Habitat for Humanity® Ethiopia

Impact Evaluation of Home Provision and Ownership on Quality of Life.

May 2023

Addis Ababa, Ethiopia

Forward

Habitat for Humanity Ethiopia (HFHE) is a branch of Habitat for Humanity International (HFHI). HEHE is currently operating under Habitat for Humanity Africa. Habitat for Humanity Ethiopia started work in 1993 with the aim of assisting families who have no stable income and affected by various forms of vulnerabilities to move out of substandard housing.

In our way to ensure decent and affordable housing, thousands of houses have been constructed and transferred to partner families through generous support from institutional partners, foundations and individual donors. HFHE is expanding its program to support families and communities not only by delivering housing but also creating access to safe water and improved sanitation facilities. Capacity building for individuals and communities is also a vital component of our work which also ensures sustainability of our program.

The work of Habitat for Humanity in Ethiopia empowers families to lead stable and dignified life by building homes as a vital part of efforts being made to address multiple challenges they face. Thus, our work extends far beyond building houses.

Addressing housing crises in Ethiopia requires significant response and collaborative efforts of stakeholders in the sector. It requires commitment, dedication and profound understanding of the complexities of the national and global housing ecosystems. Habitat for Humanity Ethiopia has been constructing and repairing homes along with water and sanitation facilities for three decades, partnering with families to create healthy and enabling living environment.

While reaching more families with more integrated housing, water and sanitation programs, it is vital to understand the changes Habitat for Humanity's work has brough on target households. For this purpose, HFHE, in collaboration with Policy Study Institute has conducted a study which focuses on the impact of home ownership on the quality of life of partner families. The standardized study has shown the results of the housing intervention, highlights the changes noted with the corresponding indicators. The study helps assess policy options beyond lessons learned to expand our program in integrated way. It can be useful for the housing sector practitioners, academia and the wider subject-matter expertise for reference and knowledge sharing.

I would like to reaffirm that Habitat for Humanity Ethiopia will continue to enhance engagement and partnership with key housing institutions and stakeholders to realize our common mission of availing decent and affordable housing in Ethiopia.

Yitna Tekaligne

National Director and Representative to African Union

Acknowledgments

The study on Impact Evaluation of Home Provision and Ownership on Quality of Life was conducted by Habitat for Humanity Ethiopia in collaboration with the Policy Studies Institute (PSI). The team from PSI comprises Dessalegn Anshiso, Jemal Adem, Jonse Bane Solomon Tilahun and Hana Woldekidan. We would like to extend our heartfelt thanks to the team members for their professional work.

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Executive Summary

Recognizing the pressing challenges of the provision and access to affordable housing in Ethiopia, Habitat for Humanity Ethiopia has initiated the pro-poor housing intervention programs. Specifically, there are three intervention modalities introduced at different stages: Mortgage housing scheme, housing for vulnerable group and urban slum upgrading which aimed at creating opportunities for vulnerable and low-income sections of the community in different urban centres of the country. The fact that conducting an impact evaluation is one of the important steps in any development project plan and implementation mainly to evaluate the overall performance against the pre-stated objectives and draw lessons to make decisions and scale up the program, the current study is initiated to assess the impacts of housing intervention implemented by HFHE. Accordingly, this study aims at investigating the impact of home provision and ownership on the quality of life of the program-participating households over HFHEs intervention timeline (1993 – 2022). The study investigates the relation between home provision and ownership on homeowner's quality of life, using various indicators including safety, health, education, social connectedness, asset and wealth creation, and livelihood. The results of this impact evaluation study will serve a dual purpose: accountability and learning.

This study was conducted in various of Ethiopia where Habitat housing program was implemented namely: Addis Ababa, Debre Berhan, Debre Markos, Adama(Nazareth), Ambo, Fitche, Shashemene, Jimma, Dessie, Kombolcha and Bahir Dar. A representative sample of 655 Habitat homeowners and 503 non-participant households (control group in the housing intervention areas, varying in housing tenure), participated in this study through household surveys conducted in 11 towns/cities. Complete lists of the participant households were obtained from HFHE. For the control group, PSI used administrative data on the beneficiaries of the Urban-Safety net program in the respective cities and towns to obtain comparable lists of households. In addition to that, 56 qualitative surveys were conducted engaging Habitat homeowners in Jimma, Shashemene and Dessie towns. The study applied both descriptive statistics such as average, standard deviation, t-test, ANOVA and principal component analyses to compare the differences across the treated and control group for several variables of interest. Also, advanced econometric method and Propensity Score Matching (PSM) estimation technique were used to establish the causal relationships between home ownership program and outcome variables (income, child education, health and wealth). The key findings are presented as follows:

Key Findings

Education outcomes: Using the average scores of children in their last academic year of high school, the standard regional and national test scores and maths scores as academic performance indicators, the study indicated on average children from the HFHE's home ownership program

performed and scored higher academic results than the control group. Although the results from the descriptive analysis show clear and visible differences in academic performance, the empirical analysis results reveal no statistical differences across the two groups. PSM estimation results indicate that there is a statistically significant impact on education outcomes. Specifically, program participating households have higher average education expenditure by about ETB 2,527 (approximately USD 46.8) compared to households in control group. Similarly, children's average year of schooling is higher by about two years for housing program beneficiaries against control groups. In addition, children's rate of absenteeism from school was taken as one of the indicators to measure education outcome and the finding showed that a child from treated households has lower absence rates (by nearly two days) compared to those in the control group. This indicates that Habitat's home ownership program plays a key role in reducing average number of days children get absent from school in the last semester.

Health Outcomes: Better health outcomes were observed for program participant households as measured by child mortality, malnourishment, exposure to diarrhoea, and visit made to a health centre compared to control groups. Child mortality found to be lower by 2% and exposure to diarrhoea was also lower by 4.5% for program participants which are statistically significant. A chi-2 test conducted to test for a significant difference on the frequency of visits made to health care centres also indicated that more visits are made by households in the control group by 1.7 times which is also statistically significant.

Living Standards Outcomes: Based on the indicators used to measure living standards, a statistically significant difference is observed between the treated and control group. For instance, while 58.4 % of the households in the control group have poor housing quality, only 22.3 % in the treatment group have houses with poor quality. Similarly, the number of households with access to electricity, safe drinking water, improved sanitation facility, improved cooking methods and asset ownership in the treatment group are higher than those in the control group by 2.2%, 6.8%, 31.6%, ,6.5% and 12.5%, respectively. A significant difference is also observed on household housing expenditure under the treatment group spent ETB 825 (USD 15.3) and households under the control group spent ETB 1115(USD 20.6) per month on average terms. The analysis on living conditions before moving to habitat house also indicates 76% of the households in the treatment group were living in rented houses before moving to habitat provided houses, which justifies the significant decline in overall housing expense.

Income and saving Outcomes: Household income and saving as indicator of quality of life revealed that housing program participants have higher income and saving by about ETB 51,074(USD 941) and ETB 14623.7 (USD 269), respectively, compared to control group. This indicated that

participating in HFHE housing program has contributed to asset building that generates additional income from house rent and business income, as confirmed by the participating households as it enabled them to save for further investment.

Wealth Accumulation Outcomes: Using wealth index to measure the socio-economic position of the households, descriptive and econometric findings of the study revealed that participating households are positioned in a better economic status than the households who are not participants of the home ownership program. Specifically, result of PSM model indicated that, on average, the Habitat housing program participants have a 1.426 points higher wealth index than that of control group. Thus, HFHE housing program has played a key role in improving households' asset acquisition and ownership.

Multidimensional Poverty Index: Results from household survey show that average poverty among the families of the habitat program is 0.403 which is less than the control group. This implies habitat's home ownership program helped households to improve their MPI to move better than country level MPI (i.e., 53.3).

Conclusion and Implications: In general, the key benefits emanated from the implementation of Habitat's housing and home ownership program included: improved children's learning outcome and academic achievements, better student's study habit and lower absence rate, increased level of years of schooling, improved health status of the households, increased level of income and savings as well as better asset and wealth accumulation capacity of the households. It has also enabled households to report better living conditions, better aspirations of the households about their children and increased level of social connectedness and participation in societal life. Based on the study findings, HFHE's hypothesis that provision of housing does not only target the physical structure rather it is a platform and foundation to access wider development opportunities that contribute to the multidimensional aspect of the human well-being: human development (health, education and income/livelihood); economic development (economic growth and equality); and environment (resilience and safety) holds true. As such, home ownership program needs to be successfully scaled up, using analysis of the findings and lessons learned during project implementation to adapt the approach to specific contexts.

One of the key challenges in implementing Habitat's housing program was lack of coordination of capacity at lower level of administration specifically at the program area cities and towns, which threatens successful implementation of the program and any gains in improvement of household's quality of life. There was limitation in establishing smooth communication line from the main office down to individual projects in each city Local representative office /sub-branch of Habitat should be established for smooth communication with the main office and

to bring any issue related with the project to the local administration and concerned stakeholders on time. It is recommendable for HFHE to have liaison officers at the program participating cities and towns that can work closely with government sector, local community and partners for regular implementation, monitoring and evaluation. The partnerships need to be fostered in the home ownership program between HFHE, government agencies and local organizations -brings key opportunity to mainstream the home ownership program into the government's implementation strategies for the urban sector and housing development.

1. Introduction

1.1 Background of the study

It is an established fact that housing is one of the basic needs, a universal right and an essential element of decent living conditions (Average, 2019; Matsumoto & Crook, 2021; Manomano, Tanga, & Tanyi, 2016). Access to adequate and affordable housing is "… more than just a roof…" It is a crucial precondition in promoting socially and economically diverse neighbourhoods, in which residents can be provided with standardised services, amenities, employment opportunities and other social services (UN-Habitat, 2019 & 2022).

Although housing is considered as one of the basic needs, providing habitable and decent housing for the low-income group has been a major challenge in many countries, Millions of people around the world face severe housing deprivation which led to sprawling of slum settlements in cities accommodating more than one billion people (Average, 2019; Manomano, Tanga, & Tanyi, 2016). An estimate by UN-Habitat (2022). This indicates that 100 million people worldwide are homeless and one in four people live in harmful conditions. Another estimate also revealed that 3 billion people will require adequate and affordable housing by 2030.

Cognizant of this, both developed and developing countries have identified provision of adequate and affordable housing as a critical global and national issue that needs to be incorporated in national policies and international commitments. Among the list of international conventions and commitments, it is worth mentioning Sustainable Development Goal (SDG) 11 which aims to make cities inclusive, safe, resilient and sustainable with a target of ensuring access to adequate, safe and affordable housing and basic services and upgrading slums for all by 2030.

A study by Matsumoto & Crook (2021) indicated that Ethiopia, being one of the developing countries, has been challenged with high population growth, rapid urban expansion and increasing housing demand. Although Ethiopia is still a rural country, its urban population is expanding by 4.7 % annually, accounting 22 % of the total population in 2021 (CAHF, 2022).

Despite the booming urbanisation in Ethiopia, the majority of the population dwells in poorly built, dilapidated and cramped houses which lack even basic facilities such as adequate sanitation and safe drinking water (64.3 % of the urban population lives in slums in 2018).

Overview by CAHF (2022) based on 2015 estimates indicates that Ethiopia will have approximately four million new urban households by 2027 and 9.7 million by 2037. Demand for urban houses is estimated at 471,000 per year from 2015 to 2025, and 486,000 houses per year from 2025 to 2035 while supply of housing stock is 165,000 units nation-wide leaving wide deficit on top of the existing backlog which is estimated to be 1.2 million in Addis Ababa alone (Alemu, 2021).

Poor land management practices and limited supply of developed land, weak housing development administration and delivery systems, absence of a robust and affordable housing construction industry, weak stakeholder engagement and collaboration, high and increasing price of construction inputs, limited housing development instruments and the absence of diversified housing finance system have been identified as factors that entangled the supply of housing in Ethiopia (CAHF, 2022; PDC, 2021).

