Survey Protocol for Research on ‘Vulnerability to Poverty: Insurance Role of Microsavings against Crises in Two Villages in Northeast Rural Bangladesh’

Mohammad Sadiqunnabi Choudhury

Abstract: This protocol is a systematic narration of my fieldwork in Bangladesh for postgraduate research at the School Social Sciences, University of East London. Main aim of the research is to investigate crises coping strategies of households and insurance role of microsaving in reducing vulnerability to poverty in north eastern rural Bangladesh. Underlying research question is: How do rural people strengthen their capacity against vulnerability and how microsavings contribute in this process? There are three broad data requirement categories for this question: 1) Vulnerability to poverty 2) Crises management capacity and 3) Insurance role of microsavings. Data collection methods are both qualitative and quantitative in nature. Qualitative method uses Participatory Rapid Appraisal (PRA) and Focus Group Discussion (FGD). Quantitative method employs semi-structured questionnaire and Progress out of Poverty Index (PPI) for each randomly selected households. The survey was held in two randomly selected villages in north eastern region of Bangladesh.

Key words: vulnerability, poverty, coping strategies, households, Bangladesh
INTRODUCTION

Microfinance Institutions (MFIs) and Non-Government Organizations (NGOs) organize the rural poor and provide development inputs such as microfinancial support, health and education programs for capacity building of the households in rural Bangladesh. Unlike banks, MFIs provide collateral free semi-formal microfinancial instruments to support their microenterprise and provide security against socioeconomic crises and shocks. They provide self-insurance products like microsaving and microcredit as well as insurance products like microinsurance and other social safety nets. This research is designed to study saving behaviour in northeast rural Bangladesh in view of their preferences and expectations in microsavings services provided by the MFIs. It would highlight on crisis management capacity of the rural households and potential use of microsavings in combating such crises. Focal point of the study is the insurance role microsavings against crises facing rural households in north eastern Bangladesh. This investigation will examine the capacity building mechanism of rural households rather than assessing the impact of MFI programs targeting poverty reduction.

Main objective of the study is to investigate the crises management capacity of households and the effectiveness of microsaving instruments in reducing vulnerability to crises in northeast rural Bangladesh. Its specific objectives are to:

• Investigate the socioeconomic factors responsible for risks and shocks driven vulnerabilities of households in north eastern rural Bangladesh.
• Analyse the livelihood condition and coping strategies of rural households facing the crises.
• Explore perception and preferences of rural poor about the insurance role of microfinance.
• Examine the effectiveness of microsavings as insurance against vulnerability to poverty.

Data required to find answer to these questions are both qualitative and quantitative in nature. Mixed method of qualitative and quantitative approaches known as Q-squared approach is used to justify the findings of this study. Key elements this research are: assessment of capacity building of poor households, utilization of microsavings as insurance against shocks, reducing vulnerability to poverty using saving-led asset based approach instead credit-driven liability based approach and self-reliant instead of aid-dependent microfinance.
Theoretical Background

Objective measures of poverty depend heavily on the quantitative information contained in household survey on expenditure or income to draw an arbitrary line separating poor from non-poor. There are three most commonly used poverty measures in development economics literature: 1) Incidence of poverty (head count index), 2) depth of poverty (poverty gap) and 3) severity of poverty (squared poverty gap). Statistical formulae are heavily used in these measurements to assess the wellbeing of the households (Ravallion, 1994, Haughton and Khandker, 2009). Social scientists have been debating over the issue of income or expenditure deprivation as an appropriate yardstick to measure poverty during 1930s and 1990s. It gains momentum when Sen redefines poverty as deprivation of human capabilities in his seminal book Development as Freedom (Sen, 1999). The idea of subjective or qualitative measures of poverty based on people’s perceptions about their situation and judgement of minimum standard and basic needs comes to forefront in early 2000s. Qualitative assessment allow poor to define poverty using Participatory Poverty Assessment (PPA) based on the idea that ‘they are true poverty expert’ so their voice should be included (Pradhan and Ravallion, 2000). Poverty measurement is now a multidimensional approach that includes all types of deprivation, insecurity, powerlessness and social exclusion. Two aspects of poverty emerged from the participatory assessments that are not covered in the conventional surveys: first, a concern about risk and volatility of income i.e. feeling of vulnerability and the second, lack of voice and socio-political rights i.e. sense of powerlessness (Kanbur and Squire, 2001). Poverty measures are generally fixed in time and thus poverty is essentially a static concept. By contrast, vulnerability is more dynamic concept that incorporates expected poverty i.e. probability of moving in and out of poverty (Lipton and Maxwell, 1992).

