Targeting the Hard-Core Poor: An Impact Assessment

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Abstract

This study reports the results of a randomized impact evaluation of a program designed to reach the poorest of the poor and elevate them out of extreme poverty. The program, which includes the direct transfer of productive assets (e.g. livestock) and additional training, was initially developed in Bangladesh, where it has reached thousands of beneficiaries, and is being piloted and studied in over seven countries. The results of this study, based on a pilot in India, indicate that this intervention succeeds in elevating the economic situation of the poorest. We find that the program results in a 15% increase in household consumption and has positive impacts on other measures of household wealth and welfare, such as assets and emotional well-being. Our results are consistent with the notion that the wealth transfer, in the form of asset distribution, directly increased consumption among beneficiary households through the liquidation of assets, but other sources of income, notably from small enterprises, appear to have contributed to the overall increase in consumption as well.

1 Introduction

That hundreds of millions of individuals survive on incomes that are inadequate at best[1] has led to the emergence of a large development industry, both public and private, dedicated to reducing poverty. Unfortunately, many of these efforts fail to improve the lives of the poorest of the poor. It has been noted that microfinance, for example, tends to benefit least those lowest on the socioeconomic ladder (Morduch, 1999; Rabbani, et al., 2006). Morduch (1999) remarks that this phenomenon lends credence to the argument that "poorer households should be served by other interventions than credit." Public assistance programs can also miss the very poor. A report by the Indian National Sample Survey Organization found that 18% of the wealthiest 20% of the rural population (ranked by monthly per capita expenditure) held Below Poverty Line (BPL) rationing cards.[2] Moreover, there are concerns that the final lists of BPL households are directly manipulated to include non-poor households (Mukherjee, 2005). Jalan and Murgai (2007) find that many households who are below the poverty line according to consumption measures are incorrectly classified by the BPL census and Banerjee et al. (2007) find that the poorest of the poor are no more likely to be reached by public assistance programs than their better-off neighbors. These facts suggest that failures in the distribution process may systematically exclude the poorest and least socially connected households.

These limitations illustrate the need for targeted programs that help the poorest of the poor establish and maintain higher levels of income. BRAC, a Bangladeshi development organization, pioneered "Challenging the Frontiers of Poverty Reduction-Targeting the Ultra Poor" (CFPR-TUP), which targets the most disadvantaged households with direct asset transfers, livelihood training and ultimately "graduates" them into microfinance programs.[3] A number of non-experimental studies (Ahmedet et al., 2009; Matin and Hulme, 2003; Mallick, 2009; Rabbani, et al., 2006) have shown that the program increases a household's asset base and consumption.

Based on this apparent success, international donors have taken interest in this type of intervention, especially in rigorously evaluating its effect. CGAP, in conjunction with the Ford Foundation, have sponsored the implementation and evaluation of 9 similar programs in 7 countries.[4] This paper presents the first results from these evaluations and provides, to the best of our knowledge, the first estimates of the impact of this type of anti-poverty program based on experimental evaluation methods.

Working with Bandhan, a microfinance institution based in West Bengal, India, we conducted baseline

[1] World Development Indicators, World Bank

[2] National Sample Survey Organisation (NSSO), Ministry of Statistics and Programme Implementation. Report No. 510 "Public Distribution System and Other Sources of Household Consumption, 2004-05."Summary at: http://mospi.nic.in/press_note_510-Final.htm

[3] BRAC website http://www.brac.net/cfpr.htm [viewed October 2007].

[4] Ethiopia, Haiti, Honduras, Pakistan, Peru, Yemen and three locations in India. http://www.cgap.org/p/site/c/template.rc/1.26.12411/

and post-program surveys with nearly 1,000 households. We randomly invited half to participate in Bandhan's "Targeting the Hard-core Poor" (THP) program. The theory behind the program is that the poor are trapped in extreme poverty by their lack of assets and inability to use financial intermediation to overcome their lack of assets. The program's components — direct asset transfers, inoculation of savings habits and integration into microfinance groups — are designed to overcome these barriers to upward mobility. The training component is intended to address the assumption that the poor either lack the confidence to escape poverty or that they lack sufficient human capital to make optimal use of assets. Regular meetings which provide both encouragement and training related to enterprise development are also part of the program. Due to the program design however, which combined asset transfers with training, we were unable to distinguish between these theories or disentangle the relative effects of asset transfers and training.

Using experimentally generated variation in program participation, we find that the program results in substantive improvements in household welfare. Notably, our estimates suggest that being invited to participate in the THP program leads to a 15% increase in per-capita monthly consumption on average. This estimate reflects the expected impact of the invitation to participate and, therefore, takes into account that not all invited households choose to participate. Households which actually chose to participate in the THP program experience an average increase in per capita monthly consumption of more than 25%.

Given that the program includes direct asset transfer (mostly livestock), it is not surprising that treatment households (those offered the chance to participate in the THP program) ended up with a larger asset base than comparable control households. But we also found a number of additional benefits: treatment households suffer less from food insecurity, report being happier and are more likely to report that their physical health has improved. (In spite of the latter finding, we do not detect program effects in terms of more objective measures of physical health, but such effects may take time to become apparent.) The data analyzed in this study were collected before THP households "graduated" to microfinance, so in this timeframe we do not find that participation in the THP program has substantive impacts on household's financial behaviors, except through the savings component of the THP program. Treatment households do, however, indicate a greater interest in obtaining credit. In additional results, we investigate how treatment households finance additional consumption. Our results are consistent with the notion that some households financed consumption through the sale of the assets transferred, but this effect does not appear to fully account for the observed increase in consumption. Additional income from small enterprises operated by treatment households also appears to be an important factor in explaining increased consumption.

This study complements earlier work on the effects of BRAC's CFPR-TUP program (Ahmed et al, 2009; Matin and Hulme, 2003; Mallick, 2009; Rabbani, et al, 2006) and confirms many of the positive effects documented there, such as on assets, food security and savings. Our results differ in other respects, however.

For example, we find more modest increases in consumption than Ahmed et al. (2009). We also do not find effects on agricultural activities, such as leasing in land, as is suggested by Ahmed et al. (2009) and Rabbani, et al. (2006). These differences may derive from the different context (Bangladesh vs. West Bengal) or from the difference in methodologies.[5]

Additionally, this investigation ties into the body of research concerned with the returns to investment in developing countries (McKenzie et al., 2008; McKenzie and Woodruff, 2008). The intervention studied here differs in important respects, notably the focus on households as opposed to firms, the fact that asset transfers were accompanied by ongoing training and the special demographic group studied here.

In what follows, we describe the data and our empirical strategy before discussing the effect of the program on income and consumption. We proceed to discuss secondary program impacts before examining the sources of income in greater detail. We follow with a discussion of heterogeneous treatment effects before concluding.

2 Setting and Data

2.1 Overview of Bandhan's "Targeting the Ultra Poor"

This study pertains to approximately 1,000 eligible households in rural villages in Murshidabad, India (a district north of Kolkata) selected for Bandhan's Targeting the Hardcore Poor program. Of these 1,000 eligible households, 300 received grants worth $100, paid for by the Consultative Group to Assist the Poor (CGAP).

The initial phase of the intervention consisted of Bandhan identifying eligible households, the "Ultra Poor", within each village. To be considered "Ultra Poor", households must meet a set of criteria. First, an eligible household must have an able-bodied female member, as the program was intended specifically to improve the situation of women.[6] Second, households must not be associated with any microfinance institution (the aim is to target those who lack credit access) or receive sufficient support through a government aid program.[7] In addition to these two requirements, eligible households must also meet three of the following five criteria: the primary source of income is informal labor or begging; land holdings are below 20 decimals (10 katthas, 0.2 acres); the household owns no productive assets other than land; no able bodied males are in the household; school-aged children work instead of attending school.

[5] A forthcoming study on the effects of BRAC's CFPR-TUP program by Burgess and Bandiera using an experimental approach finds results similar to this study.

[6] While the majority of beneficiaries are female, some men are eligible under special circumstances such as physical disability.

[7] "Sufficient support" was determined on a case-by-case basis by Bandhan; while many of the households they identified as Ultra Poor participate in some government aid program, they determined that this assistance was not sufficient to alleviate the poverty of the household.

To identify households satisfying this definition of Ultra Poor, Bandhan first finds the poorer villages in the region through consultation with its microfinance branch managers in the area. Subsequently, Bandhan conducts Participatory Rural Appraisals (PRAs) in particular hamlets of selected villages to identify the subset of the population most likely to be Ultra Poor. To ensure adequate participation, Bandhan employees enter the hamlet on the day prior to the PRA, meeting with teachers and other local figures to build rapport with the residents, and announcing that the PRA will occur on the following day. In addition to generally encouraging participation (Bandhan aims for 12-15 PRA participants), Bandhan staff specifically encourage household members from various religions, castes and social groups to attend.

The PRA consists of a social mapping and a wealth ranking. In the first stage, the main road and prominent hamlet landmarks (temples, mosques, rivers, etc.) are etched into the ground to create a map of the hamlet. The participants mark the location of every household on map. For each household, the name of the household head is recorded on an index card.

In the wealth ranking stage, the index cards are sorted into piles corresponding to socioeconomic status. To accomplish this, Bandhan employees start with one index card and inquire about that household's occupation, assets, land holdings and general economic well-being. They then take another card and ask how this household compares to the first household. A third card is selected, classified as similar in wealth to one or the other of the prior households and then whether it is better off or worse off than that household. This process is continued until all the cards have been sorted into piles, usually 5 of them, corresponding to poverty status. Often a large percentage of the cards end up in the poorest pile, in which case these households are further sorted using the same process into two or more piles.

Bandhan selects the households assigned to the lowest few ranks, progressively taking higher categories until it has approximately 30 households. In the second phase of the identification process, a Bandhan employee visits these households to conduct a short questionnaire. The questionnaire pertains to the criteria for Ultra Poor classification: inquiring about the presence of an able-bodied woman, the presence and ability to work of a male household head, land holdings, assets, NGO membership and so on. Based on the information collected in this survey, Bandhan narrows its list of potentially Ultra Poor households in that hamlet to 10-15 households.

In the final stage of the process, the project coordinator, who is primarily responsible for administration of this program, visits the households. He verifies the questionnaire through visual inspection and conversations with household members. Final identification as Ultra Poor is determined by the project coordinator, according to the established criteria and his subjective evaluation of the households' economic situation.

Following identification, half of the potential beneficiaries are randomly selected to receive assets. Rather than transferring cash, Bandhan purchases and distributes assets such as livestock and inventory to benefi-

ciaries. The grants are also used to finance other inputs, such as fodder and sheds for livestock. Following selection, Bandhan staff meet with beneficiaries to select the livelihood option best suited to the household. In this sample, 90% of beneficiaries chose livestock, receiving either 2 cows, 4 goats or 1 cow and 2 goats. The value of the asset transferred was approximately US$100, or Rs. 4,500, which is around 20% of baseline annual household expenditure.

Over the next 18 months, Bandhan staff meet weekly with beneficiaries. These meeting are primarily held to provide information and training on topics related to the household's enterprise (such as proper care for livestock) as well broader social and health issues.[8] Additionally, beneficiaries are required to save Rs. 10 (approximately $US 0.25) per week at these meetings. Initially, Bandhan disburses a weekly "subsistence allowance" of Rs. 90 at these meetings. The allowance is given for 13 to 40 weeks, depending on the particular enterprise selected by the households.[9]

Approximately 18 months after receipt of the asset, the beneficiaries are "graduated" to microfinance and become eligible for regular microfinance loans provided by Bandhan. As most of the Ultra Poor households do not have prior experience with formal financial institutions like banks or MFIs, Bandhan conducts a three-day microcredit orientation course for THP program beneficiaries, attendance at which is required to be considered for a microloan. The training addresses a number of social, health and community issues[10] and explains the functioning of a microcredit group, its rules and regulations, group solidarity and the role of savings in one's financial life. The endline survey discussed below, and utilized in the analysis, was generally conducted before the graduation training. At the time of writing, however, the majority of beneficiaries have joined one of Bandhan's microfinance groups and have taken a loan.