According to Habitat for Humanity (2020) provision of housing does not only targets the physical structure rather it is a platform and foundation to access wider development opportunities that contribute to the multidimensional aspect of the human well-being: human development (health, education and income/livelihood), economic development (economic growth and equality), and environment (resilience and safety). In support of this, Meyer (2014) has stated that provision of housing for the low-income group fosters overall human development as it enhances physical welfare, entrepreneurial capacities as well as social status and inclusion.

HFHE, recognizing the pressing challenges of the provision and access to affordable housing in Ethiopia has initiated the pro-poor housing intervention programs. Specifically, there are three intervention modalities introduced at different stages; Mortgage housing scheme, housing for vulnerable group and urban slum upgrading which aimed at creating opportunities for vulnerable and low-income sections of the community in different urban centres of the country.

Thus, this research report is developed to conduct a rigorous impact evaluation study on home provision intervention by HFHE on asset and wealth creation and ownership, education and health outcomes, income generating capacity and living conditions of program participating households. It is important to assess the quality of life by evaluating the economic, social, and environmental attributes that have the potential to affect household level general well-being. HFHE has exerted its effort in the area of housing over the last 28 years in the country to provide affordable and decent homes to the low-income members of the community. Studies confirmed that access to affordable housing has a positive impact on health, education, safety, social connectedness and also affects other aspects of quality of life through lowered discrimination, better family interaction and economic standard. In line with this, the study aims at addressing the following impact evaluation questions:

1. How relevant is the housing provision program to the participating households, the government's affordable housing strategies and for the Habitat for Humanity Ethiopia/International?
2. Does the provision of houses through the mortgage, housing for vulnerable groups and urban slum upgrading approaches bring improvement to the quality of life in terms of health outcomes, education achievement, food security, housing quality,

job creation, etc. of the program participating households?

3. How does housing intervention improve/alleviate the housing problem of the poor?
4. Do the housing interventions improve asset creation of program participating households?
5. What kinds of policy recommendations can be drawn to solve the pressing challenges of provision of affordable housing for low-income households?

As evaluation criteria, we can get an insight into the relevance, suggest the way out for the sustainability of the program and bring dependable impact evaluation to capture the aspects recommended in the DAC criterion. In summary, the general purpose of the impact evaluation is to investigate the housing intervention from the standpoint of accountability and also as a means of drawing lessons.

1.2 Objectives

The general objective of the study is to examine the impact of house provision through mortgage, vulnerable group and slum upgrading on households quality of life. This impact evaluation study can serve the dual objectives of accountability and learning. Specifically, the objectives of the impact evaluation are:

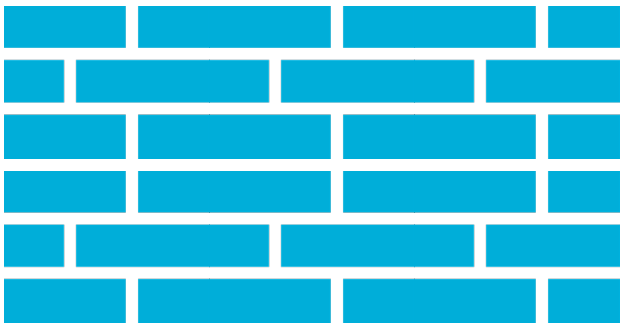
Assess the attribution of decent and affordable housing provision on quality of life of the homeowners.

Examine the effect of decent and affordable housing on creating asset/ economic benefits to homeowners.

Recommend contextualised policy options to extend housing interventions to the low-income community members.

Extract lessons learnt from the implementation of housing intervention for future programming.

The final objective of this impact evaluation assignment is to be used by key actors for their respective learning needs, decision-making, advocacy, and policy intervention for future programming.



2. Methodology

2.1. Research Design

The research design follows a quasi-experimental approach that was used to test the impacts of the Home Ownership Program on Quality of Life against a control group. This type of design is appropriate for evaluation of development projects, as it has no "real" control. The control and treatments have different phases of interventions as home ownership programs involve various steps, and the design is therefore appropriate from an ethical perspective.

2..2 Data sources and types

2.2.1 Secondary sources

The secondary data was collected from various sources, zonal, regional as well as federal level stakeholders to substantiate the finding from primary data analysis. Various documents from Habitat for Humanity Ethiopia were also consulted to analyse the success of the program.

Contextual Analysis: A review of relevant documents from various stakeholders including Habitat for Humanity Ethiopia was conducted to assess the holistic picture of the impact of housing related interventions.

2.2.2 Primary sources

Survey Questionnaires: A well-structured questionnaire in English , which is attached to this research report, was administered to the experiment and control group to collect quantitative data to examine the impact of housing provision on quality of life including housing quality, asset building, education, health, food security, multidimensional poverty, jobs creation, social connectedness etc. The complete lists of applicants and program participating households of the HFHE's housing program were extracted from HFHE.

Key informant interviews (KIIs): This method is used to explore and dig deeper from first-hand qualitative information that cannot be obtained via household survey on the impact of housing intervention programs in Ethiopia. The key informants were selected from the households in the program, local government, Habitat for Humanity Ethiopia and national government and other relevant stakeholders who are relevant to the study.

Data collection tools: This study utilised the survey questionnaire (which is annexed to this report) with minimum modifications to cater for relevant data to support the analysis. The tool was designed to collect data on household characteristics, housing characteristics, MUAC (Middle –Upper Arm Circumference) measures to determine the nutritional status of the households in computing MPI, household incomes and asset ownership. The development of the tool was led by the PSI in collaboration with Habitat for Humanity Ethiopia. The questionnaire was developed in English and later translated to Amharic and Afan Oromo for ease of implementation. The English version of the questionnaire was programmed and loaded in the tablets that were used for data collection.

A mixed-method (qualitative and quantitative) approach was used for the Impact Evaluation study in February 2023. Gathering of data and information was conducted in two main ways: a review of documents, and primary data collection. A desk review of relevant documents (previous researches, literature reviews and past studies) was conducted to help understand and identify impacts of the project and identify key themes and issues to be undertaken. The desk review was done to obtain information and understanding about the project as well as the framework of implementation. The preliminary literature review helped to map existing literature, studies, tools and manuals, in order to see what knowledge is already available concerning the project and similar projects. In addition, the literature review was meant to identify gaps and so-far unanswered questions.

Training of Enumerators and Data Collection: Data was collected by a team of locally recruited enumerators. The selection of enumerators was based on their educational background (at least a bachelor's degree), understanding of the local languages and familiarity with the area. The enumerators and supervisors were trained for two days at PSI prior to data collection, taken through the content of the questionnaire translated from English to Amharic and Afan Oromo. In addition, they were trained on digital data collection techniques using tablets. The main topics of the enumerators training included: understanding the objectives of research, understanding questionnaire content, role plays and discussions on framing of questions, use of tablets in data collection, loading and uploading data from the tablets to the server, carrying out field implementation and procedures to be followed in the field during data collection. Besides, the survey and research team has taken HFHE's safeguarding policy and code of conduct. Data was collected between 15 - January and 13 -February 2023 by the trained enumerators using tablets or mobile phones on a SurveyCTO software.

2.3. Sampling techniques and sample size

The target population in this study was complete list of applicant households for HFHE's housing intervention programs in urban centres in Ethiopia over the period 1993-2022. This study utilised a sample of households who were the participants of HFHE's home ownership interventions, potential applicants in the waiting lists of the HFHE's documentation as well as households who participated in the urban safety net programs but not participants of the home ownership program (control). The sample was drawn through a multi-stage sampling technique. The cities and towns for interventions were purposely sampled based on HFHE recommendation. After the selection of cities and towns, a random sample of households was selected for the quantitative survey. To select the households, a sampling frame provided by HFHE, with all the names of the treated and control group was used. A computer package www.randomizer.org and Rand formula in Excel were used to select random samples of respondents. The

study population was mainly the home ownership program and non-participating households and the respondents were adult females and males in a household.

The PSI utilised systematic data collection and sampling methods. A rigorous sampling framework was developed with HFHE to ensure a comprehensive number and diversity of respondents. A total of 1158 households out of which 655 were participants of the program (treated) and 503 were non participants (control).

Further, to obtain a statistically representative sample, proportional sample was drawn from the total number of participant households in each city; disaggregating the treated group by housing scheme, 506, 72 and 74 were in the mortgage, vulnerable group and urban slum upgrading programs, respectively. Overall, sampling framework was selected from the following units: direct beneficiaries, wider members of the beneficiaries' communities, project implementer and government departments relevant to the project. The primary interviews with project stakeholders were conducted to collect information on achievements and impacts. The study undertook an in-depth interview to collect primary data from project coordinators, habitat households and stakeholders by focus group discussions (FGDs) and key informant interviews (KIIs) using checklists. Three FGDs, Five KIIs and Fifty Six qualitative surveys were held in the project study sites and at project headquarters at HFHE.

Groups				Treated by Housing Scheme		
City	Treated	Control	Total	Mortgage	Vulnerable Group	Urban Slum Upgrading
Addis Ababa	52	29	81	0	4	47
Debre Markos	51	43	94	51	0	0
Debre Birhan	186	159	345	170	15	0
Bahir Dar	70	62	132	67	3	0
Dessie	79	9	88	67	4	8
Kombolcha	61	78	139	36	10	14
Fiche	16	12	28	0	13	3
Ambo	13	9	22	0	11	2
Jimma	73	44	117	73	0	0
Shashemene	36	42	78	24	12	0
Adama	18	16	34	18	0	0
Total	655	503	1158	506	72	74

Table 2.1: Sampling Distribution

2.4. Ethical Considerations

The sampled respondents and participants were informed in advance regarding the overall purpose and objectives of the study and the data collection were commenced only after confirming voluntary participation and informed consent. Anonymity and confidentiality of the participants were also preserved so as to give the respondents assurance and get the required information.

2.5 Methods of Data Analysis

After relevant information was gathered both from secondary and primary data, the study employed both qualitative and quantitative methods of data analyses to generate quality findings. The qualitative method includes systematically and thematically organising and carefully analysing all gathered information, making narration of qualitative information and triangulating the qualitative information collected from various sources. Quantitative methods extensively applied to analyse the impact of housing programs on the quality of life of beneficiary households. For data analysis, both descriptive statistics and advanced econometric techniques are applied.

2.5.1 Descriptive Analyses

Data was cleaned, organised and analysed in Microsoft Excel and STATA software. Descriptive and inferential statistics techniques such as arithmetic mean, percentage and standard deviation were used to analyse the data. Descriptive statistics described the single variables used in this study. Inferential statistics describe any associations or connections between the variables. A conduction of a two-sample mean t-test, chi-square and ANOVA was applied to assess the relationship between the outcome variables and home ownership program. Chi-square and t-test were employed to test the statistical significance of dummy and mean value of continuous variables, respectively. The analyses disaggregated the results by treatments, household types and sex of respondents based on key indicators of the project outcome as appropriate. Since the baseline survey was not collected for Habitat for Humanity Home ownership program, the appropriate technique to evaluate the impact is propensity score matching technique. Initially, PSI proposed to apply a regression discontinuity model based on the assumption that the complete lists of household scores for screening applicants both treated and control group was available. However, it was not possible to get the complete lists of scores for screening the households for housing program participation, the most appropriate technique is propensity score matching to analyse the overall impact of housing interventions based on specified outcome variables of interest.

2.5.2 Principal Components Analysis (PCA) to construct Wealth Index of HHs

Recently, development economists have followed the recommendation made by Filmer and Pritchett (2012) to use principal

components analysis (PCA) to aggregate several binary asset ownership variables into a single dimension. It is also possible to use the sum of a number of eigenvectors, based on some criteria. Using the sum of all the eigenvectors is equivalent to using unit coefficients for each variable. It is generally considered as a 'data reduction' procedure. It involves replacing a set of correlated variables with a set of uncorrelated 'principal components' which represent unobserved characteristics of the population. The principal components are linear combinations of the original variables; the weights are derived from the correlation matrix of the data or the covariance matrix if the data have been standardised prior to PCA. The first principal component explains the largest proportion of the total variance. If the first few principal components explain a substantial proportion of the total variance, they can be used to represent the original items, thus reducing the number of variables required in models Bartholomew (2010)[1].