There are two dimensions of vulnerability: sensitivity or magnitude of a system’s response to an external event and resilience or capacity of a system’s recovery from stress (Blaikie and Brookfield, 1987; Bayliss-Smith, 1991). Robert Chambers describes vulnerability as a symptom of poverty which means defencelessness, insecurity and exposure to risk, shocks and stress. According to him, “vulnerability has [thus] two sides: an external side of risks, shocks, and stress to which an individual or household is subject; and an internal side which is defencelessness, meaning a lack of means to cope without damaging loss” (Chambers (1989, p.1). External sources of risk range from natural disasters and epidemics to crime and violence, financial insecurity, and civil conflicts. The author distinguishes poverty reduction by raising income and consumption from vulnerability reduction by making people more secure. Moser (1998) prefers using the term ‘resilience’ (or capacity to resist or recover) instead of Chambers’ ‘defencelessness’. Resilience refers to using assets and entitlements as means of resistance against shocks. More ownership and control over assets means less vulnerable the households or individuals are (assets based approach). On the other hand defencelessness has implicit meaning of seeking help from external sources (loans etc. in liability approach) which may end up with indebtedness or higher degree of insecurity.

Morduch (1994) tries to connect two well-developed notions in economics: Poverty and Uncertainty. He shows poverty-vulnerability linkage through the equation \( y = x + \varepsilon \), where current income \( y \) depends on permanent income \( x \) and transitory shocks \( \varepsilon \). He argues that vulnerability and poverty reinforce each other and diminish expected welfare of the poor. In
exploring the linkage between poverty and vulnerability Dercon (2006) focuses on risk-related vulnerability instead of defencelessness of vulnerable groups. Such groups may face risks but their defining characteristics are not related to risk. The author argues that coping mechanism is a central part of people’s livelihood. He recommends ex-ante and ex-post policies for reducing risk and supporting capacity building. *Ex-ante* measures are precautionary measures taken before the occurrence of the shocks such as insurance. *Ex-post* measures are for those who are already affected and uninsured e.g. targeted or conditional transfers to the poor.

**RESEARCH DESIGN AND METHODOLOGY**

Data Requirement: There are three major data requirement categories for this survey: 1) Vulnerability to poverty, 2) Crises management and 3) Insurance role of microsavings. For the first category, poverty likelihood as a proxy for vulnerability can easily be calculated by Progress out of Poverty (PPI) Scorecard developed by Grameen Foundation (Grameen, 2008). It includes 10 simple questions carefully selected from the Household Income and Expenditure Survey (HIES) of Bangladesh Bureau of Statistics. In-depth vulnerability measurement will be done using data from income and expenditure section of the questionnaire. Data required for the second and third categories include types of crises, resilience and coping strategies of the poor, sources and uses of microfinance, and insurance role of microsavings against vulnerability to poverty. These data were gathered by Focus Group Discussions (FGD) and survey questionnaire. Quick and cost effective instruments like PRA (Participatory Rural Appraisal) and PPI were used to back up information gathered by focus group discussion and survey questionnaire. Moreover, the risk of low response was mitigated by these two interesting, participatory and effective data collection methods.

Data Sources: Primary data are obtained from randomly selected households from two sample villages in north eastern Bangladesh. Respondents are clients of microfinance institutions (MFIs) and other formal and informal financial service providers. Other primary sources of information include officers and fieldworkers in MFIs, and other service providers such as moneylenders, rural doctor and member of local government. Secondary data are obtained from a review of literature on microfinance and risk and vulnerability in rural area. Annual reports of major MFIs, Statistical Year Book of the Bangladesh Bureau of Statistics (BBS) are other major sources of secondary data.

Sample Design

Sampling Frame: Sampling frame is a list of individuals, households or agents within a population who can be sampled. Current research project is about vulnerability to poverty assessment and risk and crises coping strategies of rural households with special focus on microsavings. The population of this study is the total number of households in two randomly selected villages in north eastern region of Bangladesh. It can be divided into subgroup of households such as ultra-poor, poor and non-poor based on specific inference about their poverty status. Sample frame was drawn from these sub-groups using appropriate sampling technique. There are two major sampling techniques in statistical analysis: 1) Probability sampling where every unit of population has a chance of being selected and 2) Non-probability sampling where some elements of population have very negligible or no chance. In order to avoid the risk of exclusion bias or
selectivity bias I use probability sampling which has various types such as 1) Simple random sampling, 2) Systematic random sampling, 3) Stratifies sampling, and 4) Cluster or multistage sampling. In this study, I use stratified sampling method where each subgroup or stratum is classified as an independent sub-population and then individuals or households are randomly selected from the specific sub group.

