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

Jamie Anderson - Consultative Group to Assist the Poor (CGAP)- World Bank Group

Report generated on: May 24, 2018

Visit our data catalog at: http://microdata.worldbank.org

Sampling

Sampling Procedure

The smallholder household survey in Bangladesh is a nationally-representative survey, with a target sample size of 3,000 smallholder households. The sample was designed to provide reliable survey estimates at the national level.

Sampling Frame
Bangladesh is divided into 7 administrative divisions. Each division is divided into districts, sub-districts, wards (for urban areas) or unions (for rural areas). Each ward is further divided into mahallas while each union consists of mauzas. For the 2008 agricultural census, mauzas and mahallas were further divided into 153,945 enumeration areas (EAs).

The Bangladesh Bureau of Statistics maintains a list of 64,314 mauzas/mahallas. Among these, 750 mauzas/mahallas (i.e., 1.2% of the total number) have missing information on the number of agricultural households they contained in 2008. In addition, 18,377 mauzas/mahallas had less than 80 agricultural households. These mauzas/mahallas contain about 4.8% of the total number of agricultural households. The sampling frame for the smallholder survey consisted of the list of EAs for mauzas/mahallas containing at least 80 agricultural households in 2008. While at the mauza/mahalla level the number of agricultural households was available, at the EA level only the estimated number of (general) households was available along with the urban-rural classification.

Sample allocation and selection
To take nonresponse into account, the target sample size was increased to 3,158 households assuming a nonresponse rate of five percent observed in similar national household surveys. The total sample size was first allocated to the divisions based on the number of agricultural households in the sampling frame. Within each division, the resulting sample was then distributed to urban and rural areas in proportion to number of agricultural households.

Given that EAs were the primary sampling units and 15 households were selected in each EA, a total of 211 EAs were selected.

The sample for the smallholder survey is a stratified multistage sample. Stratification was achieved by separating each division into urban and rural areas. The urban/rural classification is based on the 2008 agricultural census. Therefore, 14 strata were created, and the sample was selected independently in each stratum.

In the first stage, EAs were selected as primary sampling units with probability proportional to size, the size being the number of households in the EAs. Prior to the selection, in each stratum, the list of EAs was sorted by district, sub-district, wards/unions, and mauzas/mahallas. A household listing operation was conducted in all selected EAs to identify smallholder households and to provide a frame for selecting smallholder households to be included in the sample. In the second stage, 15 smallholders were sampled in each EA with equal probability.

In each sampled household, the household questionnaire was administered to the head of the household, the spouse, or any knowledgeable adult household member to collect information about household characteristics. The multiple respondent questionnaire was administered to all adult members in each sampled household to collect information on their agricultural activities, financial behaviors, and mobile money use. In addition, in each sampled 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 smallholder survey in Bangladesh is the fourth survey in the series, following the surveys in Mozambique, Uganda, and Tanzania. Fieldwork in those three countries has experienced a lot of failed call backs where identified eligible households and household members could not be interviewed during the time allocated to fieldwork in each country. As a result, the final sample size fell slightly short of the target. For this reason, in Bangladesh the number of households selected in each EA was increased from 15 to 17 following the household listing operation in all sampled EAs.

Response Rate

The user guide to the data set provides detailed tables on household and household member response rates for the

Bangladesh smallholder household survey. A total of 3,355 households were selected for the survey, of which 3,163 were found to be occupied during data collection. Of these, 3,154 were successfully interviewed, yielding a household response rate of 99.7 percent.

In the interviewed households 5,408 eligible household members were identified for the Multiple Respondent questionnaire. Interviews were completed with 5,214 eligible household members, yielding a response rate of 96.4 percent for the Multiple Respondent questionnaire.

Among the 3,154 eligible household members selected for the Single Respondent questionnaire, all of them were successfully interviewed a response rate of 100 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 data files and used during analysis.

Questionnaires

Overview

To capture the complexity of smallholder households, the smallholder household survey was divided into three questionnaires: 1) The Household questionnaire; 2) the Multiple Respondent questionnaire; and, 3) 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 Bangla and then pretested on 9 February 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 tablets The script was tested and validated before it was used in the field.

Data Collection

Data Collection Dates

Start	End	Cycle
2016-03-17	2016-04-21	N/A

Data Collection Mode

Computer Assisted Personal Interview [capi]

DATA COLLECTION NOTES

MRB Bangladesh, 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, a centralized training session was conducted on 13-16 March 2016. 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.

Thirty interview teams collected data for the survey on tablets. Each team consisted of one supervisor and five interviewers.

Data Collectors

Name	Abbreviation	Affiliation
MRB, Bangladesh		

SUPERVISION

Two staff members from MRB coordinated and supervised fieldwork activities along with the independent QC team hired by InterMedia to oversee the overall quality function of data collection. The QC team 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 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 were produced using either the SPSS Complex Sample module or STATA based on the Taylor series approximation method.

Related Materials

Questionnaires

CGAP Smallholder Household Survey in Bangladesh – Household Questionnaire

Title	CGAP Smallholder Household Survey in Bangladesh – Household Questionnaire
Country	Bangladesh
Filename	cgap_smallholder_household_survey_questionnaire_bda_2016_household_eng_bla.pdf

CGAP Smallholder Household Survey In Bangladesh – Multiple - Respondent Questionnaire

Title	CGAP Smallholder Household Survey In Bangladesh – Multiple - Respondent Questionnaire
Country	Bangladesh
Filename	cgap_smallholder_household_survey_questionnaire_bda_2016_multiple_respondent_eng_bla.pdf

CGAP Smallholder Household Survey In Bangladesh – Single - Respondent Questionnaire

Title	CGAP Smallholder Household Survey In Bangladesh – Single - Respondent Questionnaire
Country	Bangladesh
Filename	cgap_smallholder_household_survey_questionnaire_bda_2016_single_respondent_eng_bla.pdf

Reports

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

Title	Working Paper - National Survey and Segmentation of Smallholder Households in Bangladesh
subtitle	Understanding their Demand for Financial, Agricultural, and Digital Solutions
Author(s)	Jamie Anderson Alexander Moler Nathaniel Kretchun
Date	2016-12-01
Language	English
Filename	CGAP Smallholder Household Survey_BGD_Technical Paper_May 17.pdf

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

Title	Understanding the Demand for Financial, Agricultural, and Digital Solutions from Smallholder Households : Insights from the Household Survey in Bangladesh
subtitle	Summary Deck
Author(s)	CGAP
Date	2017-12-01

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	Bangladesh CGAP Smallholder Household Survey Summary Deck.pdf

Technical documents

CGAP Smallholder Household Surveys: User Guide to the Data Set for Bangladesh

Title	CGAP Smallholder Household Surveys: User Guide to the Data Set for Bangladesh
Date	2016-12-01
Country	Bangladesh
Language	English
Filename	CGAP Smallholder Household Survey_BGD_User Guide_May 17.pdf