As a technique, principal component analysis (PCA) is a geometrical ordination method that can identify underlying structures characterising a set of highly correlated variables. Therefore, it can be used to compress a set of variables into a smaller number of derived variables or components. It is used to pick out patterns in the relationships between the variables in such a way that most of the original data can be represented by a new set of data within a reduced dimensional space (i.e. reduced number of new variables). The principal components are extracted in such a way that the first component accounts for the largest amount of total variation in the data, the second accounts for the second largest amount of total variation in that order until the last principal component is extracted (Dillion and Goldstein, 1984).

In its algebraic form, information in N variables $Z_1,Z_2,Z_3,\ldots\ldots,Z_N$ can be re-stated in terms of N components $F_1,F_2,F_3,\ldots\ldots F_K$. The first component F_1 is the linear combination of original variables having the largest sample variance (λ_1).

$$F_1= a_{11} Z_1 + a_{21} Z_2 + a_{31} Z_3+\cdots.....+a_{-n1} Z_n$$

This based on the constraint $\sum^{n}_{n=1}(a_{n1})^2 =1$

Ii is important to impose this constraint to avoid situations in which variance can be made arbitrarily large by increasing the magnitudes of the a_{nj} coefficients. The next component F_2 is then the linear combination uncorrelated with F_1 having the second largest variance (λ_2).

$$F_1=a_{12} Z_1 + a_{22} Z_2 + a_{32} Z_3+\cdots\ldots..+ a_{n2} Z_n$$

Given the constraint $\sum^{n}_{n=1}(a_{n1})^2 =1$

And the third principal component is the linear combination uncorrelated with F_1 and F_2 the next largest variance (λ_2) in that order. In these equations the a_njrepresents the coefficients from the regression of the j^{th} component on the k^{th} variable.

2.5.3 One-way ANOVA

One-way analysis of variance (ANOVA) is generally used to determine if there exists a significant difference between as well

[1] Bartholomew, D. J. (2010). Principal components analysis.

as within variables. In a similar vein, one ANOVA analysis is also used to test the statistical significance of the variables (Das et al. 2019). In this study one-way ANOVA will be used to test whether there is a significant difference in the determinants of quality of life across cities and between program participant and non-participant households. But through the analysis of the one-way ANOVA only the significant differences within and between variables can be addressed and it even tells us where this difference exactly lies (Das et al. 2020).

2.5.4 Constructing Wealth Index

To evaluate the impact of the housing interventions on the socio-economic well-being of the study households, a Wealth Index was computed. The first step in the computation of Wealth Index is to assign weights to assets included in a index by applying PCA. We created dummy variables for each category of categorical variable to be included in the Principal Component Analysis (PCA); to be precise a four-category variable is converted into four separate yes/no variables; for each household one of these were coded 'yes' the other three 'no'[2] Vyas and Kumaranayake (2006). Applying equal weights and using the inverse of the proportion of the population that owns the item can only be carried out using binary variables. Therefore, for the purposes of creating indices 3 and 4, each categorical variable was collapsed to a binary variable based on a subjective assessment of the most appropriate dichotomisation, resulting in an appropriate distribution of ownership and meaningful categories. The dichotomizations are detailed below:

Details of dichotomisation of categorical variables

Wall Material

- Lower Socio-economic Position (SEP) group: Wood and mud, Wood and grass, Stone only, Stone and mud, Blocks-unplastered, Mud bricks (traditional), Steel (" Lamera"), Cargo Container, Parquet or polished wood, Chip wood, Corrugated iron sheet, Reed/Bamboo, Plastic cover
- Improved Socio-economic Position(SEP): Ashawa girf, Stone and cement, Blocks-plastered with cement, Bricks

Floor Material

- Lower Socio-economic position (SEP) group: sand, smoothed mud
- Improved SEP group: smooth cement, tile, other

Water supply

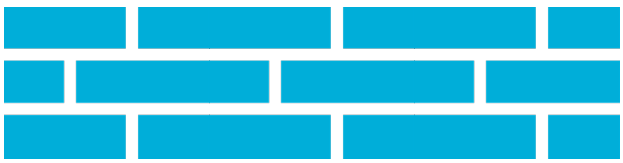
- Lower SEP group: personal open unprotected well, communal open unprotected well, river, spring, lake, reservoir, other
- Improved SEP group: piped into dwelling, piped outside dwelling, communal standpipe, personal hand pump, communal hand pump, protected spring

Moreover, improved water sources include piped water into the dwelling, piped water into the yard, a public tap/standpipe, a tube well/borehole; a protected dug well, a protected spring, and rainwater (WHO

[2]

and UNICEF, 2006). Improved sanitation facilities are those that separate human excreta from human contact and include the categories flush to piped sewer system, flush to septic tank, flush/pour flush to pit, composting toilet, ventilated improved pit latrine, and a pit latrine with a slab. Because shared and public facilities are often less hygienic than private facilities, shared or public sanitation facilities are not counted as improved (WHO and UNICEF, 2006).

From this study, a Wealth Index was computed, which provided a composite measure of a household's relative socio-economic well-being. A statistical procedure called "principal components analysis" (PCA) was employed in STATA (StataCorp, 2015) to compute the asset weights. The PCA is a multivariate statistical technique that can be used to reduce the number of variables in a data set by converting them into a smaller number of components; each component being a linear weighted combination of the initial variables (Vyas and Kumaranayka, 2006). The first component, which explains the largest part of the variation in the data, is chosen as the wealth index (Filmer and Scott, 2012). To compute the PCA, first, these variables were all changed into binary as yes (present) or no (absent) that were coded as "1" and "0," respectively. This is because the wealth index works better in binary variables.



2.5.5 Multidimensional Poverty Index

As one of the outcome variables we opt to relate the impact of home ownership provision on quality of life with Multidimensional Poverty Index (MPI), which is an index, intended to quantify acute poverty, understood as a person's inability to meet minimum internationally agreed standards. MPI complements monetary poverty measures by capturing the acute deprivations in health, education, and living standards that a person faces simultaneously. The Multidimensional Poverty Index looks into more than just income or consumption, the traditional measures of poverty. In other words, MPI measures those experiencing multiple deprivations. For example, people who are malnourished, and do not have access to electricity or cooking fuel. MPI reveals a lack of very basic services and core human functioning for people across countries. MPI is composed of 3 dimensions made up of 10 indicators (see table below). Among the 10 indicators (See Table 2.1 below), two are for health, two are for education and six indicators are for living standards. The indicators of MPI are closely linked to the Sustainable Development Goals (SDGs).

Dimensions of poverty	Indicator	Deprived if living in a household where…	Weight	SDG area
Health (1/3)	Nutrition	Any person under 70 years of age for whom there is nutritional information in undernourished	1/6	SDG 2: Zero Hunger
	Child mortality	A child under 18 has died in the household in the five year period preceding the survey	1/6	SDG 3: Health and wellbeing
Education (1/3)	Years of schooling	Number of eligible household member has completed six years of schooling	1/6	SDG 4: Quality Education
	School attendance	Any school- aged child is not attending school up to the age at which he/she would complete class 8	1/6	SDG 4: Quality Education
Standard of living (1/3)	Cooking fuel	A household cooks using solid fuel, such us dung, agricultural crop, shrubs ,wood, charcoal, or coal	1/18	SDG 7: Affordable and clean Energy
	Sanitation	The household has unimproved or no sanitation facility or it is improved but shared with other households	1/18	SDG 6 : Clean Water and Sanitation
	Drinking water	The households source of drinking water is not safe or safe drinking water is a 30 minute or longer walk from home, round trip	1/18	SDG 6 : Clean Water and Sanitation
	Electricity	The household has no electricity	1/18	SDG 7: Affordable and clean Energy
	Housing	The household has inadequate housing materials in any of the three components: floor, roof, walls	1/18	SDG 11: Sustainable cities and Communities
	Assets	The household does not own more than one of these assets: radio, TV, telephone, computer, animal cart, bicycle, motorbike, refrigerator and does not own a car or truck	1/18	SDG 1: No Poverty
Adama	18	16	34	18
Total	655	503	1158	506

Table 2. 2. Multidimensional Poverty measures and Indicators

2.5.6 Food Insecurity Experience Scale (FIES) Index

FIES is constructed using simple dichotomous responses of "Yes" or "No" with 9 questions. During the survey time, respondents were enquired if they at any time during the previous 12 months experienced different severity levels of food insecurity. These questions range from "being worried about not having enough food to eat" to "going hungry for a whole day," due to lack of money or other resources. Responses to these FIES questions were aggregated, the total scores ranging from 1 to 8. For these analyses, the scores were classified into 3 categories based on the global standard;

1) Little to no hunger in the household (1 - 3),
2) Moderate hunger in the household FI (4 - 6), and
3) Severe hunger in the household FI (7, 8).

2.5.7 Econometrics Model: Multiple Regression and PSM Model

The main objective of the study is to estimate the impact of home ownership on households' quality of life. That is, we were interested in how homeownership affects the outcome for those who benefited

from housing interventions; hence, we estimated the average treatment effect on the treated (ATT), where the treatment is home ownership program (both through mortgage revolving fund and vulnerable group support) in housing interventions and the treated are participants of housing program. This requires making an inference about the outcome that would have been observed for the treated if they had not been treated (Pufahl and Weiss, 2009).

However, we cannot observe how the outcome levels would have looked like without home ownership, thus we face a problem known (in the literature on impact evaluation) as the problem of missing data on the counterfactual (Rosenbaum and Rubin 1983). Such a problem can be addressed if one finds a suitable comparison group among non-beneficiaries' households. Unfortunately, however, identification of a suitable control group among those families who are not beneficiaries of home ownership, which can be used as a counterfactual is challenging. In this regard, Propensity Score Matching (PSM) is the popular approach (Heckman and Navarro, 2003: Rosenbaum and Robin, 1983). The main idea of PSM is to construct a suitable comparison group with non- beneficiaries that are similar to beneficiary households in all relevant observed characteristics (Khandker et al, 2010; Caliendo &Kopeinig, 2005).

PSM constructs a comparison group by modelling the probability of participating in the intervention on the basis of observed characteristics unaffected by the intervention. It allows finding a comparison group from a sample of non-participants closest to the participants in terms of observable characteristics so that both groups are matched on the basis of the propensity score[3] (Khandker et al, 2010). This propensity value is estimated based on a statistical model: logit or probit (Pufahl and Weiss, 2009), and thereby estimate the average treatment effect of the outcome difference between the two groups using some chosen matching algorithm(s)[4] (Khandker et al, 2010; Becker and Ichino, 2002).

The empirical approach in this study is designed to reduce at least two potential sources of bias in the selection of a comparison group of non-beneficiaries' households, which are common in evaluations aimed at measuring ex-post impact of interventions that involve some degree of self-selection into participants. First, beneficiaries of housing interventions may differ from non-beneficiaries with respect to observed characteristics, such as education.

However, Propensity Score Matching (PSM) can account for such differences. Second, beneficiaries may differ with respect to unobserved characteristics, such as ability, desire, motivation, etc, what formally is called 'hidden bias' or 'unobserved selection bias'. Controlling for such hidden bias requires a suitable instrument that explains the probability of participation in home ownership programs but does not explain their outcome. In this case, however, since we employ matching and compare beneficiaries

[3] Propensity score is a predicted probability of participation given observed characteristics

[4] Matching algorithms include nearest-neighbor (NN) matching, caliper or radius matching, stratification or interval matching, kernel matching, and local linear matching (see Khandker et al, 2010).

and non-beneficiaries whose propensity scores are sufficiently close or have the same distribution, we can assume that the distribution of unobservable covariates is the same or at least not so different for both groups independent of membership to induce a bias (Becker and Ichino, 2002). Apart from this, we tested sensitivity of the estimated ATT results to possible hidden bias arising from unobservable covariates by using (1) alternative Probit model specification,(2) applying different matching algorithms, and (3) Rosenbaum Bounds Sensitivity test (Khandker et al, 2010).