Sample Size: North eastern part of Bangladesh is known as Sylhet Division which has four districts: Sylhet, Moulavibazar, Habiganj and Sunamganj. Geographically, the north eastern Bangladesh has two main topographies: 1) High lands with high plains, hills and hillocks locally known as Ujan and Pabar or Tilla areas. 2) Low lands with flood plain and free water wetlands locally known Bhatti and Haor or Beels. I have selected two remote villages from each of the region at random. One of the criteria for remoteness is the distance from the urban area that ensures the true characteristics of rural life. I assume that it is no less than 10 kilometres from of district town or 5 kilometres from local government offices. For each village I used stratified random sampling method for identifying sample households. By PRA wealth ranking exercise villagers classified their households into three strata: ultra-poor, poor and non-poor. From each stratum 35 households were selected randomly giving 35 X 3 = 105 households in each village and 105 X 2 = 210 households in total sample. Each household was surveyed by using PPI scorecard and semi-structured questionnaire. Respondents in each village participated in six PRA exercises (transects, social map, seasonal calendar, wealth ranking, mobility map and pairwise ranking) and seven FGDs (3 poverty groups, 3 MFIs field officers groups and one other service provider group). Participants in PRA are residents of the village, irrespective of age and social status, interested in engaging themselves in information sharing joyful exercises. In each FGD, 6-12 participants discussed about the issues initiated and prompted by the moderator.

Data Collection Methods
In this research I used four survey instruments: 1) Participatory Rural Appraisal (PRA), 2) Focus Group Discussion (FGD), 3) Progress out of Poverty Index (PPI) and 4) Household Questionnaire. Data collection methods are combination of both qualitative (instrument 1 and 2) and quantitative (instrument 3 and 4) methods. Qualitative components are designed to listen and learn from group of poor and non-poor rural people. Quantitative components are mainly household survey using semi structured questionnaire and poverty scorecard.

1) Participatory Rural Appraisal (PRA): PRA is a short cut method of collecting data quickly and accurately by learning from and with respondents. The role of the researchers is to facilitate rural people in collecting, presenting and analysing information owned and shared by them. Researchers are usually ignorant of the local condition, environment and knowledge and thus they are outsiders and learners. Respondents, on the other hand, are well aware of the local situation, knowledge and experience and they therefore are insiders and preceptors. In PRA outsiders establish rapport, facilitate methods, hand over the stick and then watch and listen to insiders who use map, model, and diagram to plan, discus and evaluate their livelihood and environment. PRA contains various exercises such as Transects, Participatory Mapping, Seasonal Calendars, Venn Diagrams, Flow Charts, Mobility Map, and Timelines. In this study, PRA includes following exercises:

a) Village transects – Research team met village leaders and senior persons to obtain general overview of the economy, history and geography of the village. They chose a person who led the team for an observatory walk through the residential area of the village. These transects provided
an ‘objective’ map that identifies village infrastructure including housing, drainage and sanitation and economic activities such as livestock management, rural trades and crafts.

b) Social mapping – Villagers were asked to prepare ‘social map’ of the village which includes topology of the village in social and economic terms, and inventory of village resources such as school, wells, hand pumps, community centres, religious centre, MFI groups, social capital etc. It identifies social networks and their uses in confronting social crises. Social maps also reveal the division of the village in poverty scale.

c) Seasonal calendar – In this exercise, villagers have drawn trends in their main economic activities, problems and opportunities throughout the year. It is used in assessing seasonal variation in crop production, livelihood, health and nutrition in order to identify frequency and magnitude of difficulties and vulnerability they face.

d) Wealth ranking – In this exercise villagers were asked to rank their households on the basis of relative wealth and level of poverty. Wealth ranking exercise provides valuable information on local views of wealth characteristics and perceptions in economic wellbeing in terms of their own poverty and vulnerability scale.

e) Mobility map – In a mobility map respondents explore movement pattern of individual, group or community searching for services, facilities and livelihood opportunities. In this exercise villagers were asked to draw a map of economic activities with symbols and explain in details such as purpose, distance, mode of transportation, importance and frequency of visits. Male and female mobility map are done separately to capture the gender difference in these activities.

f) Pairwise ranking – Pairwise ranking is a method of comparing pair of elements such as problems, potentials and needs. In this study, the research team let people recognise their need for financial instruments such as different types of microcredit and microsavings. They then put the items in row and column to compare each pair and finally enter the preferred item in the relevant grid. Client’s preference score is drawn on frequency of the items in the grid.