2.2 Data, Take Up and Attrition

The data used in this study come from two waves of surveying. The initial wave, spanning February 2007 through March 2008, was conducted among those households identified as Ultra Poor by Bandhan. The survey consisted of a household module covering income, consumption, migration and various other features of the household, as well as an adult module (administered to everyone over 18 years old) capturing information on labor supply, time use, health and other topics at the individual level.

Following the completion of the baseline survey, households were randomly selected to receive an offer to participate in the program. Randomization was done remotely by the research team, and selection was

[8]These topics included: Early Marriage, HIV/ AIDS, Sanitation & Personal health, Immunization, Fruit tree plantation, Women & child trafficking, Family planning, Dowries, Deworming and Marriage Registration.

[9]The exact duration was 13 weeks for households which selected a non-farm enterprise, 30 weeks for households receiving goats and 40 weeks for households receiving cows.

[10]These topics include generating awareness of the role of village committees (formed by Bandhan), discouraging dowry and early marriage, raising awareness about basic human rights and the role of the government and local self governments (such as the Panchayat, and Gram Sabha) and fostering awareness about health, safe drinking water and sanitation.

stratified on hamlet. A total of 991 households were surveyed at baseline, of which 512 (51.66%) were randomly selected for program participation and 466 did not receive such an offer.[11] The figure of 512 exceeds the number of households which actually received assets. This is because between randomization and enterprise selection, a number of households (12.5%) were found to be ineligible (on account of participating in microfinance activities or self-help groups). Furthermore, some households refused the offer to participate in the program (35.6%). Figure 1 shows the distribution of the outcome of the offer to participate to the 512 households randomly selected to participate in the program. Refusal[12] was anecdotally attributed to rumors in some, predominantly Muslim, villages that Bandhan was a Christian organization (which it is not) seeking converts. A few households declined to participate on account of not having time or not wanting to care for livestock. Table 1 presents the mean of various indicators separately for those who were offered a chance to participate and chose to do so and those that were offered the chance and did not. As might be expected in light of the rumors, those that chose to participate in the program are more likely to be Hindu than Muslim (by 18 percentage points, a difference which is statistically significant above a 1% confidence level). On average, THP participants are also slightly younger than non-participants, but we do not observe other statistically significant differences in demographic and economic variables.

Of the 978 households included in this study, 812 (83%) were re-surveyed in the endline, 18 months after the asset transfer. In addition, we conducted an endline interview with 2 households who were randomized, but had refused the baseline survey.[13] Two households surveyed at baseline had merged into a single household at endline; this combined household was surveyed at endline and considered a treatment household as one of the two initial households had been assigned to treatment. Two other households had split into separate households, which were also surveyed at endline; split households were assigned the treatment status of the initial household. Our final sample consists of these 817 households of which 429 were randomly selected to participate in the program. Of those 429 selected to participate in the program, 251 (58.5%) actually had assets at endline, while 6 (1.5%) of the 388 control households had assets.[14]

Of the 166 households that took the baseline survey but not the endline survey, the most common reason for attrition was refusal to sit for the survey (57%); these were mostly households in villages where rumors about religious conversion circulated. The second most common reason was migration (26%).

[11] A total of 13 households were not randomized. The names of 11 households were inadvertently left of the list of names for randomization and 2 households were directly selected by Bandhan to receive assets later in the course of the study. We omit these households from the analysis, thus our sample includes 512 plus 466, or 978, households rather than 991.

[12] Mostly refusal means that the household declined to participate when made the offer, though a handful of households initially accepted and subsequently returned the asset.

[13] Although randomization is customarily done after the completion of the baseline, 3 households were mistakenly included on the list for randomization before the baseline was complete. We revisited these households after discovering but they declined to give the interview at that point. Two of these households were found for the endline.

[14] Bandhan transfered some of the assets returned by treatment households who declined to participate to control households. We treat control households which received assets as control households in the analysis which follows.

Depending on its nature, such attrition may pose a threat to the external or internal validity of the results. In Table 2 we assess whether attrition could affect external validity, which would occur if households that do not appear in the endline data are systematically different from those that do. The table shows the difference in the average of various demographic and economic variables (measured at baseline) between those that were surveyed and those that were not surveyed in the endline. We find that households that were not surveyed at endline have less land, tend to have fewer adult household members (and more children; the average total number of members is the same for both groups) and are more likely to be Muslim.

These differences suggest that caution is in order when extrapolating these results to other populations, but they do not necessarily entail bias, or concerns about internal validity: only if attrition is correlated with treatment assignment would we worry about internal validity. In Table 3, we regress an indicator variable that the household was an attrition household (surveyed at baseline but not endline) on an indicator that the household was selected to participate in the program. Table 3 shows that treatment assignment is not a significant predictor of attrition, which mitigates concerns about attrition bias affecting the results. Moreover, we directly compare the characteristics of treatment households which were not resurveyed to control households that were not resurveyed. These results (presented in appendix table A1) show that the characteristics of attrition households (those not surveyed at endline) were similar between those who did and did not receive an offer to participate in the THP program.

2.3 Summary Statistics

Another assumption underlying the empirical strategy employed is that the randomization was successful and baseline characteristics are uncorrelated with treatment assignment. We test this assumption in Panel A of Table 4, which shows the means, and difference in means, of baseline characteristics for treatment and control households. These estimates indicate that the randomization was generally successful.

In addition, Panel A illustrates the general demographic characteristics of these households. Households have, on average, slightly fewer than 4 members and, reflecting Bandhan's selection criteria, only $\frac{2}{3}$ of households include an able-bodied adult male member. This is a particularly disadvantaged population: average landholdings are less than 2 katthas (0.04 acres), houses consist of only 1.2 rooms on average and average per capita monthly consumption is ˜Rs. 415 (or in daily PPP adjusted terms $1.21 in 2006 dollars$).

Panel B, which reflects the same analysis using endline data, reveals substantive differences between treatment and control households at the endline, indicating the effects of the program. In particular, households randomly selected for participation in the program are significantly more likely to report that their main source of household income derives from non-agricultural enterprises operated by the household and

less likely to report it comes from agricultural labor. They are also 12% more likely to cultivate some of their land, significant at the 1% confidence level. There are also highly significant differences (above a 1% confidence level) between treatment and control in terms of per-capita consumption, with treatment households consuming approximately 15% more per person per month. Finally, it appears that treatment households are more likely to report experiencing a non-health related economic shock in the last year; as death of livestock is included in the variable as constituting a shock, this may also be an outcome of the program. In what follows, we investigate these and other outcomes in greater detail.

3 Empirical Strategy

In the results that follow, we estimate the causal impact of the THP program on a number of household and individual level outcomes, including income, consumption, health, food security and labor supply, which are denoted by y. Letting S_i be an indicator variable that household i was randomly selected to participate in the THP program, we estimate the following equation:

$$y_{ih} = \beta S_{ih} + \alpha_h + \varepsilon_{ih} \tag{1}$$

where the subscript h indicates hamlet (a sub-unit of villages). We include hamlet-level fixed effects to account for stratification. Random offers of program participation ensure that S_{ih} is not correlated with ε_{ih} and that we recover the true causal impact of the program on the outcome. This is measured by β, which captures the mean difference in y between those who were offered program participation and those that were not after removing the effect of common hamlet-level determinates of y.

β does not measure the actual impact of participating in the program on the outcome of interest, but rather the expected change in the outcome for a household which is offered the chance to participate. We report these Intent to Treat (ITT) estimates (as opposed to Treatment on the Treated, or TOT, estimates) given that these estimates give the expected impact and are most relevant to the issue of scaling up the program.[15]

For individual level outcomes, we estimate:

$$y_{ijh} = \beta S_{ih} + \alpha_h + \varepsilon_{ih} + \varepsilon_{ijh} \tag{2}$$

where the subscript j denotes individual j residing in household i. When reporting results for individual

[15]The TOT results can be estimated by scaling the ITT results by a factor of 1 divided by the difference in participation (having an asset) between treatment and control groups, which is $\frac{1}{\frac{251}{428} - \frac{6}{385}} = 1.75$.

level outcomes we cluster standard errors at the household level, reflecting the likely possibility of correlation within households.

4 Results - Impacts

Given that the THP program included a substantial wealth transfer (assets worth ˜$100, which is almost 3 times mean monthly household consumption), it is plausible that the intervention would affect a wide variety of outcomes through the income effect. In what follows, we first evaluate the direct impact on income and consumption before considering plausible secondary impacts on health, financial behaviors and labor supply. We further investigate potential impacts of other THP program features, such as whether targeting women for asset transfers affects women's status and whether the training component affects specific knowledge and behaviors.

4.1 Income

The primary objective of the program was to provide beneficiaries with income-generating assets, enabling them to create a reliable income stream and allowing them to "graduate" into microfinance programs and out of extreme poverty. We therefore begin by considering the effect of the program on household income. As shown in columns 1 and 2 of Table 5, the program resulted in statistically and economically meaningful increases in household income — average income in households invited to participate in the program was Rs. 302 higher in total and Rs. 78 higher per capita, representing 22% and 21% of the control group mean, respectively. Columns 3 through 11 present the effect of the program on income disaggregated by source of income. These estimates reveal that the primary drivers of increased total income were additional income generated by livestock and non-agricultural entrepreneurial endeavors, income from these sources increased by 594% and 46%, respectively, relative to the control group mean. These difference are statistically significant at or above a 5% level. We do not observe statistically significant differences in income from other sources.

The survey instrument also included detailed questions on the sources of income considered in Table 5, including own agriculture, income from own livestock, fishing and income from own non-agricultural enterprises. In Appendix Tables A2 through A4, we consider the impact of the program on various specific indicators related to these income sources. Consistent with Table 5, we do not find any statistically significant difference between treatment and control households in terms of land cultivated (either owned or leased), or their propensity to fish or income from fishing. Also consistent with Table 5, we find that being selected to receive an offer to participate in the program results in increases in several variables associated with income from livestock rearing activities. We find, not surprisingly, that treatment households have acquired, on

average, approximately 2 more animals over the past 3 years than control households; 1.5 small animals (goats, pigs or sheep) and 0.4 cows. Considering monthly flow income from animals, which captures income from milk, eggs and other animal products less regular expenses such as fodder, we find that, on average, the cost of maintaining livestock (including feed and veterinary care) exceeds regular flow income from these animals. In contrast, we find that livestock generate substantial amounts of income from irregular income sources, defined as the sale of the animal itself, animal products (such as skin or hide) or animal calves. It appears that irregular sources of income account for the observed increase in total income from livestock activities.

In contrast to the results in Table 5, which measures income from various activities simply by asking respondents how much income they have earned from various sources, we do not find strong evidence of increased income from non-agricultural business when inquiring more directly and in greater detail about the cash flows from businesses. For one thing we do not observe any difference between treatment and control households in the probability that the household operates a non-agricultural enterprise. Further, while the point estimates are positive, indicating greater values for treatment households, we do not find any statistically significant differences in reported income, revenues or costs for specific enterprises operated by the household in the last 30 days.

4.2 Consumption

An increase in income such as that documented above would plausibly result in increased consumption, which is an important metric of welfare in its own right. In Figures 2, 3 and 4, we graphically depict the effect of the THP program on per capita consumption. The figures plot the density of per capita monthly consumption (separately for total consumption, for food and fuel consumption and for non-food consumption) for treatment and control households. For total consumption as well as food and fuel consumption, the density for treatment households is more or less uniformly shifted rightward, indicating that the program increased consumption at all levels of consumption. For non-food consumption, the distributions are quite similar, except that the distribution for treatment households includes a longer right tail, indicating the presence of a few exceptionally high expenditure levels on non-food items among treatment households.

We check whether these differences are statistically significant in Table 6, which presents results from estimating equation (1) when taking these measures of consumption as the dependent variable. The point estimates imply that treatment households spend, on average, Rs. 83 more per person per month in total than control households, which is similar in magnitude to the Rs. 78 increase in per capita income shown in Table 5. Columns 2 and 3 show that treatment households spend an average of Rs. 63 more on food and

fuel, statistically different from zero above a 1% confidence level, and Rs. 20 more per person per month on non-food items, significant at the 10% level, though, as noted above, this latter difference appears driven by outliers. Finally, in column 4, we investigate whether treatment households are acquiring more household durables, but cannot reject that the expenditure levels between treatment and control are equal in this respect. We should note that in addition to being highly statistically significant, the results with respect to total and food consumption are also of considerable magnitude; these differences represent over 15% of the mean level of consumption among the control group.

