TabangKO

Unconditional Cash Transfers and Financial Literacy in the Philippines

Western Leyte

Mercy Corps - Philippines
2014-15 Impact Evaluation
Pre-Analysis Plan

CAUSAL DESIGN

Pre-evaluation Analysis Plan

The following document outlines the strategy used to evaluate the impact of Mercy Corps' TabangKO program that was implemented in Western Leyte, Philippines. While Mercy Corps and the research team may extend analysis to additional indicators of interest, the report below ensures that the evaluation focus adheres to original transmission channels identified in background documents and theories of change by using the approach described below.

Overview - TabangKO Financial Program

In early 2014, Mercy Corps partnered with BPI Globe BanKO, a branchless mobile bank, to open savings accounts and deliver unconditional cash transfers (UCTs) of PhP 3,950 (approximately 88 USD) to over 25,000 households severely impacted by typhoon Yolanda. The transfers were scheduled for disbursement[1] in three payments, PhP 2000, 1200, and finally 750 (approximately 45, 27, and 16 USD, respectively), between June and September 2014. The program utilized a completely mobile platform to deposit secure cash transfers to savings accounts provided to all beneficiaries. For many households in the area, take-up of formal banking services was historically low and the accounts provided were the only bank accounts for household heads.

In addition to the UCT, participants received a brief one hour overview of financial literacy principles through a local consulting company, the Microfinance Innovation Center for Resources and Alternatives (MICRA). For a specific subset of beneficiaries, Mercy Corps aimed to add to the initial financial literacy overview by providing targeted voice messages consisting of further financial information and promotion of savings behavior. It should be noted that all financial training materials were developed and implemented independently by Mercy Corps without collaboration with BanKO or its affiliates during the course of the TabangKO program. This also includes the promotion of any financial services outside of the initial savings account. To date, BanKO has not expanded financial services in the area beyond the TabangKO program.

Beneficiary Selection

Mercy Corps identified potential intervention sites by assessing the presence of humanitarian and disaster relief agencies (INGOs, NGO, and NGAs) in typhoon affected areas. Sites were chosen to reflect those most underserved by the relief and humanitarian aid communities and focused on inland areas that sustained significant wind damage.

Potential beneficiaries were identified using a list compiled by the Department of Social Welfare and Development (DSWD), which catalogued various levels of damage experienced by households. Households that resided in the pre-selected areas and were categorized as having been "totally damaged" by DSWD criteria were chosen for program enrollment. Mercy Corps staff conducted random verification of household damage sustained to asses the level of damage and the type of materials used to select beneficiaries. Priority was given to households

1 A small sample of beneficiary households were given their transfer in a single lump sum as a part of the impact evaluation study

that used lighter and less stable building materials. Mercy Corps then worked with community leaders to ensure the accuracy of the targeting process. Households were then contacted with details of the program. Prior familiarity or take up of financial products and services were not factored into the decision-making during the selection process.

Identification Strategy

The program evaluation design utilized by the research team was a randomized controlled trial.

Treatment Assignment

While Mercy Corps' program was implemented across multiple areas, this impact evaluation is limited to Western Leyte. The eligibility criteria and subsequent registration process resulted in 5,489 households enrolled in the program. Of these 1,738 were randomly selected to receive a baseline survey and assigned to the following treatment groups as defined in the table below.

Table 1. Distribution of Treatment Groups at Baseline

Treatment Group	Intervention	No. of Households Recorded
A1	Cash Transfer (Lump Sum)	446
A2	Cash Transfer (3 payments)	456
B	Cash Transfer (3 payments) Financial Literacy (MICRA)	364
C	Cash Transfer (3 payments) Financial Literacy (MICRA) Voice Messages (Savings Encouragement)	393
		Total[2]: 1738

The A2 treatment arm is the comparison group for this evaluation and represents the status quo delivery method for financial distribution. Beneficiaries receive 3,950 PHP as an unconditional cash transfer via Banko's mobile banking platform. The sum is distributed to the household in three payments over a period of 6 months (April - September 2014). The A1 arm is a slight variation to the traditional intervention in which households received the entire cash transfer in a single lump sum. The 3,950 PHP was transferred to beneficiaries in May-June of 2014. The impact evaluation will compare A1 to A2 in an effort to understand the potential differing marginal impact UCTs have on households when delivered in differing dosages. A 2013 study of Give Directly's UCTs in Kenya suggests that households receiving lump sums may be more likely to invest in durable goods when compared to those receiving the same amount spread over multiple payments. Cash transfers for beneficiaries in treatment arms B and C receive the same cash transfer sum and schedule as those in arm A2.