2) Focus Group Discussion (FGD): FGD gathers information from a group of people directly affected by an issue or exclusively involved in a programme. In this research there were five focus groups in each village: Three poverty groups (ultra-poor, poor and non-poor), three service provider groups (MFI fieldworkers) and one other service provider group (village doctor, local government member, money lenders). Main topics in this FGD are types of risks and crises, coping strategies, perceptions and preferences about the microfinancial instruments for accumulating assets and managing risks. Participants also discussed about the role of MFIs in their lives, identify any shortcomings in MFI services particularly microsavings. In this FGD, both male and female participants are allowed to discuss on gender issues in microsavings and coping capacities.

3) Progress out of Poverty (PPI) Scorecard: PPI Scorecard, developed by Chen and Mark (2009) for Grameen Foundation, is a quick and cost effective poverty assessment tool for MFIs and NGOs that measures and tracks economic poverty levels of the clients (Grameen, 2008). It is easy to administer, only five minutes needed to conduct interview, tally the scores and compute the poverty likelihood in the field using paper, pencil and calculator. PPI constitutes a scorecard with 10 easily observable, quick to ask and readily answerable questions which have the close link
with the poverty status. For example, easily verifiable ‘roofing material’ is used instead of unobservable ‘value of the house’. Final PPI score is the summation of response values from each question. Score ranges from 0 meaning the most likely poor to 100 or most likely above the poverty line. Poverty likelihood is estimated through a lookup table constructed on the basis of national poverty line and international benchmark adjusted for purchasing power parity (PPP). In this table total score from scorecard gives corresponding poverty likelihood of a household at a point in time or over time.

4) Household Questionnaire: Household questionnaire is designed to capture demographic, financial and social information including education, health, income and expenditure, loans and savings, crises coping strategies. After the qualitative data collection is complete, I analysed preliminary results to identify issues appropriate for follow-up in the household survey. This follow-up was required to maintain the sequence of the Q-squared approach in qual-quant order such that one method can clarify and enrich the result of the other. The Questionnaire consists of ‘Closed’ set of questions which are easy to understand and quick to answer at all literacy level. It is also easy to code and simple to create database for further analysis compared to ‘Open’ set.

Construct of Survey Instruments: Key constructs for PRA in this survey are participatory mapping, seasonal calendars, and wealth ranking which involve voluntary and joyful participation of respondents. Researcher’s role here is to facilitate the sharing of knowledge and information of local conditions. Main constructs for FGD are types of crises facing the rural households and their coping strategies, perceptions and preferences of rural people about uses of microfinance in accumulating assets and managing risks. Key constructs for survey Questionnaire are income and expenditure, loans and savings, types of risks and crises, resilience and coping capacities of the poor. It also contains demographic data such as gender, age, marital status, occupation etc.

Progress out of Poverty Index (PPI) includes 10 easily verifiable questions that have close link with poverty status.

PRA provides data on social structure, ethnography, power structure, poverty map, and financial portfolio of residents in a village. It supplies information that identifies focus poverty groups for the FGD. Discussions in FGD include types of risks and crises facing the rural poor, perceptions and preferences of rural poor about microfinance and their utilisation in coping with crises. Survey Questionnaire and PPI provide quantitative information on household demography and socioeconomic activities of rural people. Although PRA and FGDs are respondent driven exercises, facilitators need to limit the flow of outcome within the scope of the study. These exercises are designed in such a way that they provide information that cross check the information gathered by household questionnaires and PPI. This also mitigates the problem of missing or unavailable data.

Survey Administration

Survey Process: The survey was held in two villages in northeast Bangladesh during February to April 2013. Research team for the survey comprises three members: two data collectors and a principal investigator. As a principal investigator I was responsible for facilitating the PRA and
FGDs while data collectors assisted me in taking field notes, operating digital recorder and transcribing PRA exercises into newsprint. They also assisted respondents to fill up questionnaire as many of the respondents were not able to read and write properly. A pilot survey was done with 10 households before the data collection was started in February 2013. This has been useful in reshaping the survey questionnaire and reorganising PRA and FGD tools. Survey questionnaire, FGD prompt card and PPI score card have been developed before the start of the survey. These documents were printed in sufficient numbers keeping some spare copies in case of spoils. PRA materials were taken from village resources such as seeds, tree leaves, stones, pebbles, flowers etc. Data collectors were provided with paper and pencil, sharpener, eraser, ruler, writing pad, tape recorder, torch light and above all daily allowance. Training was organized for data collectors to minimise any information gap, overall low response and inconsistency in data collection process. Before we start with survey questionnaire we organised PRA exercises, facilitated FGDs and completed PPI score cards. Sample households were selected at random from the household groups stratified by PRA wealth ranking exercises. We finally distributed questionnaires to those households and sit with respondents face to face to assist him or her understanding the relevant questions.