Given that this intervention took place in rural villages, where beneficiary households know and are known by other households, it is possible that receiving assistance through the THP program crowds out other assistance provided by the community, or that the benefits of the program are shared with others in the village, which would cause the consumption results above to either under- or overstate the effect of the program. To investigate this possibility, in Table 7 we regress the number of meals given or received by the household and the value of food, gifts and loans given or received by the household on an indicator that the household was randomly selected to participate in the THP program. We find that selected households have given an additional 0.7 meals in the last 30 days to other households, significant above a 5% confidence level, and report receiving Rs. 18 less than control households (almost 50% less) in gifts of food from other households in the last month. We do not observe statistically significant results for other outcomes, but the point estimates are generally consistent with the notion that selected households receive less in gifts and loans from other community members than control households. In unreported results (available on request) we evaluate whether participation in the THP crowds out government assistance administered by local government officials (such as subsidized food). We do not find that selection for participation in the THP program results in any differential probability of receiving government assistance.

The results presented in Table 7 show that while treatment households increased their support to other households on account of the THP program, the magnitudes are not especially large in an economic sense.

4.3 Assets

Though we do not detect a statistically significant difference in measured expenditure on household durable goods, it is possible that households would use their increased income to invest in other capital goods or assets. It is further possible that the measure of spending on durables is noisy due to recall error or because expenditure occurred well before the second survey was completed and is outside the period captured in the questionnaire. Therefore we examine the impact of the program on assets and investments directly in Table 8. We use a principal components index to aggregate asset ownership into a single variable. When

including livestock, which was actively transferred to treatment households through the program, we find that treatment households score considerably higher on this index than control households. Restricting to non-livestock assets, however, we do not detect a statistically significant difference between treatment and control households. This index does not include land, which is considered separately in column 3; we find that treatment households own about $\frac{1}{3}$ of a katta more land than control households, significant at the 10% confidence level. Column 4 shows that treatment households also have, on average, 0.6 additional fruit trees, the planting of which was actively encouraged by Bandhan.

4.4 Nutrition and Food Security

To assess the impact on nutrition in more detail, we disaggregate the gains in food consumption across food groups in Table 9. We find that an increase occurred in all food groups but, in percentage terms, the largest increases were in fruits & nuts, dairy and meat & eggs, suggesting that program participants were consuming more nutritious food than members of control households.

The increase in the quantity and nutritional value of food consumed by treatment households would be expected to impact their perceptions and reports of food security, which is what we find in Table 10. Column 1 of the table takes an index of food insecurity as the dependent variable. The results indicate, predictably, that treatment households score lower on this index and the difference is statistically significant above the 1% confidence level. Columns 2-6 consider differences in individual components of the food insecurity index. The results suggest that the difference in food insecurity is primarily driven by adults in treatment households eating more and more regularly than comparable adults in control households. The final column reports the difference in the households self-perception of their current financial situation on a scale from 1 (worst) to 10 (best); treatment households report a score which is 0.2 points, or 7%, higher than control households.

4.5 Health

Increased nutrition, as well as increased income generally, may lead to improved health outcomes; we investigate this possibility in Table 11. The data used in Table 11 derive from a survey administered to each adult[16] member of the household. We find that adults residing in treatment households score higher on an index of health knowledge and behaviors which is constructed using principal components analysis of questions pertaining to health behaviors and knowledge, such as hand washing, having soap in the household and knowledge of diseases and disease prevention techniques. We do not find any effects on actual health outcomes, such as working days lost to illness or Activities of Daily Living (ADL) scores. We do,

[16]Adults are defined as those 18 years or older.

however, find that adults residing in treatment households are 6% more likely to perceive that their health has improved over the last year (significant at the 1% confidence level). We also find that these adults are less likely to report symptoms of mental distress and that they have a more positive outlook on the future, as measured by an index of mental health on which individuals from treatment households score higher.

4.6 Financial Behaviors

One of the stated objectives of the program is to enable individuals to establish a regular income stream and "graduate" into microfinance groups. After 18 months in the THP program, Bandhan conducts training sessions with recipients and integrates them into Bandhan's microfinance activities. This process had not occurred at the time the survey analyzed here was conducted, but these data permit us to assess whether financial behaviors, including use of credit, change before formal introduction to microfinance groups and whether treatment households exhibit different attitudes and behaviors with respect to saving and borrowing than control households.

Columns 1-3 of Table 12 indicate that 18 months after entering the program, beneficiary households do not use credit more extensively than non-beneficiary households. Treatment households, however, appear to save more than control households, depositing an average of Rs. 22 into savings accounts in the last 30 days compared to the Rs. 19 deposited by control households. Mostly this savings occurs through the accounts held with Bandhan. As we do not measure informal savings, we can not conclusively say whether this is additional savings, or a shift in savings held at home into the account with Bandhan. Finally, although treatment households are no more likely to borrow than control households, they do report greater interest in taking hypothetical loans.

4.7 Labor Supply

One specific concern expressed by administrators of the THP program was that it might increase child labor since children commonly contribute to the care of livestock. On the other hand, the income effect of the transfer might allow households to rely less on the labor of children. We examine the allocation of children's time in Table 13. This table reports results from estimating equation (2), taking child's time use on various activities as the dependent variable. Since we asked each adult member about the time their children spend on various activities, we often obtained multiple reports for the same child (one from each parent). Panel A of Table 13 uses only data reported by (potential) beneficiaries on how her children spend their time. The point estimates indicate that children of women offered the opportunity to participate in the program study 30-40 additional minutes a day compared to children of other potential beneficiaries, significant at the 10%

level. There are no statistically significant differences with respect to other categories of time use however, and the difference with respect to time studying is not statistically different from zero when averaging both parent's reports of how their children spend their time and considering children of non-beneficiaries residing in the household (Panel B). Thus, we do not find substantial differences in how children residing in treatment and control households spend their time.

Similar effects are possible with respect to adult labor: the asset transfer may have created greater entrepreneurial possibilities for adults, which might result in an increase in time spent working, or the income effect may lead to a decline in labor. Table 14 shows how adults in treatment and control households report allocating their time across work, leisure and household chores. The table suggests that adults in treatment households increased the quantity of time spent working by an additional hour a day (significant at the 1% confidence level). We also consider earnings from this work in columns 4-9. Considering all adults, we do not find that adults in treatment households report earning more in the last 24 hours from their labor than adults in control households. The majority of adults, however, do not report earning anything from their activities in the last 24 hours. We find that adults in treatment households are slightly less likely to report having earned money from their activities the previous day (column 10); this difference is significant at the 10% level, but not especially large compared to the average propensity to report income (45%). Restricting to adults who do report earning income from their activities, members of treatment households earn, on average, Rs. 6 more than members of control households, significant at the 5% confidence level. It appears that this additional earning derives from enterprises operated by the household; members of treatment households earn Rs.7 more from operating household enterprises than members of control households. This difference is significant at the 5% confidence level and represents 40% of the mean daily earnings from household enterprises among the control group.

Table 15 investigates time allocation in more depth, revealing that the additional hour per day spent working by adults in treatment households is entirely accounted for by increased time spent tending livestock. This finding, coupled with our failure to detect any significant difference between treatment and control households with respect to their propensity to operate a non-farm enterprise suggests that the program may have augmented income from household enterprises either by facilitating investment or as a result of the training component rather than the creation of new enterprises or augmenting labor dedicated to non-farm enterprises.

4.8 Knowledge and Empowerment

Given that the program also incorporated an education campaign around social issues, we evaluate differences in knowledge and attitudes about social issues in Table 16. We find that members of treatment households think that families should have fewer children, are more likely to indicate that there is legal punishment for taking dowry and are more likely to self-report vaccinating children. We do not find any significant differences in knowledge about legal ages for marriage or voting.

Finally, in Tables 17 we evaluate whether the program influences political involvement and women's empowerment. Given that the program was targeted at women, and engaged them economically, it is possible that this would influence their degree of autonomy and, potentially, engagement in local politics. Table 17 pertains to data collected from each adult member of the household related to politics and women's' autonomy. We do not find any differences between treatment and control households in terms of political involvement. We do find, however, that women in treatment households score higher on our index of autonomy than women in control households; the difference is driven entirely by women in treatment households having their own financial resources, separate from the resources of the household, which is likely the savings accounts held with Bandhan. We do not find substantial differences along other components of the index, such as women's freedom to travel.

Appendix Table A5, which shows related data captured in the household survey, accords with the results above. The household level data suggest that beneficiaries (women in the household who actually received the asset) score higher on an index of financial autonomy than potential beneficiaries (women identified as eligible residing in control households) and the difference in the index is driven entirely by the fact that women in treatment households are more likely to be personally responsible for savings accounts. We do not see statistically significant differences along other dimensions of empowerment.

4.9 Discussion of Impacts

The results discussed above suggest that the THP program did result in a meaningful increase in both income and consumption for participating households. Also, due to the asset transfer component, the program augmented the asset base of treatment households, particularly with respect to livestock but also, to some extent, land and fruit trees. The increase in wealth and consumption is reflected in other program impacts, particularly the improvement in nutritional intake and food security. The program had several other notable impacts including improved mental health and happiness, changes in women's financial activities and changes in labor supply. These effects may be attributable to augmented income and wealth or to other program features (such as training, targeting women and mandatory savings accounts). We do not detect

significant program impacts on physical health, credit related activities, measures of women's empowerment aside from operating savings accounts or child labor.

Though an increase in income and consumption might be expected on account of the substantial wealth transfer inherent in the THP program, a key question is whether the increases in income and consumption are likely to persist well beyond the date of asset transfer. One important factor, although not the only one, is whether households liquidate the assets they received. Table 18 presents summary statistics on income from livestock. Though these variables pertain to all livestock acquired in the last 3 years, not just those transferred by Bandhan, the difference in these variables between treatment and control households reasonably applies to the assets transferred by Bandhan. The table shows that livestock sales are fairly common: 31% of the treatment households had sold one or more small animal (such as a goat or sheep), compared to 7% of control households, and 37% had sold at least one cow, compared to 6% of control households. It is also the case that the death of livestock is an issue. This table implies that about 25% of the small livestock transferred by Bandhan had died at the time of the endline, thought the figure is much lower for cows (only 5% of cows transferred died). Sale and death of livestock need not imply that income gains from livestock would not be sustained if there is a sufficiently high calf birth rate: the table shows that treatment households had approximately 0.5 more small livestock calves (net calf deaths) than control households, but only 0.05 more cow calves than control households. Sale of livestock calves was relatively rare at the time of this survey; treatment households had sold an average of 0.15 small livestock calves and 0.01 cow calves (compared to 0.07 and 0.03, respectively, for control households).

These figures suggest that the sale of the transferred assets contributed to the increased income among treatment households, the question, however, is if it is sufficient to explain the entire increase. A back-of-the-envelope calculation, multiplying the difference in the number of livestock sold times the price received for those livestock, suggests treatment households earned an average of Rs. 422 per household member more than control households from the sale of livestock.[17] This figure, however, pertains to the total income earned from animal sales in the past 3 years; allocating this increased income from livestock sales for treatment households across the 18 months since asset transfer works out to Rs. 23 per household member per month, which is not sufficient to fully account for the observed increase in income and consumption. If livestock sales were concentrated more recently (e.g. within the last 6 months) it is possible that income from the sale of the assets transferred would explain the full increase in consumption. Our data do not track the date at which livestock were sold, thus we can not fully answer this question.