2.5.7.1 Propensity Score Matching (PSM) Model Specification

Our objective is to investigate the impact of home ownership on households' quality of life. To this end, we developed the following model.

$$Y_i = \beta_0 + \alpha T_i + \sum_{i=1}^{n} \beta_i X_i + \varepsilon_i \qquad i = 1,2,..,n \qquad [10]$$

Where, Y_i (household ith quality of life dimensions which includes three development dimensions) is the dependent variable,T_i is participation in home ownership program or treatment, and X_i is a vector of observed explanatory variables of quality of life. In this case, there is an endogeneity problem since participation in home ownership programs is one of the observed characteristics. Consequently, we have to find a mechanism to handle such a problem.

To begin, let's recall that we have two groups of households distinguished by participation or treatment status T=1/0, where T=1 denotes a household is a households of housing ownership program or treatment group whereas T=0 denote a household that is non-beneficiary of housing program or control group. Moreover, let denote Y_{1i} be the outcome conditional on participation (T=1) and Y_{0i} be the outcome conditional on non-participation (T =0). Having this, our parameter of interest is to estimate the treatment effect on the treated (ATT) which can be obtained by comparing the average treatment effect between the home ownership participants and non-participants. This can be defined as:

$$ATT_i = E\left\{Y_{1i} - \frac{Y_{0i}}{T=1}\right\}$$

$$ATT_i = E\left\{\frac{Y_{1i}}{T=1}\right\} - E\left\{\frac{Y_{0i}}{T=1}\right\} \qquad [11]$$

Data on $E\left\{\frac{Y_{1i}}{T=1}\right\}$ is available from the $E\left\{\frac{Y_{0i}}{T=1}\right\}$nt groups. The problem is to find the expected outcome for non-participants had they participated in the housing program; since data on $E\left\{\frac{Y_{0i}}{T=0}\right\}$ groups enables one to identify only. So, the difference between $E\left\{\frac{Y_{1i}}{T=1}\right\}$and $E\left\{\frac{Y_{0i}}{T=1}\right\}$ can not be observed for the same household at a given point in time because a household cannot have two simultaneous existences—a household cannot be in the treated and control groups at the same time.

To handle this problem, Rosenbaum and Rubin (1983) suggested propensity score matching which is defined as the probability of participation given a setX_i

of observed characteristics. This can be expressed as follows:

$$Pr\left(T = \frac{1}{X_i}\right)$$

Where, $p(X_i)$ denotes propensity score and $Pr\left(T = \frac{1}{X_i}\right)$ is probability of participation in a housing program given observed covariates. Once the propensity score $p(X_i)$ is known, the PSM estimator of the average effect of treatment on the treated (ATT) is the average difference in outcomes between treatment and control group appropriately matched by the propensity score which can be defined as: $ATT=E\{Y_{1i} - Y_{0i}/T_i = 1, p(X_i)\}$

$$ATT = E_{p(X_i)/T=1}\left\{E\left[\frac{Y_{1i}}{T} = 1, p(X_i)\right] - E\left[\frac{Y_{0i}}{T} = 0, p(X_i)\right]\right\}: \qquad [13]$$

Caliendo and Kopeinig (2005) argued that ATT is defined only in the region of common support or overlap in the propensity score distribution between treatment and comparison group. Furthermore, as Rosenbaum and Rubin (1983)showed, the PSM estimator of ATT is a good estimator when, given the propensity scores, the conditional independence or unconfoundness[5] assumption and Common Support[6] assumptions are satisfied. That is, once these assumptions are satisfied, the mean of the potential outcome is the same after adjusting for observable differences. The propensity scores are derived from a Probit model, where participation in the home ownership program serves as an endogenous variable. Consequently, the home ownership participation model given observed characteristics is identified as:

$$Pr\left(T_i = \frac{1}{X_i}\right) = \emptyset(f(X_i)) = \beta_0 + \sum_{i=1}^{n} \beta_i X_i + \varepsilon_i \qquad [14]$$

Where, $\emptyset$ denotes the normal cumulative distribution function, $f(X_i)$ is a function of all observed covariates with linear and higher order terms[7].

The variables that included in X_i of the above participation model is selected on the basis of variable inclusion and exclusion advice for the PSM model given by Caliendo and Kopeinig (2005) based on the unconfoundedness assumption which the matching strategy builds up on. Using this participation model, we estimated the probability of participation in home ownership program or propensity score. Hence, every sampled participant and non-participant has an estimated propensity score, which is a continuous variable and can be expressed as:

$$\hat{P}\left(\frac{X_i}{T_i = 1}\right) = \hat{P}(X_i) \qquad [15]$$

The estimated propensity scores or predicted values are to construct the comparison groups. That is, participants are matched on the basis of this propensity score to non-participants. To do so, of the different matching algorithms, we have used the nearest-neighbour (NN) matching in this study. The average treatment effect of the home ownership program is then calculated as the mean difference in outcomes across the two groups (i.e., treatment and comparison groups).

5 I.e., Y1i, Y0i⊥ T | p(X)- which implies that treatment assignment is entirely based on observed characteristics.

6 Implies that there should be overlap in the distribution of propensity scores of treatment and control groups, I.e., 0<pXi< 1 -which ensures that treatment observations have comparison observations "nearby" in the propensity score distribution.

7 The choice of which higher order terms to include is determined by the need to obtain an estimate of the propensity score that satisfies the Balancing property (Becker & Ichino, 2002).

3. Theory of change

3.1 . Theory of Change for Housing Intervention

This section is intended to explain in quite simple terms the 'Intervention Logic'[8] behind the selection and design of the portfolio of HFHE's housing interventions. It is presented in terms of overall results chain for the Homeownership program, which explains how housing interventions are expected to have impact on outcomes. In line with this, the program logic shows how the interventions contribute to longer-term impacts on households' quality of life. As evidence indicates that, improvements in housing are usually connected with better health, education, income generation, wealth accumulation and social connection. Hence we developed the theory of change as follows.

Stage 1 **Selected Family:** A low-income household that meets Habitat criteria is selected as a beneficiary of the homeownership program		**Stage 5:** **Habitat for Humanity Volunteers:** Volunteers in the community build or rehab the home in partnership with the households.	
Stage 2 **Land:** Land is donated or purchased for the new or rehabbed home.		**Stage 6** **Mortgage:** The home is transferred to the family via a long-term, no-interest mortgage.	
Stage 3 **Materials and Services:** Materials and services are donated or purchased by HFHE.		**Stage 7** **New home:** The family now owns a simple, decent home that meets their needs.	
Stage 4 **Habitat Homeowner:** The beneficiary puts in 300 hours of "sweat equity" or volunteer time. Each Habitat for Humanity Ethiopia volunteers to construct their home or other Habitat homes.		**Stage 8** **Mortgage Payments:** Mortgage payments go into a revolving fund that is used to build homes for more households.	

Table 3. 1. Stages of HFHE Home Ownership Program Intervention

[8] See annex 1 : HHFE's Program Logic

EDUCATION

Long-term Outcomes:
Low income HHs children and adults are enrolled in the education system and receive quality education

Intermediate Outcome 1:
Increased level of HH children's access to (retention in) the education system and improved standard and maths score of children

Intermediate Outcome 2:
Improved children study habits and decreased absenteeism; increased years of schooling

Intermediate Outcome 3:
Increased access to education of low-income HHs

HEALTH

Long Term Outcomes:
Low income hhs access and receive health care services in the public health system

Intermediate Outcome 1:
Improved health status of HHs and decreased exposure of low income HHS to diseases and illnesses.

BASIC NEEDS

Long-term Outcomes:
The ability of HHs to meet their basic needs is improved

Intermediate Outcome 1:
Resources are available to the vulnerable to meet their basic needs

LIVE LIHOODS

Long-term Outcomes:
Improved Wealth and income-generation opportunities for HHs and Vulnerable groups

Intermediate Outcomes 1:
Increased level of employability of HHs and Vulnerable groups

Intermediate Outcomes 2:
Increased level of enterprise start-up and expansion by HHs and Vulnerable groups

Intermediate Outcomes 3:
Increased effectiveness of govt in delivering employment services to HHs

WASH

Long-term Outcomes:
The capacity of local municipalities to provide essential municipal services is maintained or improved

Intermediate Outcome 1:
HHs and Vulnerable group in selected cities have improved access to water supply, toilet facilities, sanitation and waste management

Figure 3. 1. Impact: Improved Quality of life of Households in Homeownership Program of HFHE

3.2 Overall Impact

The final Impact which the homeownership's program investments are expected to have on the participating households is the following: 'Improved quality of life of the households'

This is a general statement which is intended to communicate the main idea: firstly, that of the supported households achieving a certain level of physical and mental well-being, economic independence and ability to satisfy their basic needs (including obtaining decent physical living conditions, adequate nutrition and access to public education and improved health status and services) whilst being sufficiently integrated and connected with the local community to be able to enjoy a reasonable level of security.

Figure 3. 2. Delivering Impact through achieving Home ownership program

All six long-term outcomes of the results framework are intended to collectively bring about the achievement of this overall impact. Home ownership program of Habitat for Humanity Ethiopia is expected to affect families and children to enable them to attend school and to achieve the maximum benefit from the teaching provided, better learning outcome and educational achievements. The result expected from this is that children in the home ownership program will benefit from positive externalities arising from home environment and obtain a reasonably similar level of post-education opportunity and will therefore be empowered to succeed both socially and economically.

Through benefiting from the home ownership program, it is expected that the overall health status of the households will significantly improve and enjoy better quality of the health service. In this way, it is expected that the overall level of well-being of the households in the HFHE home ownership program will improve. Through the identification of vulnerable group of households and home ownership program of HFHE help to ensure that households are connected and integrated into established societal networks and service delivery systems. Additionally, HFHE's home ownership program will have an outcome for households to engage in livelihood opportunities so that it helps them prevent falling into destitution, whilst participant households' adults are gradually transited into paid employment or to secure more formal and better paid work. Ultimately, this

enables low-income households to be able to become economically independent and thereby better integrated into their local communities. There are also expected multiple positive feedback loops. For instance, improved household incomes are expected to eventually lead to positive impacts on education levels and health status.

Finally, HFHE households at local municipalities are expected to provide better services with multiple benefits. For example, HFHE interventions in terms of WASH facilities in the locality are expected to generate positive effects on energy efficiency and local environmental pollution reduction, which in turn will impact municipality finances and the local population's health status. If the six Long-Term Outcomes presented in the figure 3.2 above are achieved, then there is a high level of confidence that the overall quality of life of households will have been improved. However, significant improvements in the socio-economic conditions of the target beneficiaries rest upon the assumption that there would be no major deterioration in the overall condition of the Ethiopian economy. It is arguable that a major deterioration in the economy has in fact occurred as a result of certain macro-economic factors and social stability. Nevertheless, this does not undermine the continued appropriateness of the HFHE's intervention logic and strategy, as the objective of the home ownership program is to at least minimise the negative economic and social impacts of such adverse economic conditions on the living conditions of the target families.

4. Result and Discussions

4.1 Distribution of Total Sample across Cities and Household Groups

The following figure depicts the total sample households covered in this study across cities. Quantitative and qualitative data is collected from a total of 1158 households out of which 655 (56.56 %) are in the treatment group and 503 (43.47%) are in the control group. This implies a response rate of 82.7 % given the proposed sample size of 1400.

Samples were collected from 5 cities in Oromia region (Adama, Jimma, Ambo, Fiche and Shashemene), 5 cities in Amhara region (Debre Birhan, Debre Markos, Bahirdar, Dessie and Kombolcha) and 2 sub cities in Addis Ababa (Gullele and Akaki Kaliti).

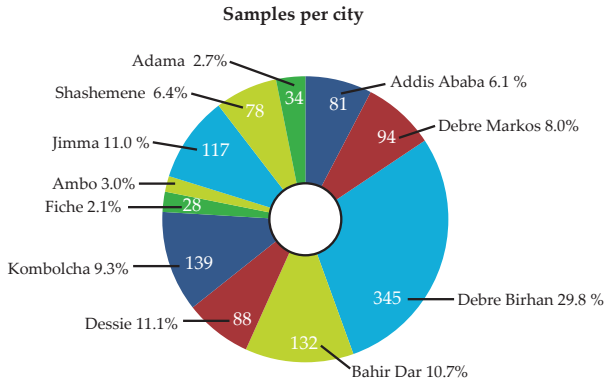


Figure 4. 1. Sample distribution across cities
Source: Own computation based on survey

Sample size was determined proportionally based on the number of habitat houses built/ upgraded in each city. In line with that, 30% of the samples were collected from Debre Birhan city, as it hosts the largest number of habitat houses built in Ethiopia.