Follow up: There was a follow up mechanism in the survey that minimises the risk of missing or unavailable data. Filled up questionnaires were carefully investigated to spot any missing or irrelevant data and respective households were revisited if necessary. Sometimes this problem arises when respondents incorrectly understand some specific questions or data collectors are not well aware of specific constructs of the questionnaire. To minimise the impact of these problems extra time were allocated to particular households. Data collectors were given proper training for thorough understanding of the questionnaire and efficient conversation with respondents. In case of any household unwilling to respond, the questionnaire was supplied to an extra household selected in the process of random sampling. In order to avoid any bias or time pressure this selection was held ex ante i.e. at the time of initial random selection and not ex post i.e. after the situation arose.

Pre-analysis Transcripts: After the data collection and follow up process was over, filled up questionnaires have been organised for coding, cleaning and data processing. Database has been created using the research package called Eviews. PRA exercises were transcribed in the newsprint just after respondents have finished the description of their drawings. Their explanations were recorded in the digital recorder and field notes of the data collectors. Participant's narration in Focus Group Discussion (FGD) has also been recorded in digital recorder and field notes. Their discussions have been transcribed carefully into written form for further analysis.

Data Analysis

In this research I use mixed method (known as Q-squared approach) combining qualitative and quantitative approaches to allow for triangulation in data analysis. Mixed approach ensures validity or appropriateness of the data to actual conditions through qualitative analysis. It also takes care of reliability of the data through quantitative analysis. Qualitative analysis utilises qualitative data collection methods such as PRA and FGD while quantitative method uses semi-structured questionnaire and Progress out of Poverty Index (PPI). PRA are used for topology of study area and random selection of respondents for survey and focus group. PPI are used for assessing the
poverty likelihood of the respondents. PRA, FGD and survey questionnaire together explore respondent’s perception, preferences and attitude towards microsavings and its effectiveness in risk management strategies. These will generate information related to impact of microsavings on lives of rural poor. Statistical package, SPSS will be used for descriptive statistics on informal and formal coping mechanisms and insurance role of microsavings against shocks. A regression analysis will involve in quantifying demand for and impact of savings services for the poor using econometric research package like Eviews or Microfit. Logistic regression model may be used to find out the relationship poverty likelihood and use of microsavings in addressing socioeconomic shocks facing rural poor. Qualitative and quantitative analysis together will cross check the outcome of this study.

**FURTHER AGENDA**

Fieldwork was held in two villages in northeast Bangladesh during February – April, 2013. The survey includes qualitative instruments such as Participatory Rural Appraisal (PRA) and Focus Group Discussion (FGD) and Quantitative instruments such as Progress out of Poverty Index (PPI) and Household Questionnaire (HQ). I have following analysis plan in next few months before starting full-fledged thesis write-up. 1) In-depth understanding of rural people’s analysis of PRA and FGD. 2) Measurement of vulnerability using the following equations: \( V_{ht} = \Pr(C_{h,t+1} \leq z) \) where \( V_{ht} \) = vulnerability level of a household \( h \), at time \( t \), \( C_{h,t+1} \) = household’s per-capita consumption level at time \( t+1 \), \( z \) = consumption poverty line and \( \Pr \) is probability that the household will fall below poverty at time \( t +1 \), and 3) Logit/Probit regression of vulnerability on its correlates.

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**References**


Mohammad Sadiqunnabi Choudhury studied economics and worked for the research departments of Bangladesh Rural Advancement Committee (BRAC) - a leading Microfinance Institution and Bangladesh Bank - the Central Bank of Bangladesh. Now he is an Assistant Professor of Economics at Shahjalal University of Science and Technology, Bangladesh. At present, he is on study leave to UEL for doctoral research. His area of interest includes poverty and vulnerability reduction, microfinance, monetary and exchange rate policy. His PhD project is about vulnerability to poverty, crises management capacity and insurance role of microsavings. Main aim of the research is to investigate crises coping strategies of households and insurance role of microsavings in reducing vulnerability to poverty in northeastern rural Bangladesh. Underlying research question is: How do rural people strengthen their capacity against vulnerability and how microsavings contribute in this process?

Contact Details: Mohammad Sadiqunnabi Choudhury
School of Law and Social Sciences,
4-6 University Way, London E16 2RD
e-mail: u1031761@uel.ac.uk