Though income from the sale of assets appears important, Tables 5 and 14 suggest that income from non-

[17]This figure refers to how much more treatment households earned than control households from the sale of all livestock (.42*512.37 + .46*3168.67 = 1673) divided by the average number of household members per household in the treatment group (3.96).

farm enterprises operated by household members also increased for treatment households, which is surprising in light of the fact that most of the assets transfers were livestock. One possibility is that some households that sold their livestock invested the proceeds in small enterprises; though the point estimates are positive we do not detect a significant increase in business revenues or costs when examining business activity in detail (see Appendix Table A4). We also do not observe an increase in labor allocated to non-farm enterprises by members of treatment households. It is possible that other program elements, such as training for managing enterprises, influenced business activity, though it is puzzling that the effect on self-reported income is not borne out in the data pertaining to the cash flows of the enterprises.

Taken together, these results are not conclusive regarding whether households are primarily consuming the value of the asset transfer or whether the transfer is likely to lead to sustained increases in income. On the one hand the sale of transferred assets is not uncommon. On the other, such sales do not appear to fully explain the observed differences in consumption and income. There is some evidence of increased non-farm business activity but we do not find especially strong evidence of increased investment (either in labor or capital) in these enterprises. Results from the second survey (conducted 30 months after asset transfer) may provide greater evidence on these questions.

5 Heterogeneity

The results discussed above, pertaining to average impacts of the program, may mask important heterogeneity in the magnitude of impacts across the population. Since increased income deriving from non-agricultural enterprises may be a factor in overall increases in income, there may be differential effects on households which operate small enterprises. Moreover, the goal of the THP program is to reach the poorest of the poor and those who lack access to credit, thus heterogeneous effects related to baseline levels of poverty and credit access may be especially informative. Relatedly, the poorest of the poor may have pressing consumption needs, causing them to liquidate assets earlier to meet these needs and generating heterogeneous effects along this margin.

In what follows, we assess whether there are heterogeneous program impacts along these dimensions for some of the main effects. We focus on household consumption, as it is perhaps our best measure of the overall economic impact of the program and an important welfare metric, and income.[18] To estimate heterogeneous effects, we estimate

$$y_{ih} = \beta_1 S_{ih} + \beta_2 X_{ih} + \beta_3 X_{ih} * S_{ih} + \alpha_h + \varepsilon_{ih} \quad (3)$$

[18]We also considered heterogeneous effects on the existence of and income from household enterprises, as this appears to be a source from which treatment households derive income, and financial behaviors, as increasing credit access is a main goal of the program. We do not find especially strong results in terms of these outcomes (results available on request).

where y is one of the outcomes discussed above and X is either an indicator variable for the household operating a small non-farm enterprise at the time of the baseline survey[19], baseline per-capita monthly total consumption, an indicator that household members get enough to eat every day (measured at baseline) or the rupee value of debt taken by the household in the 12 months before the baseline.

In Table 19A we show the results of the specification above, taking income from various sources and consumption as the dependent variables. We begin with the top panel, showing heterogeneous effects depending on whether the household operated a business at the time of the baseline. The results do not show any heterogeneous effects on income: the coefficient on the interaction term is generally negative except when considering income from household enterprises and is never statistically significant. Interestingly, however, the table suggests that there are heterogeneous effects with respect to consumption, with treatment households which operated a business at baseline consuming Rs. 150 per person per month more than treatment households which did not operate a business at baseline, relative to the corresponding difference for control households (difference-in-difference). In Table 19B we examine variables related to income sources and credit in order to understand this discrepancy. One possibility is additional borrowing, which could result in greater consumption without greater income, but column 4 does not indicate any heterogeneous effects in terms of total debt. The variables which measure the cash flows of businesses directly (as opposed to self-reported income in total) do show that treatment households that operated a business at baseline substantially increased the size of their businesses; the coefficients on the interaction terms are Rs. 1035 and Rs. 780, respectively, when considering monthly business revenues and costs and the estimates are statistically significant at the 10% confidence level. Moreover, we see that households that operated a business at baseline earn more irregular income from livestock (primarily from the sale of livestock themselves).

Additionally, in Figure 5, we plot the distribution of income in a typical month separately for treatment and control households with and without a business at baseline. The figure shows that, at moderate levels of income, the income distribution for treatment households with a business at baseline is more rightward shifted relative to treatment households without a pre-existing business than the corresponding distributions for control households. We do observe, however, significant right tails in the distribution, especially for treatment households without a business at baseline. This suggests that the regression results may be driven by the tails of the distribution. When eliminating the top 5% of the income distribution, the coefficient on the interaction term taking total income as the outcome becomes positive, but remains statistically indistinguishable from zero.

[19] We use whether the household operated a business at baseline, rather than endline, as the latter is potentially endogenous. This variable is somewhat "sticky": 97 out of 117 (or 83%) of households which operated a business at baseline also had a business at endline. We note, however, that there was a substantial increase in business activity: 45% of those without a business at baseline operated such a business at endline.

These results suggest that the program stimulated small enterprise activity, especially for those households which initially operated a business. These results (columns 3-11 of Table 19A) are also suggestive that some of the increase in income from business activity may have been offset by decreases in income from other sources (such as agriculture or outside labor). The total effect is uncertain: we observe an increase in self-reported consumption but not in self-reported income (except perhaps for part of the distribution) and increased borrowing does not appear to reconcile the difference.

In the second panel of Tables 19A and 19B, we present heterogeneous results based on per capita monthly baseline consumption. While the interaction of treatment and baseline per-capita monthly consumption is positive and statistically significant when taking endline consumption as the dependent variable, Figure 2 suggests that treatment households increased their consumption throughout the distribution and that outliers explain this result. We also see some evidence of increased small business profits for treatment households which were wealthier at baseline. These results, however, are not robust to assessing heterogeneous effects along another dimensions of poverty: whether all household members get enough to eat each day. Nor do we find evidence of heterogeneous treatment effects depending on how extensively households had used credit before beginning the THP program (results omitted, but available on request).

6 Cost Benefit

While the analysis above suggests a number of substantive benefits accrue to households participating in the THP program, assessing the benefits of the program from a policy perspective requires benchmarking the gains to beneficiaries against the costs of administering the program, and the opportunity cost of that investment.

Certain program impacts, such as improved emotional health and greater self-reported happiness, are surely valuable to beneficiaries, but since they are not directly comparable to monetary program costs we focus on gains in income and consumption in this cost-benefit analysis; any non-pecuniary benefits (costs) of the program will cause this estimate to understate (overstate) the program cost-benefit ratio.

On the cost side, a report by Micro Credit Rating International Ltd. (M-CRIL), produced in collaboration with Bandhan, put the per-beneficiary cost of the THP program at $331. Of this sum, $101 is spent on assets transferred to beneficiaries, $65 is allocated to weekly cash allowances to households and the remainder is spent on overhead and administration costs.

Tables 5 and 6 suggest that an offer to participate in the THP program leads to an average increase of Rs. 78 and Rs. 83 in monthly per capita monthly income and consumption, respectively, or approximately $90 per household per year. This increase translates to a simple annual return of 27%. In contrast, the

return on an Indian fixed deposit account is on the order of 10%, suggesting that these poor recipients are able to earn an average return above what would be possible by investing the cost of program administration in secure financial assets on their behalf.

Applying simple break-even analysis, this suggests that in order for the program to yield more benefit to recipients than the cost of the program, benefits which were, on average, the same magnitude found 18 months into the program would have to be sustained for a total of approximately 4 more years. The data presented here are not sufficient to assess whether such a sustained increase in income is plausible. On the one hand the evidence of additional small enterprise activity and increased income from such enterprises may be predictive of future income gains, on the other hand the fact that many households liquidated their assets, without a clear increase in investment, may prove to be a harbinger of ephemeral income gains. Further rounds of data collection may shed additional light on this question.

7 Conclusion

In this study, we report the results of a randomized impact assessment of an anti-poverty program targeted at the poorest of the poor in rural villages of West Bengal, India. The program, operated by a local microfinance institution, makes direct asset transfers and provides training to women residing in poor households, with the aim to enable them to establish a reliable income source and "graduate" them out of extreme poverty as well as to integrate them into microfinance groups.

We find that this program was successful in notable respects. In particular, 18 months after the asset transfer and initiation of the program, we find that participation in the program results in substantial increases in per-capita household consumption. We also find various other benefits, such as reduced food insecurity, increased assets and improved emotional well-being. Although the data analyzed in this study were collected before beneficiaries joined microfinance groups, we find that program participants express greater interest in obtaining credit, although we do not detect any effect on current financial behaviors.

Looking in greater detail at the sources of augmented income suggests that increased consumption was, to some extent, financed by the sale of assets transferred. We also find, however, that the program resulted in greater income from non-agricultural enterprises operated by the households. If the latter source proves resilient, it is possible that the program will result in sustained income increases for beneficiary households. Forthcoming analysis from data collected 30 months after the asset transfer will shed greater light on this issue.

References

Akhter U. Ahmed, Mehnaz Rabbani, Munshi Sulaiman, and Narayan C. Das. The impact of asset transfer on livelihoods of the Ultra Poor in Bangladesh. *Research Monograph Series, Research and Evaluation Division, BRAC, Dhaka.*, No. 39, 2009.

Sajeda Amin, Ashok S. Rai, and Giorgio Topa. Does microcredit reach the poor and vulnerable? Evidence from northern Bangladesh. *Journal of Development Economics*, 70(1):59–82, February 2003.

Abhijit Banerjee, Esther Duflo, Raghabendra Chattopadhyay, and Jeremy Shapiro. Targeting efficiency: How well can we identify the poor? *Center for Microfinance Working Paper*, 2007.

Angus Deaton. *The Analysis of Household Surveys.* The Johns Hopkins University Press, Baltimore, 1997.

Jyotsna Jalan and Rinku Murgai. An effective "Targeting Shortcut"? An assessment of the 2002 below-poverty line census method. `http://www.ihdindia.org/ourcontrol/rinku_murgai.doc`, 2007. Viewed September 2007.

Debdulal Mallick. How effective is a big push for the small? Evidence from a quasi-random experiment. *mimeo*, 2009.

Imran Matin and David Hulme. Programs for the poorest: Learning from the igvgd program in bangladesh. *World Development*, 31(3):647 – 665, 2003.

Jonathan Morduch. The microfinance promise. *Journal of Economic Literature*, 37(4):1569–1614, 1999.

Neela Mukherjee. Political corruption in IndiaŠs Below the Poverty Line (bpl) exercise: GrassrootsŠ perspectives on BPL: Good practice in peopleŠs participation from Bhalki village, West Bengal. *mimeo*, 2005.

Mehnaz Rabbani, Vivek Prakash, and Munshi Sulaiman. Impact assessment of CFPR/TUP: A descriptive analysis based on 2002-2005 panel data. *CFPR/TUP Working Paper Series*, No. 12, 2006.

Patrick Webb, Jennifer Coates, and Robert Houser. Does microcredit meet the needs of all poor women? Constraints to participation among destitute women in Bangladesh. *Tufts University Food Policy and Applied Nutrition Program Discussion Paper*, No. 3, 2002.

Christopher Woodruff and David McKenzie. Experimental evidence on returns to capital and access to finance in Mexico. *World Bank Economic Review*, 22(3):457–482, 2008.

Christopher Woodruff, David McKenzie, and Suresh de Mel. Returns to capital: Results from a randomized experiment. *Quarterly Journal of Economics*, 123(4):1329–1372, 2008.