Figure 4.2 below presents the percentage distribution of samples collected from each city by treatment and control groups. Given the fact that this impact evaluation study goes back more than 20 years, it became a little bit difficult to track and locate households in the control group which resulted in a slightly higher share of treated households; although initially it was planned to survey an equal number of controlled and treated households. Also, households in the treatment group later found that they had sold the house and moved to other cities. Nonetheless, maximum effort has been exerted to get comparable and statistically meaningful samples from both groups.

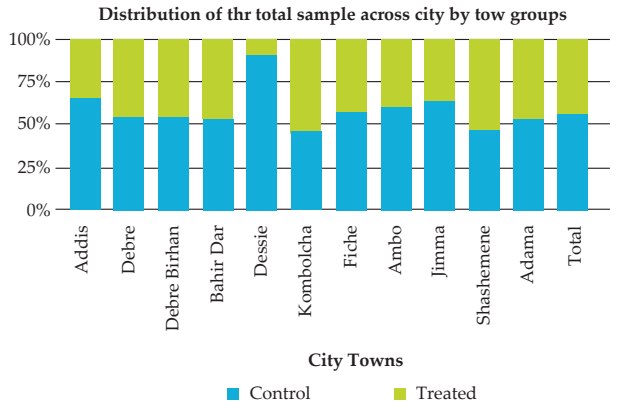


Figure 4. 2. Total Sample distribution across city by treatment and control group
Source: Own computation based on survey

4.2 Demographic Characteristics

Out of the total sample 65% of the respondents were female headed households. Except for Dessie town (for both groups) and Shashemene, Dessie and Kombolcha (for control group) the gender distribution across cities is consistent with the overall mean. No significant difference is observed between the two groups of households in terms of household size and age. Looking at the employment status 76.5 % of the total respondents replied that they are employed at the time of interview. Comparison among the treated and comparison groups reveals that there is a statistically significant difference where the number of households in the control group that are employed is higher than those in the treatment group by 5.67 %. Further inquiry into the types of occupations held by the respondents in the two groups revealed that while self - employment is the first response (35 % for treatment and 31 % for control), daily labourer stood as the 2nd highest response (20%) for the control group followed by employment in government offices (12.33%). On the other side, the 2nd highest occupation among the households in the treatment group found to be government employees (19%). Educational status, which is a summary of formal and informal education attended by household heads, indicates that 75.6% of the respondents are educated, and there is a statistically significant difference of 9.3 % among the two groups on average terms.

			Mean		mean differences	
Variable	Indicator/Measurement	Total (%)	Treated (%)	Control (%)	Diff[9]	T-stat
Gender	Male	35	33.28	37.57	4.2	1.51
	Female	65	66.72	62.43		
Age	Years	45	46.4	43.5	2.9	-3.96***
Household size	Number	4.3	4.4	4.2	0.012	-2.09***
Employment Status	Employed	76.5	74	79.72	5.67	2.26**
Educational Status	Has got any form of education	75.6	79.7	70.3	9.3	-3.67***

*, **, *** are significant at 5% and 1% level of significant, respectively

Table 4. 1. Demographic Characteristics Summary Statistics

4.3 The Effect Housing Program on the Quality Life Outcome Indicators

Mean Comparison and ANOVA Result

Under this section we discuss how provision and ownership of housing affects quality of life through the following outcomes: Education, Health, Living Standards, Housing Expense, Income and saving, Asset and Wealth accumulation and Food Security. And, the summary statistics are used to present outcome in each variable with respective indicators across the two groups. The results of a simple t-test, which is undertaken to assess if the mean difference across the two groups is statistically significant, is also reported and discussed.

[9] Difference is calculated as Mean of control –Mean of Treated

scores

Average score on mathematics, average test scores of grades 8, grade 10[10] and grade 12, absence from school and education expenditure are used as indicators to assess the impact of the intervention on education. The results show that students in the treated households have registered better academic results which are also statistically significant, except grade 10 results. In support of this, Lipnevich et al. (2016) noted that success in mathematics is related to better living conditions. As it is also confirmed in the treated households' qualitative survey, it is possible to infer that more study time led to higher performance scores in mathematics. Looking at the other two indicators, it is observed that a student from treated households has lower absenteeism as measured by the average number of days absent from class per semester (nearly two days) compared to those in the control group. Education expenditure, which is related with household's income levels found to be higher for households in the treatment group, might be related with better living conditions and economic empowerment as a result of home ownership: this in turn can affect lower absence rates and also academic performances.

owners and 75 of percent control households reported that they send their children to public school with no tuition while 34.5 percent of treated households send their children to private school with tuition fees whilst only 22 percent of the non-participant reported that they send children to private school. This might connote the home ownership program enabled households to send their children to schools with presumed better educational facilities.

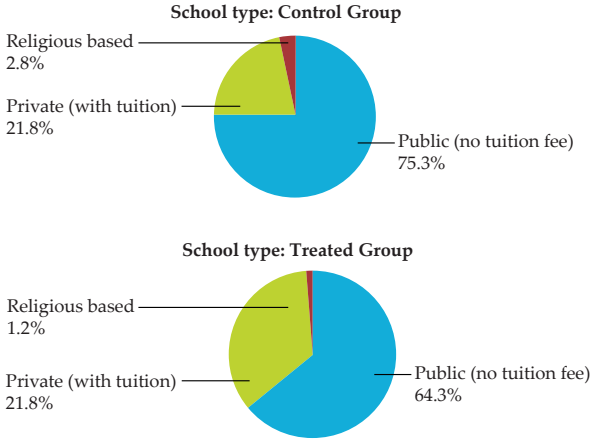


Figure 4. 3. Children types of School attendance by treated and control group
Source: Own computation based on survey

Education					
Indicator/Measurement	Total Mean	Treated Mean	Control Mean	Diff	T-stat
Average Maths score	69.25	69.71	68.57	1.13	-1.75*
Average Maths score (G10)	68.32	68.71	66.64	2.06	-0.98
Average Maths Score(G12)	55.23	56.64	49.69	6.95	-2.16**
Grade 8 Ave. Score	61.31	62.33	59.63	2.70	-2.02**
Grade 10 GPA	18.07	17.36	20.65	3.29	0.83
Grade 12 Average Score	300.51	312.32	258.54	53.78	-2.11**
Absence from school (no of days per semester)	4.16	3.4	5.12	1.64	3.48***
Education Expenditure	5382.39	6890.43	3418.65	3471.77	-6.99***

*, **, *** are significant at 5% and 1% level of significant, respectively

Table 4. 2. Education outcome indicators across treated and control group

Types of Schools: About 64.3 percent of Habitat

[10] It shows the percentage of students who scored passing score.

4.3.2 Health Outcomes

The second outcome variable through which provision of housing is expected to affect quality of life is through improvement on health. To see if there is a significant difference in health outcome, we have identified five indicators (see Table 4. 3 below). Looking at the mean differences across the two groups, better outcomes are observed for households in the treatment group with regard to child mortality, malnourishment, and exposure to diarrhoea, health expenditure and visit made to a health centre. However the differences became statistically significant only for exposure to diarrhoea.

they have, or someone in their home has, a respiratory or lung illness such as asthma or allergies. Of those, 57 % said their condition has gotten better since moving into their Habitat home, and 29 % said it has stayed the same.

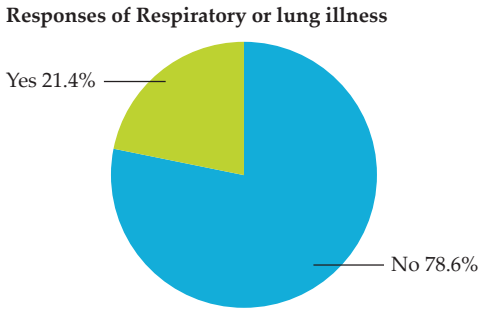


Figure 4. 4. Homeowners' response about asthma or respiratory allergies

Health					
Indicator/Measurement	Total Mean	Treated Mean	Control Mean	Diff	T-stat
Child Mortality	0.12	.11	0.13	0.025	1.29
Malnourishment	0.13	0.12	0.14	0.022	1.09
Exposure to respiratory Disease	0.24	0.23	0.26	0.023	0.91
Exposure to diarrhoea	0.076	0.056	0.1	0.045	2.86**
Health Expenditure	1594.199	1678.165	1484.861	193.30	-0.44
		x^2 Test			
	Total	Treatment Contribution	Control Contribution	Pearson chi2(5)	Pr.
Frequency of visit made to a Health Center	12. 9	5.6	7.3	12.9436**	0.024

, * are significant at 5% and 1% level of significant, respectively

Table 4. 3. Health Outcome indicators by treated and control group

A chi-square test is also conducted to test for a significant difference on the frequency of visits made to health care centres indicating that more visits are made by households in the control group which is also statistically significant. Moreover, in relation to health, we inquired particularly about asthma or respiratory allergies. Of our sample, 21 % of homeowners said

4.3.3 Living Standards

In order to assess the impact of housing on living standards we adopted six indicators from the multidimensional poverty index which includes: quality of the house, access to clean drinking water, access to improved sanitation, access to electricity, improved cooking methods and asset ownership.

Tests made on the above indicators revealed that there is a statistically significant difference between the two groups. The results in table 4.4 below are implying the larger the mean value the higher the rate of deprivation (poor living standards). For instance, while 58.4 % of the households in the control group have poor housing quality only 22.3 % in the treatment group have poor quality houses. Similarly, the number of households with access to electricity, safe drinking water, improved sanitation facility, improved cooking methods and asset ownership in the treatment group are higher than those in the control group by 2.2%, 6.8%, 31.6%, 6.5% and 12.5%, respectively.

spent birr 1115 per month on average terms. Given the fact that renting a house is expensive in cities, owning a house is expected to affect the overall housing expense. The analysis on living conditions before moving to habitat house also indicates 76% of the households in the treatment group were living in rented houses, which justifies the significant decline in overall housing expense. In support of this the data also shows while the largest cost for households in the control group is rent, from the treatment group it is the cost of utilities. Our key informant from partner households also confirmed:

"I used to live in beggary for many years and because of my physical disability people don't want to rent their house for me, not only me but many with different physical disabilities. After I received a house from Habitat I am able to be owner of a rental house and from that income I am able to send my children to school.'' [KII, Debreberhan]

Living Standards					
Indicator/Measurement	Total mean	Treated mean	Control mean	Diff	t-stat
Mortgage Payment	54	94	2	92	-2.35***
Rent	384.6	72	792	720	14.71***
Utilities	512	659	321	338	-8.12***

, * are significant at 5% and 1% level of significant, respectively

Table 4. 4. Living standard indicators across treated and control

A significant difference is also observed on household housing expenditure consistently across cities and intervention groups where households under the treatment group spent birr 825 and households under the control group

Housing Expense					
Indicator/Measurement	Total Mean	Treated Mean	Control Mean	Diff	T-stat
Housing quality	37	22	58	36	13.50***
Access to Electricity	14	13	15	2	1.05
Access to safe drinking water	6.9	3.9	10.7	6.7	4.53***
Access to improved sanitation	46	33	65	31	11.25***
Access to Improved cooking methods	93	89	96	6.5	4.25***
Asset ownership	43	37	49	12	4.29***

, * are significant at 5% and 1% level of significant, respectively

Table 4. 5. Housing Expenditure across treated and control group

4.3.4 Home ownership and Respondent Income and Saving

Home-ownership indisputably provides many financial and other benefits such as opportunities to engage in income generation activities. Housing is a major charge on income, a source of income-like flows of benefits or even cash income itself, and it makes a big contribution to material living conditions. Moreover, it is established knowledge that owning a home is necessarily an effective means of generating income for lower-income and vulnerable groups of the households. Research has shown a correlation between homeownership and increased wealth, with each year of homeownership tending to be associated with an additional $9,500 in net wealth, on average[11]. With this view and notion, this study assesses whether the home ownership program of HFHE is likely to be an effective mechanism of income creation for low-income and vulnerable groups of the households. In line with this argument, the finding of the study shows that the mean average monthly income generated from business is ETB 37,340(USD 688) while that of the control group is ETB 16,357.69 (USD 301). This implies that on average, the home ownership program of HFHE provided an opportunity for the households to generate a business income of ETB 20982.57 (USD 389) higher than that of non-participating households.