Within each barangay, half of the households verified by the initial DSWD process were randomly assigned to receive the brief one-hour module on financial literacy principles upon

[2] Note: 79 baseline respondents could not be linked to their original treatment assignments.

completion of registration. For the households that did not receive the one-time financial literacy training, half were assigned to receive the 3950 pesos transfer in a one-time lump sum disbursement. The other half was scheduled to receive the transfer over three payments. Finally, for the group that received financial literacy training, half were assigned to receive additional voice messages promoting savings behavior from Mercy Corps. This process resulted in the treatment arms outlined above.

Data Collection

In total, three surveys were administered to the treatment groups involved in the evaluation. A baseline survey was conducted for each beneficiary immediately after the completion of program registration and before administration of the financial literacy training overview. Analyzing basic difference of means, data from the baseline survey indicated that all treatment groups were balanced across observable characteristics. A midline survey was conducted after the distribution of the third cash transfer and focused on changes in consumption patterns spending. The third and final survey will be completed by the end of February 2015.

Theory of Change

Through emergency cash assistance, specifically a UCT, households are predicted to experience higher levels of resilience, recovery and improved livelihood through the following channels:

- Prevention of Productive Asset Shedding
- Promotion of Productive Asset Investment
- Increased Ability to Smooth Consumption

The impact of the UCT is based on the ability of the cash transfer to affect households along these transmission channels. Studies conducted on the overall impact of UCTs[3] suggest that the transfers consistently have positive impacts on food security, hunger, human capital formation, and ability to sustain livelihoods in the face of shocks. For example, following the earthquake in Sumatra, Indonesia in 2009, Oxfam intervened with a targeted household grant that was intended to facilitate the rebuilding of the beneficiaries' homes. Oxfam's first post-distribution survey completed a couple of months after the grant revealed that about 79% of beneficiaries were living in a temporary shelter. This was reduced in the second survey a few months later to only 27% living in a temporary shelter[4]. At this point, 69% of beneficiaries were living in their renovated homes and none reported staying at an IDP camp.

Evidence is still lacking, however, on the dosage effects. A 2013 study of the GiveDirectly program in Western Kenya found UCTs increased food consumption by 20% and decreased the number of days children go without food by 42%. The same study concluded that the size and frequency of transfer programs affect outcomes and imply policy trade-offs[5]. Specifically, they found that, "monthly transfers have stronger effects on food security than lump-sum transfers, while lump-sum transfers show larger effects than monthly transfers on particular types of assets such as metal roofs (Haushofer and Shapiro 2013, 3)."

[3] While the evidence on UCTs is growing, there is still room for rigorous studies of UCTs in emergency contexts.
[4] Palmaera, Loreto (2010) "Community Recovery Cash Grant: Responding to the shelter, food security and livelihood needs to enable early recovery of earthquake affected people in Sumatra, Indonesia." Oxfam
[5] Haushofer, Jonathan; Shapiro, Jeremy (2013-10-24). "Policy Brief: Impacts of Unconditional Cash Transfers"

Indicators related to potential effects of receiving an overview of financial literacy principals supported by financially oriented voice messages include outcomes related to usage of financial services, financial education, and increased savings behavior (formal and informal).

It is predicted that the introduction to basic financial literacy principles and reinforcement of savings behavior through voice messages would impact levels of resilience, recovery, and livelihood through the following channels:

- Increase awareness of banking services
- Increase usage of bank accounts
- Increased savings behavior

Financial literacy is a common program implemented in various contexts around the world. However, little evidence exists on the efficacy of these programs. Primarily, we aim to understand the added impact of an introductory overview of financial literacy principles on cash transfer beneficiaries. A systematic review conducted by Pande (2012)[6] suggests that a pathway exists between financial literacy programs and the demand for financial services. The review also cites survey data collected in Indonesia and India that suggest a correlation between financial literacy levels and a household's financial behavior and well-being.

Secondarily, impacts related to dietary diversity, perceived ability to cope an recover from future shock, and the Progress out of Poverty Index (PPI) are seen to be additional intermediate effects that would allow the analysis to further understand the transmission of benefits across households. These outcomes will be analyzed for all treatment groups.

Research Questions and Hypotheses

The research questions below constitute the primary focus of the research design implemented in the TabangKO program impact evaluation. Through randomization and rigorous quantitative and qualitative analysis, Mercy Corps seeks to better understand the overall effect of various design aspects of the TabangKO intervention by exploring the hypotheses below.