Figure 1

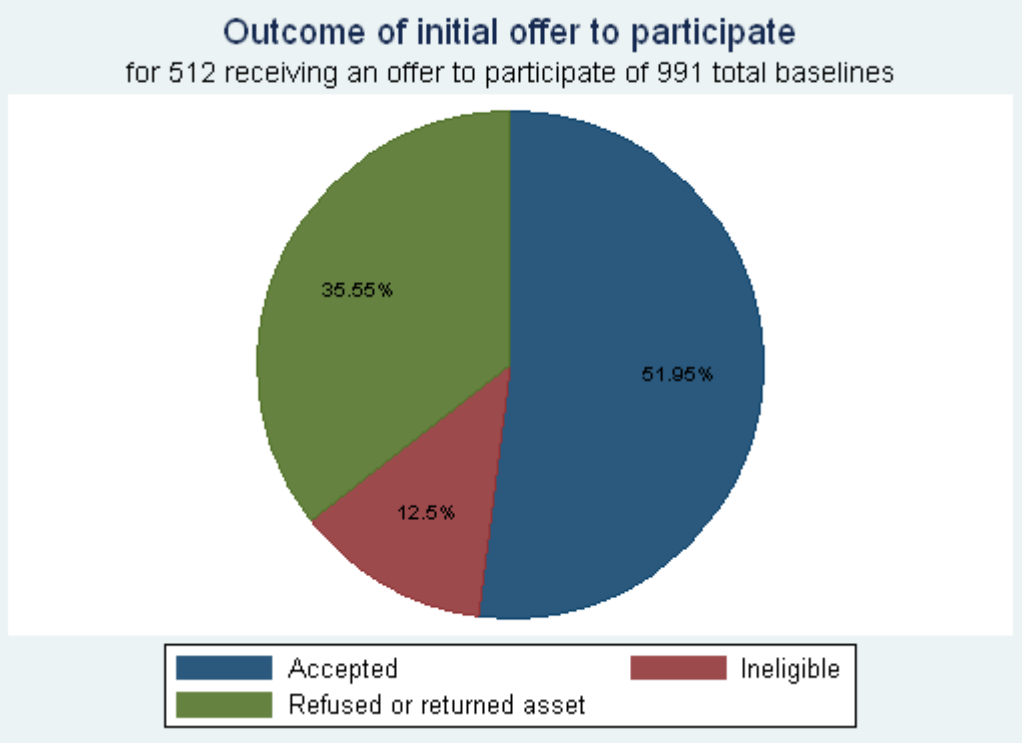
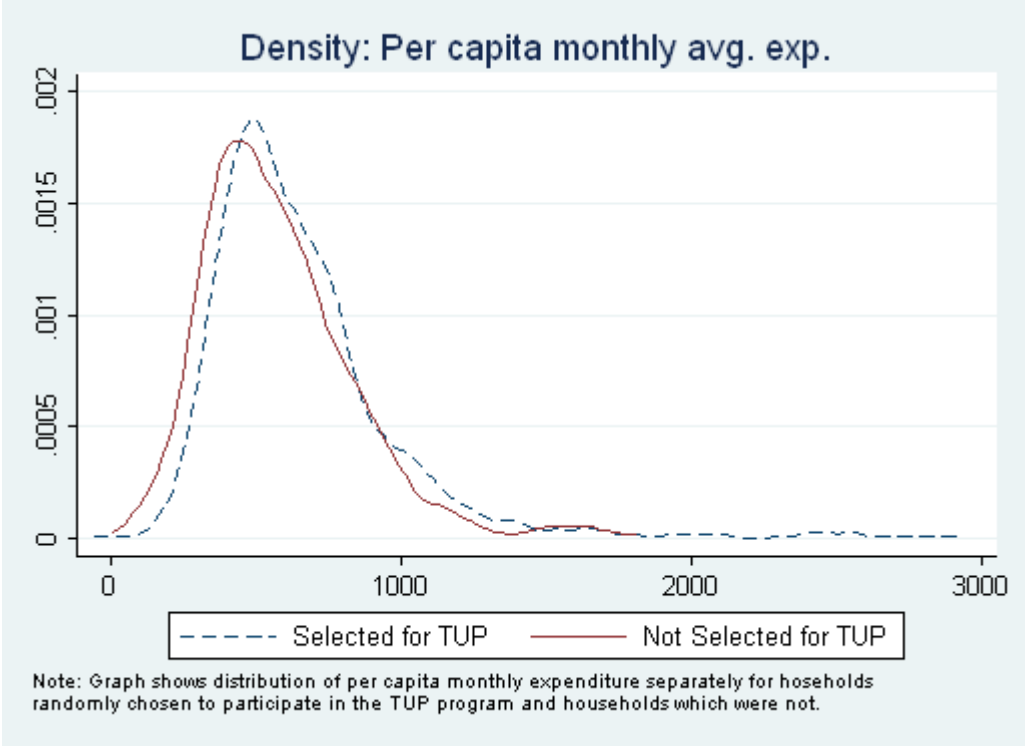
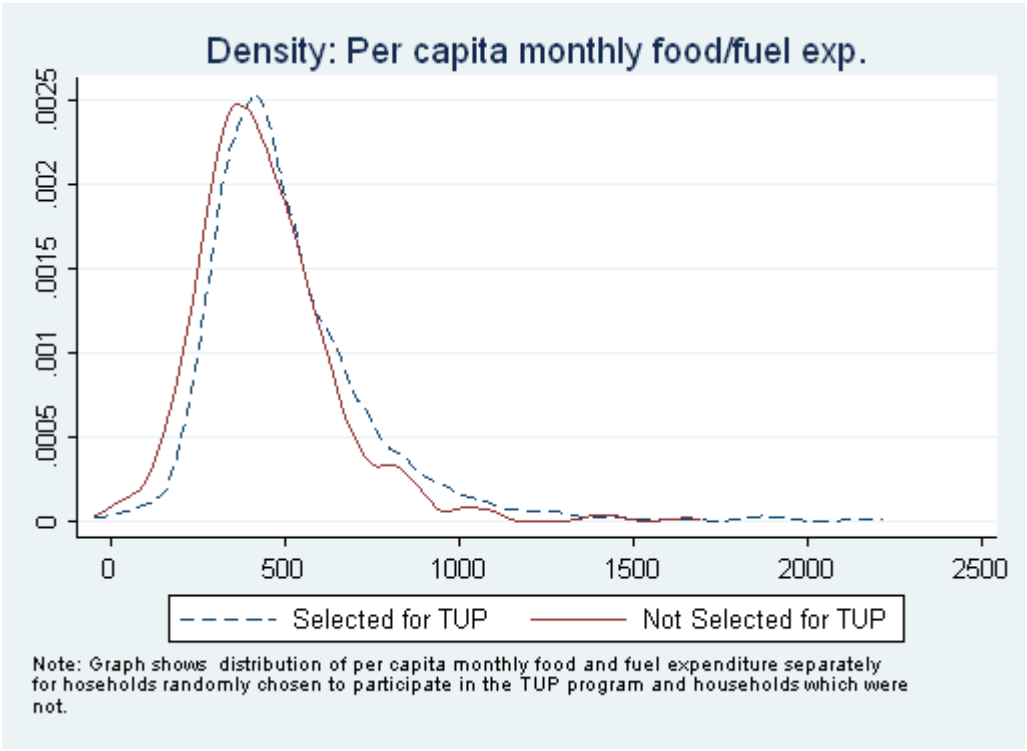

Outcome of initial offer to participate
for 512 receiving an offer to participate of 991 total baselines
35.55%
51.95%
12.5%
Accepted
Ineligible
Refused or returned asset

Figure 2



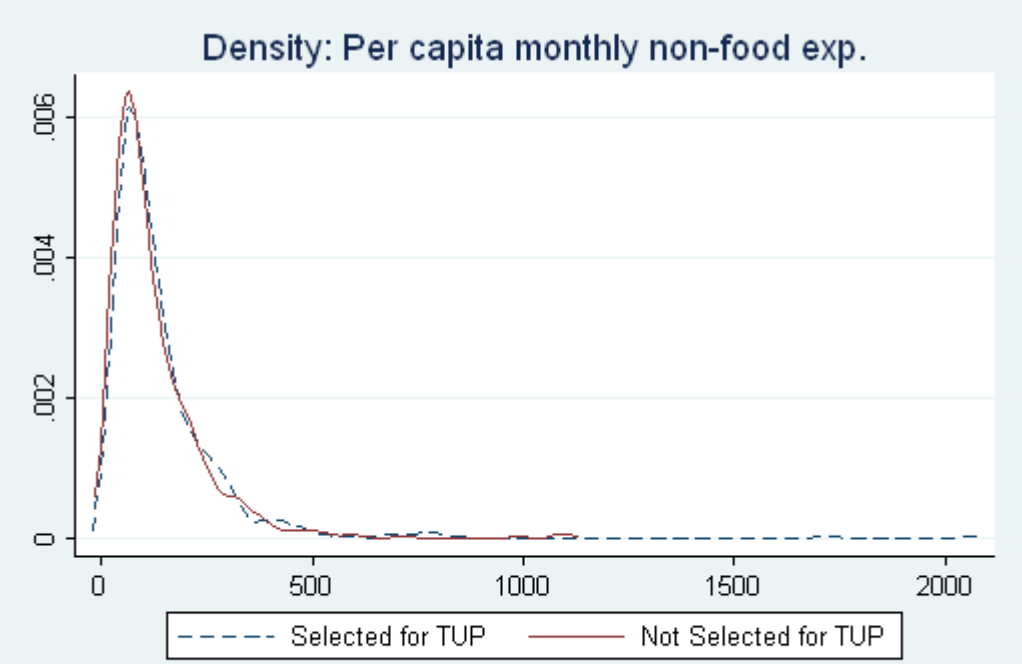
Note: Graph shows distribution of per capita monthly expenditure separately for hoseholds randomly chosen to participate in the TUP program and households which were not.

Figure 3



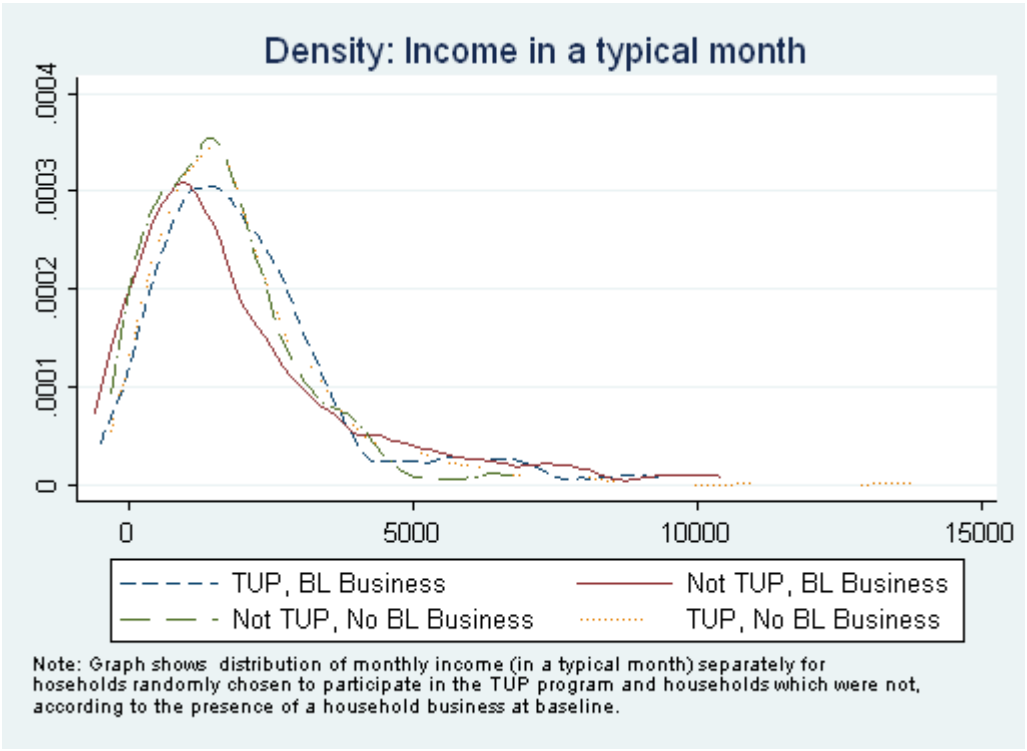
Note: Graph shows distribution of per capita monthly food and fuel expenditure separately for hoseholds randomly chosen to participate in the TUP program and households which were not.

Figure 4



Note: Graph shows distribution of per capita monthly non-food expenditure separately for hoseholds randomly chosen to participate in the TUP program and households which were not.

Figure 5



Note: Graph shows distribution of monthly income (in a typical month) separately for hoseholds randomly chosen to participate in the TUP program and households which were not, according to the presence of a household business at baseline.