Comparison made based on the household's income and savings indicates that there is a significant difference among the households in the two groups. Total annual income (summation of business income, rental income, income from wage and salary, cash transfers and aid from different sources) of households in the treatment group found to be higher for households in the control group by birr 51,074.88 (USD 941) on average terms. Zooming in to the components of the total income a statistically significant difference is observed in household incomes from business and rental activities. City wise distribution of income shows that higher income is reported in Adama for the households in the treatment group. And generally speaking, the total income of households in the treatment group is higher compared to households in the control group except for Dessie, Ambo and Shashemene. This might be related with the severe poverty and poor living

[9] Herbert, C.E.; McCue, D.T.; and Sanchez-Moyano, R. Is Homeownership Still an Effective Means of Building Wealth for Low-Income and Minority Households? (Was It Ever?). Harvard University, 2013. Accessed Feb. 17, 2023. https://www.jchs.harvard.edu/sites/default/files/hbtl-06.pdf.

Income and Saving					
Indicator/Measurement	Total Mean	Treated Mean	Control Mean	Diff	T-stat
Total income from business	28,226.07	37,340.26	16,357.69	20982.57	-1.92**
Total income from rent	4406.96	7031.847	988.86	6042.981	-9.2*** -
Total Annual Income	90,318.42	112, 655.2	61,580.29	51,074.88	-2.95***
Saving in any form	48%	44%	53%	8.3%	2.82***
Total saving	28764.37	35908.99	21285.32	14623.67	-2.27***

, * are significant at 5% and 1% level of significant, respectively

Table 4. 6. Income and Saving (in ETB) across treated and control group

conditions that existed among the treated households before program intervention which also extended till the survey time which is evident during data collection assignment.

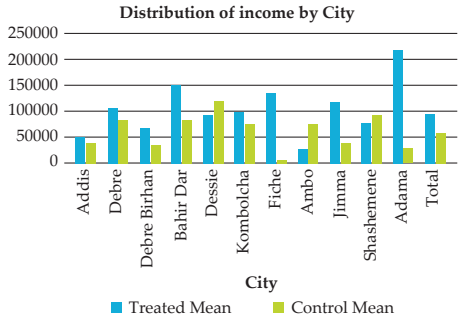


Figure 4. 5. Income distribution by city

4.3.5 Home Ownership, title and type home ownership of Respondents

The following two figures present the distribution of homeowners across the city by the two groups. From the total sample 58.3% replied that they have their own home and disaggregating this into the two groups shows that out of this total 90.81% of the households are from the treatment group. And city wise disaggregation indicates about 30% of the households that own a house reside in Debre Birhan followed by Dessie, Jimma and Bahirdar.

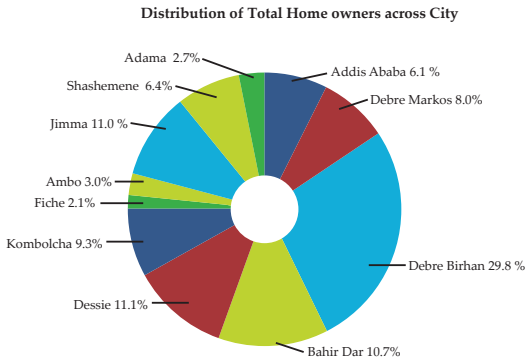


Figure 4. 6. Home owners across cities

The stacked graph below shows the share of home owners across the two groups out of the total home owners in the two groups. For instance, looking at the percentages for Addis Ababa it implies out of the total owners in the control group 25% of them reside in Addis Ababa and out of the total home owners in the treatment group 4.08% are from Addis Ababa. And for Fiche and Adama no household in the control group does own a house.

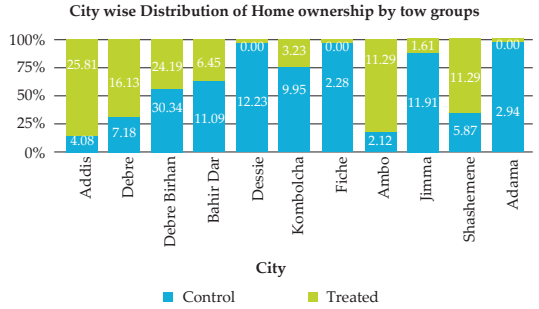


Figure 4. 7. Home ownership by treated and control groups

Title ownership: We have also assessed who owns the house ownership title in the household among those who own houses. As depicted below, the majority of the home ownership documents are held by women except Adama and Dessie where 61.1 % and 58.7% of the titles are owned by men.

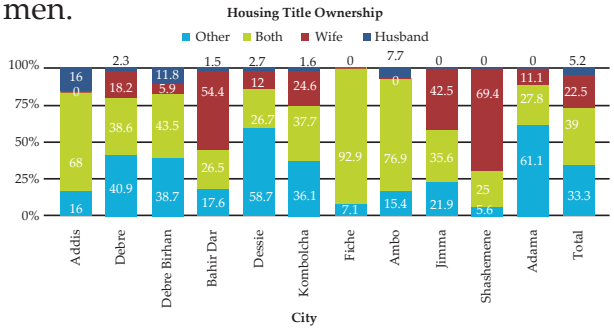


Figure 4. 8. Home ownership title by gender

The following graph depicts the type of documents issued for the home owners. Majority of the home owners in the treatment group have a free holding and lease holding certificates. Among the households in the control group 61 % replied that they have a free holding certificate while around 24 % of them reported that they have no document.

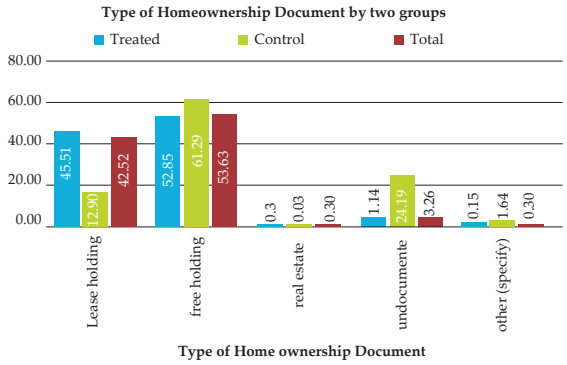


Figure 4. 9. Home Ownership Document by treated and control group

4.3.6 HFHE house construction and housing schemes

Households within the program: The following two figures depict the number of houses constructed over the year and summary of housing tenures. As indicated in the Figure 4. 10. a little over half of the house's tenure is between 10 – 15 years which is between 2000 and 2005 as displayed in Figure 4. 10. 398 houses (60%) out of the total 655 sample were constructed within these five years in Debremarkos, Debre Birhan. Bahirdar, Dessie, Kombolcha, Jimma and Adama.

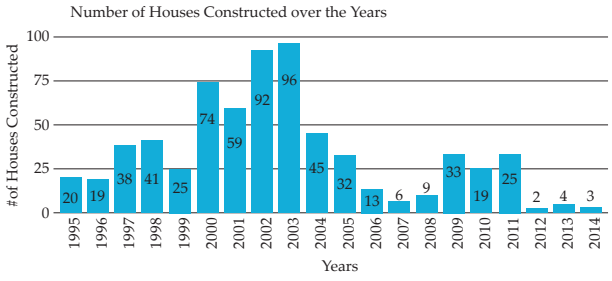
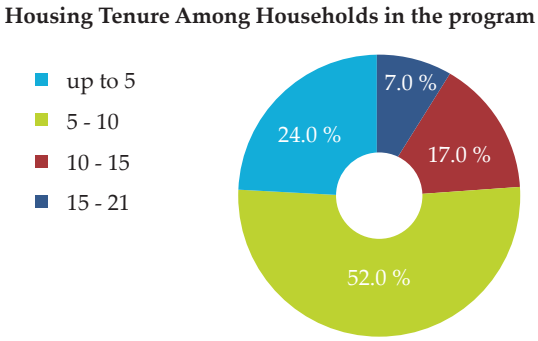


Figure 4. 10. Number of houses built over years



The following figure displays the distribution of houses constructed across the three HFHE's housing schemes; mortgage, vulnerable group program and urban slum upgrading programs over the intervention periods and across cities.

13 Housing and Housing Finance—A Review of the Links to Economic Development and Poverty Reduction John Doling, Paul Vandenberg, and Jade Tolentino No. 362 | August 2013

14 See KMRC https://kmrc.co.ke, CRRH http://crrhuemoa.org, NMRC https://nmrc.com.ng, TMRC https://www.tmrc.co.tz, and EMRC https://www.emrc-online.com

The mortgage scheme was dominant up until 2016 covering 60 to 100% of habitat intervention across cities. Slum upgrading and vulnerable group programs came into picture boldly in 2017 mainly in Addis Ababa, Fiche and Ambo. Also, out of the total households 13% reported that they got the house because of their disability; out of which 59.3 % of them are under the vulnerable group program.

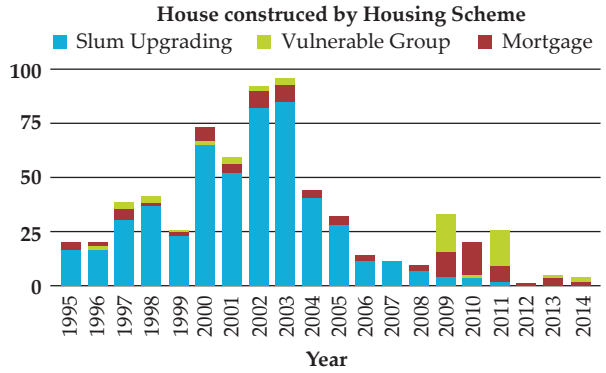


Figure 4.10 Houses built by housing scheme

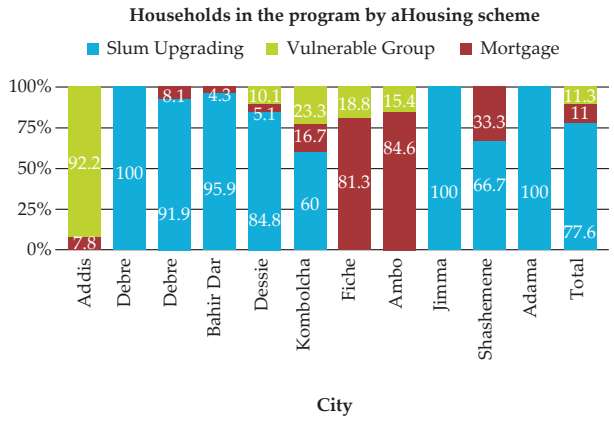


Figure 4.11 Houses built by housing scheme

Type of housing before moving to Habitat Home: Out of the total households that are in the program 76% replied that they were living in a rental house, followed by Kebele houses (15%), living in their own houses and with others (4%) before they have got habitat support.

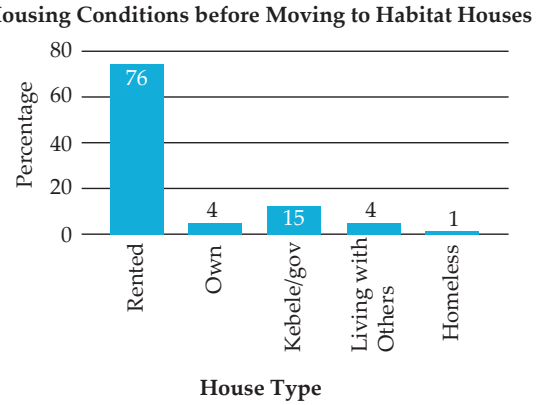


Figure 4.12 Housing conditions before Habitat House

Spill over effects: About 7.8 % of the sampled households reported that they are not living in the habitat provided home. The most frequent reasons are sold, rented, using it as a business house and rebuilt it. Further scrutiny on the reasons for selling the house indicated that the majority of them (72 %) used it to buy or construct another house; Implying owning a house has created a means of additional income and long-term economic empowerment.

