Collins Marita, David Musiime, and Mamadou Thiam
Date 2017-06-01
Country Nigeria
Language English
Filename Nigeria CGAP Smallholder Household Survey Report.pdf

Understanding the Demand for Financial, Agricultural, and Digital Solutions from Smallholder Households: Insights from the Financial Diaries and Household Survey in Nigeria

Title Understanding the Demand for Financial, Agricultural, and Digital Solutions from Smallholder Households: Insights from the Financial Diaries and Household Survey in Nigeria
subtitle Summary Deck
Author(s) CGAP
Date 2017-11-01
Country Nigeria
Language English
Description This deck is part of a series which explores the research that CGAP and partners have conducted to explore the financial needs and behaviors of smallholder households. Research was conducted as a basis for guiding financial solution providers, mobile network operators, donors and governments to design, improve, and scale solutions that address the needs of smallholder families.
Filename Nigeria CGAP Smallholder Household Survey Summary Deck.pdf

Technical documents

CGAP Smallholder Household Surveys - User Guide to the Data Set for Nigeria

Title CGAP Smallholder Household Surveys - User Guide to the Data Set for Nigeria
Date 2017-04-01
Country Nigeria
Language English
Filename cgap_smallholder_household_survey_nigeria_user_guide_july_17.pdf