Table 1: Correlates of Program Particapation

Variable	Refused	N	Participated	N	Diff	p-value	
Land owned, katthas	1.47	124	1.7	670	-0.22	0.33	
How many rooms does your house have?	1.19	127	1.18	677	0.01	0.767	
Number of household members	3.75	128	3.9	684	-0.15	0.348	
Household members aged 14 or older	2.29	128	2.32	684	-0.03	0.725	
Household members aged 0-13	1.46	128	1.58	684	-0.12	0.346	
HH head died in last 5 years	0.14	128	0.15	684	-0.01	0.772	
Religion: Hinduism	0.42	128	0.6	684	-0.18	0	***
Percent male in household	0.41	128	0.42	684	-0.01	0.816	
Average age in household	29.02	128	26.35	684	2.66	0.041	**
Average schooling in household (year)	3.42	77	3.57	447	-0.15	0.44	
Per capita monthly avg. exp.	401.9	128	417.48	683	-15.58	0.533	
Per capita monthly food/fuel exp.	288.84	128	298.28	682	-9.44	0.583	
One or more health shock (1 year)	0.28	127	0.31	679	-0.04	0.394	
Experienced non-health economic shock in last 12 months	0.25	124	0.25	679	0	0.951	

Note: Table compares means of indicators for those that did or did not refuse to participate. Sample is restricted to baseline data for households found in endline also and that were offered the chance to participate.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 2: Summary Statistics for Surveyed and Not Surveyed Households

Variable	Not Surveyed	N	Surveyed	N	Diff	p-value	
Do you cultivate any land owned by the household?	0.01	166	0.01	812	0.00	0.977	
Do you lease in/sharecrop any land?	0.00	166	0.02	812	-0.02	0.078	*
Land owned, katthas	1.14	163	1.66	794	-0.53	0.006	***
How many rooms does your house have?	1.17	163	1.18	804	-0.01	0.875	
How many rooms are pucca?	0.01	163	0.02	804	-0.01	0.497	
How many rooms are kuchha?	0.79	163	0.81	804	-0.03	0.638	
Number of household members	3.89	166	3.88	812	0.01	0.945	
Household members aged 14 or older	2.08	166	2.32	812	-0.23	0.003	***
Household members aged 0-13	1.8	166	1.56	812	0.24	0.035	**
HH head died in last 5 years	0.1	166	0.15	812	-0.05	0.116	
Number working HH members died in last 5 years	0.1	166	0.1	812	0.00	0.935	
Religion: Hinduism	0.29	166	0.57	812	-0.28	0.00	***
Percent male in household	0.42	166	0.42	812	0.00	0.862	
Average age in household	25.68	166	26.77	812	-1.1	0.352	
Average schooling in household (year)	3.37	110	3.54	524	-0.17	0.293	
Per capita monthly avg. exp.	389.68	165	415.02	811	-25.34	0.237	
Per capita monthly food/fuel exp.	287.19	165	296.79	810	-9.59	0.511	
One or more health shock (1 year)	0.34	166	0.31	806	0.04	0.367	
Experienced non-health economic shock in last 12 months	0.19	165	0.25	803	-0.06	0.1	

Note: Table shows the mean, at baseline, of the indicated variables among households reached in the endline survey and those not surveyed as well as the difference in means. Serious health events are those which required hospitalization or resulted in the loss of working days. Non-health economic shocks include severe home damage, illness/death of livestock, theft or legal dispute.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 3: Attrition and Treatment Assignment

	Attrition household	Attrition household
Selected in randomization?	-0.01	0.00
	(0.02)	(0.02)
Hamlet FEs	No	Yes
Observations	978	977
R-Squared	0.0	0.3
Mean of dependent variable	0.17	0.17

Notes: Table shows the results from a regression of an indicator variable that the household was surveyed in the baseline but not in the endline survey on an indicator that the household was randomly selected for participation in the Ultra Poor program.

* Significant at the 10% confidence level

** Significant at the 5% confidence level

*** Significant at the 1% confidence level

Table 4: Summary Statistics

Panel A

Variable	Selected	N	Not Selected	N	Diff	p-value	
Do you cultivate any land owned by the household?	0.01	427	0.01	385	0.00	0.869	
Do you lease in/sharecrop any land?	0.02	427	0.02	385	0.00	0.953	
Land owned, katthas	1.63	418	1.69	376	-0.06	0.718	
How many rooms does your house have?	1.18	422	1.17	382	0.01	0.651	
How many rooms are pucca?	0.03	422	0.02	382	0.01	0.727	
How many rooms are kuchha?	0.79	422	0.84	382	-0.05	0.266	
Number of household members	3.91	427	3.84	385	0.07	0.52	
Household members aged 14 or older	2.36	427	2.26	385	0.10	0.137	
Household members aged 0-13	1.55	427	1.57	385	-0.02	0.818	
HH head died in last 5 years	0.16	427	0.14	385	0.02	0.506	
Number working HH members died in last 5 years	0.10	427	0.09	385	0.01	0.658	
Religion: Hinduism	0.58	427	0.56	385	0.03	0.433	
Percent male in household	0.43	427	0.4	385	0.03	0.114	
Average age in household	26.8	427	26.74	385	0.06	0.952	
Average schooling in household (year)	3.56	275	3.52	249	0.04	0.782	
Per capita monthly avg. exp.	411.41	427	419.04	384	-7.63	0.676	
Per capita monthly food/fuel exp.	295.07	427	298.7	383	-3.63	0.772	
One or more health shock (1 year)	0.29	424	0.33	382	-0.05	0.149	
Experienced non-health economic shock in last 12 months	0.24	420	0.26	383	-0.03	0.406	

Panel B

Variable	Selected	N	Not Selected	N	Diff	p-value	
Main income source: Own Agriculture	0.01	429	0.01	388	0.01	0.201	
Main income source: Own non-Agriculture	0.32	429	0.24	388	0.08	0.012	**
Main income source: Agricultural Labor	0.19	429	0.26	388	-0.07	0.018	**
Main income source: Non-Agricultural Labor	0.32	429	0.27	388	0.05	0.131	
Main income source: Regular wage/salary	0.00	429	0.01	388	-0.01	0.346	
Main income source: Sharecropping	0.00	429	0.00	388	0.00	0.179	
Do you cultivate any land owned by the household?	0.66	429	0.55	386	0.12	0.001	***
Do you lease in/sharecrop any land?	0.06	429	0.04	385	0.02	0.258	
Land owned, katthas	1.47	423	1.2	385	0.27	0.092	*
How many rooms does your house have?	1.26	429	1.26	387	0.00	0.996	
How many rooms are pucca?	0.02	429	0.02	387	0.00	0.866	
How many rooms are kuchha?	0.73	429	0.75	387	-0.02	0.646	
Number of household members	3.96	429	3.89	388	0.07	0.564	
Household members aged 14 or older	2.48	429	2.41	387	0.07	0.303	
Household members aged 0-13	1.49	424	1.49	381	0	0.975	
Able bodied male adult (18+)	0.69	429	0.67	388	0.02	0.544	
HH head died in last 5 years	0.11	429	0.11	388	0.01	0.776	
Number working HH members died in last 5 years	0.12	429	0.07	388	0.04	0.053	*
Religion: Hinduism	0.61	429	0.57	387	0.04	0.282	
Percent male in household	0.43	429	0.42	388	0.01	0.678	
Average age in household	28.49	429	28.51	387	-0.03	0.979	
Average schooling in household (year)	3.65	299	3.6	264	0.06	0.714	
Per capita monthly avg. exp.	662.79	429	576.97	387	85.83	0	***
Per capita monthly food/fuel exp.	513.97	429	445.09	387	68.87	0	***
One or more health shock (1 year)	0.41	427	0.41	387	0.01	0.857	
Experienced non-health economic shock in last 12 months	0.38	429	0.21	388	0.17	0	***

Note: Table shows the mean of the indicated variables among households randomly selected to receive an offer to participate in the THP program and those that were not as well as the difference in means. Panel A presents results from the baseline survey and Panel B presents results from the endline survey. Serious health events are those which required hospitalization or resulted in the loss of working days. Non-health economic shocks include severe home damage, illness/death of livestock, theft or legal dispute.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 5: Effect of Treatment on Income

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Income in a typical month	Income per capita in a typical month	Money earned from FARMING LAND OWNED OR LEASED IN BY THIS HOUSEHOLD	Money earned from TENDING ANIMALS OWNED OR LEASED IN BY THIS HOUSEHOLD?	Money earned from WORK IN BUSINESS OPERATED BY HOUSEHOLD MEMBER	Money earned from FISHING	Money earned from AGRICULTURAL LABOR	Money earned from DAILY LABOR NON AGRI (Specify)	Money earned from SALARIED/FORMAL EMPLOYMENT	Money earned from HOUSEWORK IN AN OUTSIDE HOUSEHOLD	Money earned from TENDS ANIMALS IN AN OUTSIDE HOUSEHOLD
Selected in randomization?	302.03	77.78	30.13	83.99	121.04	9.1	-28.53	112.32	2.75	-24.8	-3.97
	(112.682)***	(28.529)***	(22.44)	(23.501)***	(54.754)**	(39.94)	(38.51)	(71.25)	(8.92)	(15.75)	(4.11)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	814	814	814	814	814	814	814	814	814	814	814
R-Squared	0.18	0.18	0.12	0.18	0.26	0.14	0.26	0.18	0.19	0.34	0.08
Control group mean	1346.65	355.97	17.36	14.13	261.91	53.02	363.97	530.53	18.69	84.2	2.85

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. Variables refer to income earned in a typical month from the indicated activity.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 6: Effect of Treatment on Consumption

	(1)	(2)	(3)	(4)
	Per capita monthly avg. exp.	Per capita monthly food/fuel exp.	Per capita monthly non-food exp.	Per capita durable good exp.
Selected in randomization?	82.78	62.87	19.91	-51.07
	(22.396)***	(16.349)***	(11.386)*	(53.20)
Hamlet FEs	Yes	Yes	Yes	Yes
Observations	813	813	813	813
R-Squared	0.2	0.22	0.14	0.18
Control group mean	498.31	372.28	124.96	224.87

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 7: Effect of Treatment on Transfers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Meals received	Meals given	Value food received	Value food given	Loans given to other households	Gifts given to other households	Loans received from other households	Gifts received from other households
Selected in randomization?	0.99	0.71	-17.59	0.29	-6.76	6.57	-286.76	-138.07
	(0.87)	(0.327)**	(9.391)*	(0.73)	(14.74)	(11.79)	(291.34)	(382.88)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	808	812	789	812	798	798	798	798
R-Squared	0.19	0.18	0.14	0.07	0.12	0.13	0.2	0.14
Control group mean	5.78	1.44	39.05	0.82	18.44	11.51	1744.3	1077.76

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects, which correspond roughly to villages. Robust standard errors in parentheses. Time period of reference for dependent variables in columns 1-4 is 30 days, in columns 5-8 it is 18 months.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 8: Effect of Treatment on Assets

	(1)	(2)	(3)	(4)
	Assets index (durables and livestock)	Assets index (durables)	Land owned, katthas	Number fruit trees
Selected in randomization?	0.4	0.12	0.28	0.56
	(0.119)***	(0.12)	(0.169)*	(0.249)**
Hamlet FEs	Yes	Yes	Yes	Yes
Observations	797	798	805	810
R-Squared	0.2	0.18	0.14	0.16
Control group mean	-0.15	-0.08	1.44	1.27

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. Assets index is the principal components index of household durable goods and livestock owned by the household or durables alone (as indicated in the column heading).