4.3.7 Home ownership and WASH

In terms of WASH, Habitat for Humanity housing program participants have better access to safe water for domestic uses 95.6% for program participants vs. 86.5% for non-participating households. Similarly, the program has played better roles in enabling households to access improved toilets where over 66% of program participants have their own private toilets whereas only 40% of non-program participants have such toilets. This result is true across urban centres

except in Addis Ababa where the program focused on upgrading urban slams that had little impact on provision of improved toilets (see Table 4.7. below).

	Treated		Control	
Cities/towns	Access to safe water for domestic uses (%)	Owned private toilet (%)	Access to safe water for domestic uses (%)	Owned private toilet (%)
Addis Ababa	80.8	8.0	82.8	13.8
Debre Markos	100.0	82.4	97.7	83.7
Debre Birhan	98.4	53.2	95.6	35.2
Bahir Dar	100.0	42.9	98.4	21.0
Dessie	100.0	100.0	100.0	44.4
Kombolcha	98.4	93.4	83.3	35.9
Fiche	56.3	65.3	100.0	41.7
Ambo	76.9	61.5	44.4	66.7
Jimma	93.2	100.0	43.2	45.5
Shashemene	100.0	61.1	100.0	52.4
Adama	100.0	100.0	31.3	37.5
Total	95.6	66.1	86.5	39.8

Table 4.7 Home ownership and WASH

4.3.8 Asset-index as measure of HHs' socio-economic position: Principal Component Analysis

Measuring household socio-economic position by asset index is considered as one of the alternatives to income and consumption expenditure. It is used as a proxy measure for the economic wellbeing of a household (Sahn and Stifel 2003). This approach collects information on ownership of a range of durable assets (e.g. radio, sofa, table, car, refrigerator, television and etc.), housing characteristics (e.g. material of dwelling floor and roof, toilet facilities), and access to basic services (e.g. electricity supply, source of drinking water). In this study, these assets are categorised in our survey questions about asset ownership--a list of assets is provided for the household to indicate which, when and how many of them they own.

We run the principal component analysis on the list of assets in order to reduce the dimensionality into a single asset score. It is recommended to use the first principal component that explains the most variance in the data. The factor scores from the first component are used as weight for each asset to construct an asset index for each household. The higher the household asset index scores the higher the household's relative economic status in the sample. Based on literature (Rutstein 2008), in this study household asset indices are stratified into wealth quintiles. In this study, the household's wealth was represented by the first principal component. The weights for each indicator from this first principal component were used to generate a household score.

In our analysis, three components namely housing quality, consumer durables and services quality were used to construct the wealth index of the households. Each household both in the control and treated group is assigned to one of the wealth quartiles depending on the value of their wealth index. Figure below mirrors households in the treated group who are in a better socio-economic position than

the households in the control group. It is clearly observed that 201 households in the treated group are in the wealthiest category in terms of asset index while only 27 of households from the control group are in the wealthiest category. This implies that habitat's home ownership program positions households in an improved socio-economic condition than that of non-beneficiary households. In a similar vein, the highest numbers of poor households are the control group than the treated group, signalling that habitat home program participants have positioned the households to improve the core indicator of severity of poverty in terms of asset ownership.

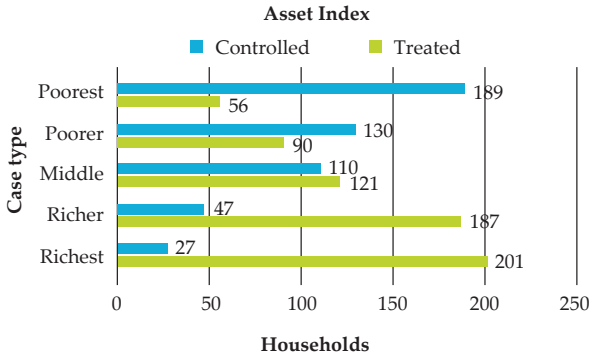


Figure 4. 13. Asset Ownership by treated and control group
Source: Own computation based on Household Survey

Moreover, the associated mean and standard deviation of asset index for each of the quintiles is summarised in table below. Testing the mean percentage scores across wealth quartiles reveals that there is statistically significant difference among the treated and control group (with the largest difference between wealthiest and poorest households in the treated group is 4. 76). This could be reflective of the fact that wealthier households acquire more assets than the poorer counterparts. In relative terms, households in the home ownership program have better asset ownership than that of the control group. The message taken from this finding is that Homeownership of Habitat for Humanity Ethiopia is a significant contributor to the wealth accumulation of low-income households; it is a clear signal that households hold a substantial portion of wealth in their home. This finding shows that housing wealth accumulation depends critically on how soon a family that is renting becomes a homeowner. The interesting part of the story is also confirmed in one of our qualitative survey with Habitat Homeowner who said:

"We have changed from living in a rental house to becoming a house owner; even we have become property-owners for rental houses. Our transformation is so evident that we used to be fearful of our landlord, but now we are enjoying the benefits of our own home'. [FGD, Adama]

Wealth Quintiles	Treated		Control		Largest Difference	Test statistics (d.f) (p-value)
	Mean	SD	Mean	SD		t=-17.4767
Q1	-2.128	0.380	-2.282	0.421	0.16	Pr = 0.0000
Q2	-1.021	0.275	-1.117	0.278	0.09	
Q3	-0.067	0.252	-0.155	0.275	0.09	
Q4	0.892	0.293	0.903	0.304	0.01	
Q5	2.631	1.206	2.569	0.814	1.8	
Largest Difference	4.76					

Table 4.8 Mean and Standard Deviations of Asset Index by Quintiles across treated and control groups

4.4 The link between Home ownership and Multidimensional Poverty Index

In the literature, most of the numerous definitions of poverty and material deprivation cannot be entirely separated from housing circumstances. The significance of the links between housing and poverty, and material deprivation deserves greater recognition from those with an interest in both subjects. The interaction between the two can have an immense effect on the numbers of those defined as 'living in poverty', who they are and the implications for policy.

Ending poverty in all its forms is the main aim of Sustainable Development Goal 1. The global Multidimensional Poverty Index (MPI) measures acute multidimensional poverty. It does so by measuring each person's meeting deprivations across 10 indicators in three equally weighted dimensions: health, education and standard of living (see figure 4.14). The health and education dimensions are based on two indicators each, while standard of living is based on six indicators. In this study, the indicators to compute MPI are taken from household surveys. Each indicator was equally weighted within its dimension, so the health and education indicators were weighted 1/6 each, and the standard of living indicators are weighted 1/18 each (OPHI 2019). The MPI is the product of the headcount or incidence of multidimensional poverty (proportion of people who are multidimensionally poor) and the intensity of multidimensional poverty (average share of weighted deprivations, or average deprivation score, 1 among multidimensionally poor people) and is therefore sensitive to changes in both components. A deprivation score of 1/3 (one-third of the weighted indicators) is used to distinguish between the multidimensionally poor and non-poor.

The MPI complements the international $1.90 a day poverty rate by identifying who is multidimensionally poor and shows the composition of multidimensional poverty. The MPI has three dimensions and 10 indicators as illustrated in figure 4.14. Each dimension is equally weighted, and each indicator within a dimension is also equally weighted. Any person who fails to meet the deprivation cut-off is identified as deprived in that indicator.

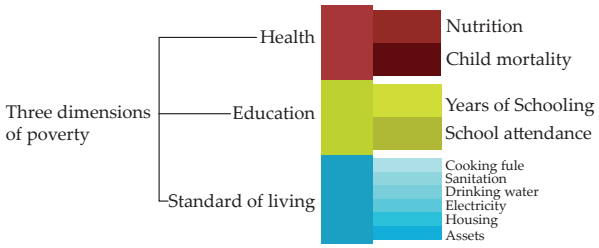


Figure 4. 14. Structure of the global Multidimensional Poverty Index
Source: HDRO and OPHI.

As we can see in Table 4.8 below the analysis shows that average deprivation (A) along-with headcount (H) and MPI (M_0). Average deprivation (A) is the indicator computed by adding the percentage of total deprived households of all dimensions and dividing it by the total number of poor households. Headcount ratio (H) is computed by dividing the total poor by the total number of people. MPI is determined by multiplying the average poverty (A) to headcount ratio (H) which indicates that MPI will be between 0 and 1 if the family's MPI is 0, which indicates

that the family is not poor whereas 1 shows perfect poverty.

The result of Table 4.8 below depicts that average poverty among the households of the control group is 0.597 which is greater than the treated group where it is 0.403. Surprisingly, the finding showed that MPI for the Habitat's home ownership program is better than country level MPI which indicates that home ownership might contribute to the improvement of household's MPI compared to national level. This might reflect that Habitat Home ownership program has helped households to improve their poverty status in relation to the national level multidimensional poverty index[12]. The households in the home ownership program have shown significant improvement in the indicators of multidimensional poverty index which includes; health, education and standard of living. The key takeaway from the finding is that Habitat's home ownership program perhaps has a key role to help households to meet the Sustainable Development Goal 1 which aimed at ending poverty in all its forms everywhere.

4.5. Food Security and Home Ownership

We computed the household hunger severity scale based on the responses to the last three FIES questions and sub-questions. While most of the respondents indicated little to no hunger experience in the past four weeks, about 15.5% and 6.9% of non-beneficiaries and beneficiaries respectively indicated moderate hunger experience (see Figure 4.15). Only 2% and 1.2% of non-beneficiaries and beneficiaries reported severe hunger. The difference in terms of moderate hunger experiences between the beneficiaries and non-beneficiaries seems to be non-trivial.

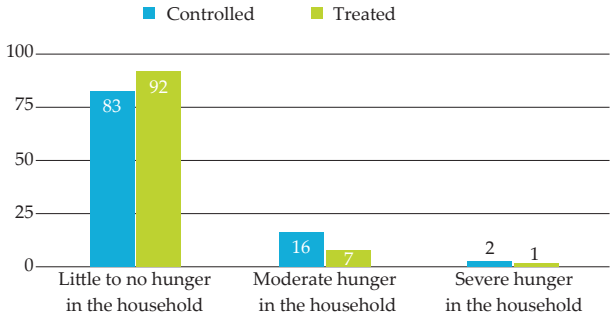


Figure 4. 15. Food Insecurity Experience Scale (FIES) index among households
Own computation based on survey

Group	MPI Value	Head- count (%)	Intensity of deprivations (%)	Contribution of deprivation in dimension to overall multidimensional poverty (%)		
				Health	Education	Standard of living
Control	0.597	0.57	53.3	0.222	0.315	0.545
Treated	0.403	0.43	47.3	0.222	0.266	0.463

Table 4.9 MPI for Households in control and treated group
Source: Own computation based on Household survey

[12] The intensity of deprivations in Ethiopia, which is the average deprivation score among people living in multidimensional poverty, is 53.3 percent.

4.6. Home Ownership Impact: Result from Model Estimation

The previous section shows the mean outcome comparison of the beneficiaries and non-beneficiaries of the housing program from two sample T-tests. In this section, we used the regression and propensity score matching (PSM) estimation models to assess the impact of the habitat housing program on some major outcome indicators that are explained in the earlier section. We estimated the regression model because during the implementation of home ownership program it is assumed that the participants and non-participant household of the program have similar characteristics, and the program participants (treatment group) are selected from those applied for the housing program. Again, the control groups are selected from those applied for the housing program but not selected into housing program during implementation period. We also know that the program is not purely experimental, though it is assumed that the participating and non-participating households of the program have similar characteristics. To overcome the issue, we estimated the Average Treatment impact on Treated (ATT) by using the PSM model to match both groups and for the empirical inference of the results. Further, the program impact results are supported by the qualitative results from the lived experiences of the Habitat housing program participants.