1) What difference does the frequency of cash transfers make?

H1: Differences in cash transfer disbursement schedules will result in differences in how cash is spent within the home.

Primary Intermediate Outcomes

Use of Cash
- Nondurable Goods Index
- Durable Good Index
- Materials used to build home

[6] Pande, Rohini, el al. (2012-February) "Does poor people's access to formal banking services raise their incomes?"

H2: Differences in cash transfer disbursement schedules will result in differences in the rate of investment in productive assets within the household.

Primary Intermediate Outcomes

Productive Asset Investment
- Animal Assets Index (Large and Small Animals)
- Work Equipment Index
- Ability to recover damaged work assets

H3: Differences in cash transfer disbursement schedules will result in differences in the rate of productive assets shedding within the household[7].

Primary Intermediate Outcomes

Prevention of Asset Shedding[8]
- Animal Assets Index (Large Animals)
- Work Equipment Index

2) What difference does an introductory overview of financial concepts have on the savings behavior of beneficiaries?

H4: An introductory overview of financial concepts will increase the savings behavior of beneficiary households.

Primary Intermediate Outcomes

Reported Savings Behavior
- Reported Average Monthly Savings
- Informal Savings Usage
- Formal Savings Usage
- Reported activity following hypothetical positive cash shock

3) What difference do regular finance related messages and savings encouragement messages have on the savings behavior of beneficiaries?

H5: Finance related messages and savings encouragement messages will increase the savings behavior of beneficiary households.

Primary Intermediate Outcomes

Reported Savings Behavior
- Reported Average Monthly Savings
- Informal Savings Usage
- Formal Savings Usage

[7] This will be compared to baseline rates of ownership across all assets to determine rates of asset shedding
[8] Values will be compared to baseline to assess any significant losses of assets

Variable Construction

In certain cases, outcome variables will be constructed through the creation of various indices from a set of variables. For established indices, guidance will be taken from source material on the appropriate scoring and compiling process. For general asset compilation the evaluation will employ two strategies; the sum of asset inventories will be aggregated across the variables and Principal Component Analysis (PCA) will be used. For variables utilizing a likert scale, average values will be used to construct a single index.

Estimation Strategy

The following equations will be used to estimate impact of the intervention across treatment groups.

$$y_{iB,t} = \beta_0 + \beta_1 T + \delta_B + \varepsilon_{iB,t} \tag{1}$$

where y_{it} is the outcome for household beneficiary i in Barangay B at time t; T is the treatment dummy; δ_B is the Barangay level fixed effects; ε_i is the error term.

Where available, the ANCOVA model will be used to estimate the outcome variable when baseline values can be determined for beneficiaries.

$$y_{iB,1} = \beta_0 + \beta_1 T + \beta_2 Y_{iB,0} + \delta_B + \varepsilon_{iB,1} \tag{2}$$

In order to increase robustness of findings, specifications that include a vector for household level controls will also be estimated.

Heterogeneous Effects

The evaluation will also attempt to explore any heterogeneous effects that may potential arise reuslting in differential effects for sub-groups within the study. The effects will be estimated using the following equation:

$$y_{iB,t} = \beta_0 + \beta_1 T + \beta_3 (T \, x \, G) + \beta_4 G + \delta_B + \varepsilon_{iB,t} \tag{3}$$

where $(T \, x \, G)$ is the interaction between treatment and heterogeneous indicator and G is the indicator variable for the heterogeneous effect.

Heterogeneous impacts will be examined along a range of individual and household level effects. These will include, but will not be limited to:

Individual (Financial Decision Maker)

Gender
Age
Education level
Baseline financial literacy
Income Source

Household

Size of household
Number of income sources

Controlling for Program Bias

Data analysis of the baseline survey indicated that all treatment groups were balanced across the aforementioned control variables and geographic indicators. In certain cases, relatively low response rates for specific assets and behaviors did yield the potential for outliers to drive the results. Where outliers are suspected across self-reported continuous variables, the research team intends to conduct the following robustness checks: (1) drop outliers or (2) truncate the data where there is little to no expected loss in statistical power or (3) transform the data into log form if possible.

The potential effects of attrition will be identified by using an indicator variable to signal respondents who withdrew or became unreachable over the course of the evaluation. The value will be analyzed against baseline data analyze whether or not attrition has any potential relationship with the error term. Missing values, where substantial, will be imputed at the mean for variables in addition to normal analysis.