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 9: Effect of Treatment on Disaggregated Food Consumption

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Exp. cereals	Exp. pulses	Exp. dairy	Exp. edible oil	Exp. vegetables	Exp. fruit, nuts	Exp. meat, eggs	Exp. other food	Exp. pan, tobac., alcohol	Exp. fuel and light
Selected in randomization?	14.68	2.6	4.74	2.77	14.93	3	8.24	8.68	0.47	2.76
	(5.330)***	(1.386)*	(1.678)***	(1.664)*	(4.267)***	(1.142)***	(2.548)***	(2.684)***	(2.27)	(2.96)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	813	813	813	813	813	813	813	813	813	813
R-Squared	0.2	0.22	0.22	0.21	0.22	0.23	0.22	0.22	0.15	0.23
Control group mean	152.88	11.89	6.49	31.73	68.25	2.77	19.81	37.4	16.72	24.11
Effect as % of mean	10%	22%	73%	9%	22%	108%	42%	23%	3%	11%

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. All variables are per capita.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 10: Effect of Treatment on Food Security

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Food insecurity index	Adult skipped meal	Adult not eat entire day	Child skiped meal	Do all members of your household get enough food everyday?	Regularly eat 2 meals a day	Self-classification (ladder)
Selected in randomization?	-0.05	-0.08	-0.13	-0.01	0.07	0.01	0.21
	(0.013)***	(0.025)***	(0.030)***	(0.03)	(0.025)***	(0.02)	(0.072)***
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	812	811	811	812	812	812	811
R-Squared	0.28	0.21	0.26	0.24	0.2	0.25	0.24
Control group mean	0.37	0.9	0.53	0.27	0.11	0.85	2.36

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. Dependent variable in column 1 is an index of food insecurity, it is the simple average of indicator variables where 1 indicates greater food insecurity than 0. The dependent variables in columns 2-6 are indicator variables used to construct the food insecurity index. The time period of reference for skipping meals is 12 months. Dependent variable in column 7 is households self-perception of well-being on a scale from 1 (extremely poor) to 10 (very comfortable).

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 11: Effect of Treatment on Adult Health

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Health Knowledge and Behavior Index	Health Index	Unable to work because sick or injured (30 days)	Days unable to work	Average ADL score (1-4=can't do task)	Self perception of health (10=best 1=worst)	Perceive health improved last year	Mental Health Index	Life satisfaction index (1-5=most satisfied)	Index of reported symptoms of mental distress	Did not experience period of worry/anxiety in last year	Scale (1-3) think life will get better
Selected in randomization?	0.44	0.11	-0.03	-0.03	-0.02	0.08	0.06	0.41	0.14	-0.08	0.04	0
	(0.09)***	(0.07)	(0.02)	(0.22)	(0.02)	(0.08)	(0.02)***	(0.11)***	(0.04)***	(0.02)***	(0.02)***	(0.01)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1515	1518	1519	1519	1519	1518	1519	1502	1516	1516	1514	1505
R-Squared	0.16	0.16	0.17	0.12	0.14	0.16	0.14	0.19	0.17	0.2	0.14	0.22
Control group mean	-0.24	-0.08	0.38	2.25	1.54	3.9	0.23	-0.21	2.42	0.6	0.07	2.94

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors, clustered at the household level, in parentheses. The index of health knowledge and behaviors is constructed using principal components analysis using questions pertaining to health behaviors and knowledge including washing hands after defecating, wearing sandals to the latrine and elsewhere, awareness of waterborne diseases and ways to prevent them, knowledge of HIV and ways to prevent the disease, having soap, a toothbrush and paste at home and knowledge of iodized salt. The index of physical health in a principal component index of various indicators of health, including: self-perception, missed work days, and Activities of Daily Living measures. The index of mental health is also constructed using principal component analysis based on the self-reported presence or lack of symptoms of poor mental health and an individual's outlook for the future.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 12: Effect of Treatment on Financial Variables

	(1)	(2)	(3)	(4)	(5)
	Total borrowing	Informal borrowing	Quasi-formal borrowing	Rs. deposited in savings (30 days)	Willingness to borrow (min of loan size bounds)
Selected in randomization?	-204.58	-61.83	-142.75	22.62	439.63
	(371.12)	(345.42)	(98.84)	(10.819)**	(216.029)**
Hamlet FEs	Yes	Yes	Yes	Yes	Yes
Observations	812	812	812	805	794
R-Squared	0.18	0.18	0.18	0.2	0.22
Control group mean	2459.2	2174.79	284.41	19.22	2262.6

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. The willingness to borrow and financial autonomy variables are constructed only from survey responses of the THP beneficiary or potential beneficiary (for control households). The former pertains to expressed willingness to borrow different amounts of money with interest. The later is the simple average of indicators of financial autonomy (presented separately in the following three columns): specifically taking independent decisions about buying and selling assets, taking decisions about borrowing, spending and saving and operating savings accounts).

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 13: Effect of Treatment on Children's Time Use

	(1)	(2)	(3)	(4)
	Time spent household chores (Child)	Time spent on leisure activities (Child)	Time spent working (Child)	Time spent studying (Child)
	Panel A			
Selected in randomization?	-0.55	9.66	2.59	38.09
	(8.88)	(11.38)	(7.12)	(21.14)*
Hamlet FEs	Yes	Yes	Yes	Yes
Observations	519	518	518	520
R-Squared	0.25	0.39	0.28	0.35
Control group mean	61.22	137.7	20.82	163.62
	Panel B			
Selected in randomization?	-0.69	10.54	2.68	19.71
	(6.97)	(9.68)	(7.09)	(16.29)
Hamlet FEs	Yes	Yes	Yes	Yes
Observations	626	626	626	626
R-Squared	0.26	0.34	0.25	0.32
Control group mean	61.5	137.99	23.55	174.06

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors, clustered at the household level, in parentheses. The estimates in the top panel are constructed using time reported by the (potential) beneficiary for her children. The estimates in the lower panel use the average of time reported by each of the child's parents. Time spent on various activities is minutes spent in the last 24 hours.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 14: Effect of Treatment on Adult Time Use

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Time spent household chores	Time spent on leisure activities	Time spent working	Individual income from labor	Individual income from HH business	Individual income from outside labor (ag, non-ag, domestic)	Individual income from outside labor (ag)	Individual income from outside labor (non-ag)	Individual income from outside housework	Earned from work yesterday	Individual income from labor (if earn)	Individual income from HH business (if earn)	Individual income from outside labor (ag, non-ag, domestic) (if earn)	Individual income from outside labor (ag) (if earn)	Individual income from outside labor (non-ag) (if earn)	Individual income from outside housework (if earn)
Selected in randomization?	-4.57	2.57	61.25	1.02	1.88	0.44	-0.81	1.94	-0.81	-0.04	6.01	6.56	2.23	-0.9	4.93	-0.9
	(7.23)	(2.49)	(10.22)***	(1.58)	(1.16)	(1.25)	(0.78)	(1.10)*	(0.78)	(0.02)*	(3.00)**	(2.64)**	(2.83)	(1.84)	(2.74)*	(1.84)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1519	1519	1519	1519	1519	1519	1519	1519	1519	1519	654	654	654	654	654	654
R-Squared	0.1	0.14	0.13	0.08	0.12	0.1	0.12	0.09	0.12	0.12	0.25	0.28	0.29	0.3	0.22	0.3
Control group mean	232.63	17.12	221.08	21.38	6.94	11.5	5.64	4.38	5.64	0.45	47.92	15.55	25.77	12.65	9.81	12.65

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors, clustered at the household level, in parentheses. Time spent on various activities is minutes spent in the last 24 hours. Income is in Rs. earned in the last 24 hours, including payments in cash and the value of in kind payments. Income is reported separately for income from a non-agricultural enterprise operated by the household and income from outside labor (agricultural, non-agricultural or housework in another household). The final three columns restrict to adults who report earning some income (in cash or in kind) from their labor in the past 24 hours.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 15: Effect of Treatment on Adult Labor Time

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Own/rented field	Own animals	Own business	Fishing	Agricultural labor	Outside housework	Non-agricultural labor	Other work
Selected in randomization?	1.66	64.64	9.45	-3.61	-4.1	-12.38	7.66	-1.95
	(2.10)	(5.00)***	(6.89)	(2.11)*	(5.33)	(6.26)**	(5.82)	(3.17)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1519	1518	1518	1519	1519	1519	1519	1519
R-Squared	0.11	0.25	0.2	0.16	0.15	0.14	0.08	0.11
Control group mean	4.25	32.31	61.01	6.57	40.24	35.79	30.11	10.81

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors, clustered at the household level, in parentheses. Time spent on various activities is minutes spent in the last 24 hours.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 16: Effect of Treatment on Knowledge

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Good # of children to have	What is the legal age of marriage for a boy?	What is the legal age of marriage for a girl?	What is the lowest age for casting vote?	Punishment for giving and taking dowry at marriage?	Mother should be involved in fertility decision	Do you get your child administered to vaccines?	Are you aware of the different Government schemes?
Selected in randomization?	-0.05	-0.02	0.03	0.07	0.05	0	0.05	-0.01
	(0.03)*	-0.17	-0.1	-0.16	(0.03)*	-0.01	(0.03)*	-0.02
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1508	1470	1473	1267	1473	1481	749	1517
R-Squared	0.11	0.1	0.11	0.11	0.14	0.13	0.27	0.16
Control group mean	2.17	22.46	18.54	19.16	0.65	0.92	0.86	0.83

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors, clustered at the household level, in parentheses. Variation in sample size driven by
* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 17: Effect of Treatment on Empowerment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Index of political involvement	Index of women's autonomy (all)	Index of (potential) beneficiaries's autonomy	Woman travels out of village (30 days)	Travels unescorted to next village	Participates in SHG	Has own financial assets
Selected in randomization?	0.01	0.07	0.08	-0.01	-0.02	-0.02	0.35
	-0.02	(0.01)***	(0.02)***	-0.03	(0.01)*	-0.02	(0.03)***
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1519	1516	759	1494	1515	1515	1516
R-Squared	0.12	0.19	0.21	0.16	0.11	0.18	0.28
Control group mean	0.45	0.49	0.49	0.6	0.97	0.16	0.22

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors, clustered at the household level, in parentheses. Women's autonomy index is the simple average of indicators that the woman can travel outside the village, participation in Self Help Groups or having her own savings and loans; the components are also evaluated separately. This index is also considered exclusively for beneficiaries and potential beneficiaries (in the control group). The index of political involvement is the simple average of indicators that the individual voted in local elections or approached local political officials.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 18: Livestock Summary Statistics

Variable	Selected	N	Not Selected	N	Diff	p-value	
Acquired small livestock (indicator)	0.62	429	0.36	386	0.26	0	***
Small animals acquired (3 years)	2.81	429	0.93	386	1.88	0	***
Sold small livestock (if acquired, indicator)	0.31	265	0.07	137	0.25	0	***
Number small livestock sold (if acquired)	0.49	265	0.07	139	0.42	0	***
Average price of small livestock	512.37	38	1400	3	-887.63	0.002	***
Small livestock acquired died (if acquired, indicator)	0.56	263	0.25	138	0.31	0	***
Number small livestock Acquired that died (if acquired)	1.44	263	0.91	138	0.54	0.015	**
Number small livestock calfs born (if acquired)	1.83	265	1.08	139	0.75	0.002	***
Number small livestock calfs died (if acquired)	0.59	265	0.33	139	0.26	0.069	*
Number calves sold (acquired)	0.15	265	0.07	139	0.08	0.135	
Acquired cows (indicator)	0.26	428	0.08	386	0.18	0	***
Cows acquired (3 years)	0.54	424	0.09	382	0.45	0	***
Sold cow (if acquired, indicator)	0.37	111	0.06	32	0.31	0.001	***
Number cows sold (if acquired)	0.53	112	0.06	32	0.46	0.002	***
Average price of cow	3168.67	25	4468.75	4	-1300.08	0.107	
Acquired cow died (if acquired, indicator)	0.08	108	0.03	32	0.05	0.318	
Number calves born (if acquired)	0.08	427	0.03	386	0.05	0.004	***
Number calfs died (if acquired)	0.04	111	0.03	32	0	0.898	
Number calves sold (if born)	0.01	112	0.03	32	-0.02	0.345	

Note: table shows the mean of variables pertaining to livestock and livestock rearing activities separately for treatment and control households and the difference in means.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 19A: Heterogeneous Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Income in a typical month	Income per capita in a typical month	Money earned from FARMING LAND OWNED OR LEASED IN BY THIS HOUSEHOLD	Money earned from TENDING ANIMALS OWNED OR LEASED IN BY THIS HOUSEHOLD?	Money earned from WORK IN BUSINESS OPERATED BY HOUSEHOLD MEMBER	Money earned from FISHING	Money earned from AGRICULTURAL LABOR	Money earned from DAILY LABOR NON AGRI (Specify)	Money earned from SALARIED/FORMAL EMPLOYMENT	Money earned from HOUSEWORK IN AN OUTSIDE HOUSEHOLD	Money earned from TENDS ANIMALS IN AN OUTSIDE HOUSEHOLD	Per capita monthly avg. exp.
Baseline: Household has enterprise												
Selected in randomization?	350.11	84.08	36.61	90.59	88.47	42.67	-18.87	134.98	6.24	-25.9	-4.67	61.43
	(120.906)***	(30.305)***	(29.72)	(26.917)***	(55.38)	(38.50)	(43.02)	(77.631)*	(9.74)	(17.63)	(4.84)	(23.431)***
Baseline: Household has enterprise	547.7	110.79	7.82	6.16	485.17	352.61	-106.26	-122.61	8.47	-81.05	-2.61	-9.78
	(333.18)	(98.90)	(18.49)	(33.42)	(162.591)***	(219.41)	(92.03)	(204.51)	(16.32)	(36.520)**	(2.71)	(41.01)
Selected X Household has enterprise	-376.41	-52.22	-45.12	-44.87	206.89	-253.11	-80.92	-150.99	-24.76	11.52	4.95	150.86
	(395.36)	(108.65)	(70.88)	(54.19)	(203.24)	(212.76)	(111.05)	(232.79)	(18.19)	(39.64)	(5.13)	(74.358)**
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	811	811	811	811	811	811	811	811	811	811	811	810
Control group mean	1346.65	355.97	17.36	14.13	261.91	53.02	363.97	530.53	18.69	84.2	2.85	498.31
Baseline: Per capita monthly avg. exp.												
Selected in randomization?	333.31	10.88	7.48	46.83	92.29	49.6	-13.04	113.23	17.95	24.35	-5.38	-23.28
	(197.224)*	(55.70)	(37.24)	(40.28)	(101.40)	(55.22)	(67.82)	(132.06)	(15.09)	(29.36)	(5.61)	(59.56)
Baseline: Per capita monthly avg. exp.	-0.65	0.04	0	-0.04	-0.05	0	-0.13	-0.46	0.03	-0.01	0	0.23
	(0.239)***	(0.08)	(0.06)	(0.04)	(0.12)	(0.09)	(0.09)	(0.156)***	(0.02)	(0.04)	(0.00)	(0.081)***
Selected X Per capita monthly avg. exp.	-0.1	0.16	0.06	0.09	0.07	-0.1	-0.05	-0.02	-0.04	-0.12	0	0.27
	(0.40)	(0.14)	(0.11)	(0.09)	(0.21)	(0.11)	(0.12)	(0.24)	(0.02)	(0.063)*	(0.00)	(0.151)*
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	810	810	810	810	810	810	810	810	810	810	810	810
Control group mean	1346.65	355.97	17.36	14.13	261.91	53.02	363.97	530.53	18.69	84.2	2.85	498.31
Baseline: Do all members of your household get enough food everyday?												
Selected in randomization?	335.62	87.05	37.93	89.16	153.65	12.44	-45.96	110.69	5.91	-23.72	-4.49	81.78
	(123.438)***	(31.165)***	(26.89)	(25.720)***	(59.063)***	(45.10)	(41.15)	(77.07)	(9.46)	(15.27)	(4.65)	(24.397)***
Baseline: Do all members of your household get enough food everyday?	298.89	79.55	8.61	20.02	200.09	53.73	-153.06	94.66	11.09	66.27	-2.52	-16.76
	(269.02)	(68.66)	(18.25)	(31.26)	(141.09)	(61.95)	(104.66)	(172.93)	(17.17)	(60.06)	(2.62)	(45.82)
Selected X Do all members of your household get enough food everyday?	-330.21	-90.06	-73.39	-46.82	-300.11	-30.62	137.3	18.27	-29.83	-9.78	4.77	10.43
	(334.76)	(82.35)	(54.79)	(51.30)	(170.440)*	(101.16)	(126.95)	(224.96)	(20.02)	(72.12)	(4.94)	(75.60)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	811	811	811	811	811	811	811	811	811	811	811	810
Control group mean	1346.65	355.97	17.36	14.13	261.91	53.02	363.97	530.53	18.69	84.2	2.85	498.31

Note: Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation, and the interaction of selection with the variable indicated in the rows (as well as the main effect).
Regressions include hamlet fixed effects. Robust standard errors in parentheses.
* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table 19B: Heterogeneous Effects

	(1)	(2)	(3)	(4)	(5)	(6)
	Business income (1 month)	Business revenue (1 month)	Business costs (1 month)	Total borrowing	Irregular income from livestock	Monthly flow income from livestock
Baseline: Household has enterprise						
Selected in randomization?	-6.07	0.8	6.38	-0.21	326.85	-91.41
	(40.80)	(141.74)	(119.29)	(0.38)	(78.557)***	(27.389)***
Baseline: Household has enterprise	297.84	840.35	536.77	1.79	-58.77	-23.75
	(112.521)***	(299.641)***	(240.696)**	(1.076)*	(144.67)	(36.20)
Selected X Household has enterprise	245.86	1035.1	780.76	-0.1	512.51	66.8
	(171.15)	(533.486)*	(427.011)*	(1.24)	(287.673)*	(54.33)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	792	795	792	809	809	808
Control group mean	300.74	585.32	285.27	2.46	26.44	-24.58
Baseline: Per capita monthly avg. exp.						
Selected in randomization?	-94.79	-263.73	-170.51	0.03	209.35	-90.11
	(77.94)	(252.87)	(197.65)	(0.54)	(143.12)	(43.687)**
Baseline: Per capita monthly avg. exp.	-0.06	0.06	0.12	0	-0.07	-0.05
	(0.10)	(0.30)	(0.22)	(0.00)	(0.13)	(0.04)
Selected X Per capita monthly avg. exp.	0.31	1.03	0.72	0	0.47	0.02
	(0.166)*	(0.570)*	(0.45)	(0.00)	(0.30)	(0.10)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	791	794	791	809	809	808
Control group mean	300.74	585.32	285.27	2.46	26.44	-24.58
Baseline: Do all members of your household get enough food everyday?						
Selected in randomization?	36.93	144.82	104.7	-0.27	376.04	-80.08
	(43.24)	(146.58)	(120.87)	(0.41)	(82.683)***	(25.814)***
Baseline: Do all members of your household get enough food everyday?	26.95	-129.47	-158.19	-0.95	-1.84	36.87
	(125.50)	(329.41)	(273.82)	(0.84)	(133.32)	(35.49)
Selected X Do all members of your household get enough food everyday?	-50.7	113.25	167.33	0.54	225.76	-17.58
	(158.05)	(478.39)	(396.98)	(0.98)	(261.26)	(62.21)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	792	795	792	809	809	808
Control group mean	300.74	585.32	285.27	2.46	26.44	-24.58

Note: Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation, and the interaction of selection with the variable indicated in the rows (as well as the main effect). Regressions include hamlet fixed effects. Robust standard errors in parentheses.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% con

Table A1: Comparison of Attrition Sample in Treatment and Control

Variable	Treatment	N	Control	N	Diff	p-value
Do you cultivate any land owned by the household?	0.01	85	0.01	81	0	0.973
Do you lease in/sharecrop any land?	0	85	0	81	0	
Land owned, katthas	1.31	83	0.95	80	0.36	0.115
How many rooms does your house have?	1.16	83	1.19	80	-0.03	0.632
How many rooms are pucca?	0	83	0.03	80	-0.03	0.149
How many rooms are kuchha?	0.84	83	0.73	80	0.12	0.198
Number of household members	3.98	85	3.79	81	0.19	0.511
Household members aged 14 or older	2.15	85	2.01	81	0.14	0.257
Household members aged 0-13	1.82	85	1.78	81	0.05	0.847
HH head died in last 5 years	0.08	85	0.12	81	-0.04	0.386
Number working HH members died in last 5 years	0.07	85	0.12	81	-0.05	0.282
Religion: Hinduism	0.29	85	0.28	81	0.01	0.886
Percent male in household	0.42	85	0.42	81	0.01	0.861
Average age in household	25.01	85	26.37	81	-1.36	0.563
Average schooling in household (year)	3.24	59	3.53	51	-0.29	0.312
Per capita monthly avg. exp.	389.13	85	390.27	80	-1.14	0.971
Per capita monthly food/fuel exp.	295.91	85	277.92	80	17.99	0.371
One or more health shock (1 year)	0.35	85	0.33	81	0.02	0.792
Experienced non-health economic shock in last 12 months	0.15	84	0.22	81	-0.07	0.27

Note: Table shows the mean, at baseline, of the indicated variables among households not reached in the endline survey separately for those assigned to treatment and control. Serious health events are those which required hospitalization or resulted in the loss of working days. Non-health economic shocks include severe home damage, illness/death of livestock, theft or legal dispute.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table A2: Effect of Treatment on Livestock and Assets

	(1)	(2)	(3)	(4)	(5)	(6)
	Small animals acquired (3 years)	Goats, pigs or sheep acquired (3 years)	Birds acquired (3 years)	Cows acquired (3 years)	Irregular income from livestock	Monthly flow income from livestock
Selected in randomization?	1.95	1.52	0.42	0.4	398.83	-82.05
	(0.191)***	(0.119)***	(0.136)***	(0.053)***	(78.952)***	(23.660)***
Hamlet FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	812	812	812	803	812	811
R-Squared	0.29	0.35	0.22	0.34	0.24	0.16
Control group mean	0.93	0.33	0.59	0.09	26.44	-24.58

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. Irregular income includes income derived from the sale of animals, sale of animal calves or sale of products (hides, etc.) of deceased animals over the prior 3 years. Monthly flow income includes income from home consumption or sale of milk, dung (for fuel), wool, or other animal products.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table A3: Effect of Treatment on Income from Agriculture and Fishing

	(1)	(2)	(3)	(4)
	Own land cultivated (katthas)	Leased land cultivated (katthas)	Household fishes	Income from fishing (30 days)
Selected in randomization?	-0.03	0.15	-0.01	-101.95
	(0.17)	(0.36)	(0.02)	(116.09)
Hamlet FEs	Yes	Yes	Yes	Yes
Observations	812	811	813	812
R-Squared	0.07	0.22	0.37	0.17
Control group mean	0.21	0.67	0.06	127.45

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. Land cultivated refers to the sum of land area cultivated in each season.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table A4: Effect of Treatment on Income from Non-farm Enterprises

	(1)	(2)	(3)	(4)	(5)
	Operate small enterprise	Investment in small enterprise	Business income (1 month)	Business revenue (1 month)	Business costs (1 month)
Selected in randomization?	0.03	-1.58	30.89	156.36	122.68
	(0.03)	(37.08)	(40.59)	(128.21)	(104.57)
Hamlet FEs	Yes	Yes	Yes	Yes	Yes
Observations	814	805	795	798	795
R-Squared	0.36	0.26	0.27	0.19	0.16
Control group mean	0.49	194.76	300.74	585.32	285.27

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. Variables refer to any enterprise operated within the last 3 years. Investment refers to investment in any non-merchandise item necessary to operate the enterprise. Income is net of expenses.

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level

Table A5: Effect of Treatment on Financial Autonomy Variables

	(1)	(2)	(3)	(4)
	Financial autonomy index	Decide: buy and sell assets	Decide: spend, borrow and save.	Responsible for savings accounts.
Selected in randomization?	0.14	0.03	0	0.38
	(0.025)***	-0.035	-0.035	(0.032)***
Hamlet FEs	Yes	Yes	Yes	Yes
Observations	814	794	792	813
R-Squared	0.21	0.21	0.22	0.34
Control group mean	0.16	0.37	0.39	0.1

Note: OLS regression of variable indicated in the column heading on an indicator for whether the household was selected randomly for THP program participation. Regressions include hamlet fixed effects. Robust standard errors in parentheses. Financial autonomy variables are constructed only from survey responses of the THP beneficiary or potential beneficiary (for control households). The Financial Autonomy Indes is the simple average of the three indicators of financial autonomy (presented separately in the following three columns): specifically taking independent decisions about buying and selling assets, taking decisions about borrowing, spending and saving and operating savings accounts).

* Significant at the 10% confidence level, ** Significant at the 5% confidence level, *** Significant at the 1% confidence level