4.6.1. Wealth index and Home Ownership

The result from regression estimation of treatment on the assent index shows that the housing program has a positive and significant effect on the wealth index. The impact of the housing program participation after controlling other variables that affect the wealth index is 1.426[13] (Table 4. 9). This implies that being the participant of home ownership program of the habitat house will increase the household's wealth index by 1.426. Our regression model result also shows that the household's wealth index has a positive and significant correlation with the household's total annual income and educational level. And, the result further shows that the being in an employer status has a positive correlation with the wealth index than the government employee in terms of better wealth creation. Wealth index for households living in Shashemene and Ambo found to have a statistically negative relationship with home ownership as compared to households in Addis Ababa while has for households living in Dessie positive and significant relationships is observed. This might not be directly related with housing interventions rather it is influenced by households individual characteristics as qualitative surveys indicated that households in Ambo and partly in Shashemene found to engage in non-productive rather subsistence oriented activities, which has limited multiplied income generation potential

Similarly, the ATT result (Table 4.10), after matching both groups for any observed

[13] We used the figures in the last column(Model estimation)for discussion.

difference, shows that participation in the housing program has a significant contribution to the wealth index of the home owners. On average, the habitat home ownership program participants have a 1.426 higher wealth index of that than their counterparts. This could be justified as the ownership of a house for poor households is a means of wealth accumulation and considered in the computation of their wealth index. Besides, by reducing costs incurred due to housing expenditure, home ownership could contribute to acquisition other types of assets or wealth accumulation.

Variables	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
Partner Household	2.028***	1.561***	1.488***	1.426***
	(0.102)	(0.0904)	(0.091)	(0.0927)
Total annual income (log)		0.562***	0.567***	0.543***
		(0.0461)	(0.048)	(0.0472)
Male		-0.0493	0.00497	0.106
		(0.0951)	(0.093)	(0.0969)
Age		0.0116**	0.0100*	0.00574
		(0.00407)	(0.00404)	(0.00454)
Education		0.113***	0.102***	0.0883***
		(0.00897)	(0.00927)	-0.0104
Household size		0.0236	0.0521	0.0438
		(0.0306)	(0.0298)	(0.0296)
Debre Markos			-0.0591	-0.128
			(0.232)	(0.248)
Debre Birhan			-0.0819	-0.0758
			(0.205)	(0.216)
Bahir Dar			0.296	0.238
			(0.233)	(0.245)
Dessie			0.575*	0.565*
			(0.243)	(0.255)
Kombolcha			0.146	0.0551
			(0.233)	(0.244)
Fiche			-0.659	-0.574
			(0.427)	(0.415)
Ambo			-0.929**	-1.051**
			(0.323)	(0.319)
Jimma			-0.091	-0.00129
			(0.246)	(0.257)
Shashemene			-1.179***	-1.281***
			(0.246)	(0.259)
Adama			-0.0396	0.129
			(0.336)	-(0.33)
Private organization Employee				-0.0774
				(0.161)
NGO Employee				-1.027**
				(0.36)
Domestic Worker				-0.392
				(0.465)
Self Employed				-0.00808
				(0.133)
Daily Laborer				-0.637***
				(0.168)
Pensioner				-0.0707
				(0.197)
House Wife				0.163
				(0.201)
Unemployed				-0.267
				(0.203)
_cons	-1.083***	-8.295***	-8.269***	-7.526***
	-0.0765	-0.47	-0.52	-0.565
N	1119	1119	1119	1119
adj. R-sq	0.26	0.502	0.535	0.546

Table 4.10 Regression result for wealth index and home ownership

	ATT	Std. Err.	T	(0.255)
Wealth index	1.426***	0.149	9.577***	0.0551

Moreover, result from qualitative survey also conveys the same message. Households [Habitat homeowners] were enquired about the status of assets ownership they acquired before and after moving to habitat provided homes (see Table 4.12 below), 82% of them responded that they acquired majority of their assets after they moved to habitat home and only 17 %of the respondent reported that they acquired the assets before habitat home. This is a good indication that the home ownership program of Habitat for Humanity Ethiopia has a positive spill over effect in terms of equipping households in accumulating wealth through asset ownership.

Asset Type	Before Moving to Habitat Home (%)	After Moving to Habitat Home (%)
Radio	16.02	83.98
Sofa	25.10	74.90
Table	20.82	79.18
Chair	22.02	77.98
Electric mitad	33.90	66.10
Stove	13.33	86.67
Kerosene lamp	18.18	81.82
Refrigerator	22.22	77.78
Television	20.00	80.00
Line Telephone	14.29	85.71
Mobile Telephone	100.00	0.00
Bicycle	50.00	50.00
Motorbike/ Scooter	0.00	100.00
Truck	0.00	100.00
Bajaj taxi	17.87	82.13

Table 4. 11. Assets acquisition before and after moving to habitat home

4.6.2. Impact of Home Ownership on Income and saving

Similar to the mean comparison results from the two samples' mean T-test, the regression estimation of the housing program on income and saving is positive and significant. And, being the participant of the housing program will have an impact of increasing the annual income of members by 0.292 % for households (Table 4.12).

Interestingly, the ATT from PSM model estimation shows that the housing program has a positive and significant impact on the household average income and saving as well. Specifically, the program has an impact on increasing average annual income and saving households by ETB 34,509 (USD 639) and ETB 14,017 (USD 259), respectively (Table 4. 13). This is due to the fact that as the households own the living home, the cost of housing rent will be moved to their savings, and over the year these savings are used to build rental houses in the living compound (incremental housing), and the rental income increases their average annual income. The qualitative survey results from KII are also in line with this finding and our respondents stated as follow:

'Thanks to God and Habitat for Humanity, may God continue to bless them. I am now the owner of a house with multiple income generating businesses. I used to earn less than 14 birr per day but now I generate my own business income from the sale of dairy products, which is located in the compound of the house habitat built for me. Now I am independent

and able to support others in need.' [KII, Debreberhan]

One of the habitat's home owners with disability during the key informant interview also confirmed and she said that:

'I knew that with a good heart and will, like Habitat, humanity can cross boundaries and have unlimited scope. No one would have helped me if Habitat didn't find me. I am a living testimony that anyone can rise from dust and move to a better life. I am currently working in a soap production factory established by the help of Habitat for Humanity Ethiopia. Now my basic needs are fulfilled and I have some extra amount of money too'. [KII, Debreberhan]

The other key informant also stated that:

'When we first moved to habitat home there was no place to buy groceries from since it is located at the town's periphery; but I started my own kiosk which helped me generate a large sum of income over years. Now, I am in an improved economic status even I renovated the home Habitat provided for me' [KII, Adama]

Variables	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
Partner Household	0.395***	0.212***	0.291***	0.292***
	(0.063)	(0.0556)	(0.0532)	(0.054)
Male		0.290***	0.219***	0.222***
		(0.0629)	(0.0575)	(0.0594)
Age		0.00592*	0.00521*	0.00548
		(0.00246)	(0.00234)	(0.00283)
Education		0.0671***	0.0581***	0.0420***
		(0.00558)	(0.00546)	(0.00647)
Household size		0.104***	0.107***	0.102***
		(0.0185)	(0.0173)	(0.0169)
Debre Markos			0.484***	0.334**
			(0.103)	(0.11)
Debre Birhan			-0.158	-0.224*
			(0.0941)	(0.0975)
Bahir Dar			0.575***	0.441***
			(0.1)	(0.105)
Dessie			-0.332*	-0.415*
			(0.167)	(0.165)
Kombolcha			0.193	0.128
			(0.125)	(0.126)
Fiche			-1.164*	-1.163*
			(0.507)	(0.495)
Ambo			-0.79	-0.919
			(0.484)	(0.512)
Jimma			0.00853	-0.088
			(0.109)	(0.115)
Shashemene			0.423***	0.288*
			(0.105)	(0.112)
Adama			0.284	0.268
			(0.177)	(0.181)
Private Organization Employee				-0.104
				(0.0897)
NGO Employee				-0.294*
				(0.145)
Domestic Worker				-0.33
				(0.239)
Self Employed				-0.189*
				(0.0856)
Daily Laborer				-0.416***
				(0.117)
Pensioner				-0.241*
				(0.108)
Housewife				-0.356**
				(0.137)
Unemployed				-0.714***
				(0.123)
Constant	10.57***	9.312***	9.320***	9.770***
	(0.0473)	(0.155)	(0.161)	(0.204)
Observations	1119	1119	1119	1119
adj. R-sq	0.033	0.23	0.322	0.343

Table 4. 12. Regression estimate result on natural logarithm of total Annual Income

	ATT	Std. Err.	T
Annual income in ETB	34,509.874	5633.377	6.126***
Annual saving in ETB	14017.486	6926. 213	2.024***

Table 4. 13. ATT estimation for annual income and annual saving

Earnings of Money: We asked the Habitat homeowners if they own more money since they moved to the Habitat home in our qualitative survey. The finding reveals that 85% of the households are earning more since they moved to a habitat home. While 7% reported that the earning status remains the same and 6 percent of the households earn less money than before. This perhaps indicates home ownership programs enable households to engage in a better income generating activities such as building rental houses, trading activities, engaging in businesses animal husbandry etc.

Earning of Money since moving to Habitat Home	Responses in %	Cumulative %
Much more money	55.36	55.36
A little more money	30.36	85.71
There was no change	7.14	92.86
A little less money	5.36	98.21
Much less money	1.79	100
Total	100	

Table 4. 14. Financial and economic situation of Habitat households since moving to Habitat Home

Better job: The households from the Habitat home ownership program were asked if they have switched their job since they moved to a Habitat provided home, 41 percent reported that they have changed their job. Of household members who changed their job, 78 percent of them stated that the new job is much better than the one before they moved to Habitat.

Have you changed jobs since moving to Habitat Home?	Response in %	Cumulative %
No	58.93	58.93
Yes	41.07	100
If yes, how is the job compared to moving to Habitat Home	Responses in %	Cumulative %
Much better	78.26	78.26
Somewhat better	4.35	82.61
There was no change	8.7	91.3
Somewhat worse	8.7	100
Total	100	

Table 4. 15. Change in job after moving habitats' home

4.6.3. Home Ownership Impact on child Educational expenditure and schooling year

In this section the educational impact of the housing program is estimated by using the total annual expenditure, children average education schooling year at household level, and the average number of days children are absent from school in the last semester. Annual educational expenses for tuition, uniform, transport, tutor, basic material, and aid material are higher for the beneficiary housing program. The regression estimate indicates that participation in the housing program will increase the household members' educational expenses by ETB 2,475 (USD 46) yearly, keeping other variables constant. Besides, an increase in households' total annual income, educational level and household size has positive and significant contributions for the child's educational expenditure at the household level. However, an increase in the age of the household head has a negative effect.

The regression result also shows there is a positive and significant relationship between children average education schooling year at household level and homeownership program. Participation in the habitat housing program will increase, on average, the schooling year of children education by 1.59~, i.e nearly 2 grades. And, the result shows that the housing program has a positive and significant outcome on the reduction of the average number of days children get absent from school in the last semester.

Moreover, the ATT result for the matched households shows that the program has impacted the beneficiaries' educational expenses positively and significantly. The average annual expenses of the ATT estimation indicate beneficiaries have ETB 2,527 (USD 47)higher expenses than their counterparts. The justification for this is that the program's beneficiaries have a higher income than non-beneficiaries as it is indicated in the above sections. This in turn empower households to invest in their child's education through payment of tuition fees, uniform, transport, tutoring, basic material, and aid material. The descriptive results also show that a majority of the participant households send their child to private schools, where the tuition fees are higher, which might be related to households desire to find better quality education for their children.

Furthermore, ATT results of a child's average schooling year at household level shows that the program has impacted the participating households' schooling year positively and significantly. The average contribution of the habitat program on the children's schooling year is approximately similar to the regression result, i.e 1.47 years of schooling. Additionally, ATT findings indicate that the average number of days children get absent from school in the last semester are 2 days less than the non- beneficiaries of habitat housing programs.

Variables	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
Partner Household	3394.2***	2566.9***	2771.7***	2475.4***
	(499)	(390.1)	(398.3)	(427.9)
Male		-338.8	-260.8	-358.5
		(487)	(482.7)	(513.3)
Age		-23.65	-21.41	-46.59*
		(19.26)	(18.43)	(19.32)
Education		350.7***	293.1***	215.4***
		(49.67)	(45.15)	(54.44)
Household size		1604.8***	1555.2***	1453.8***
		(168.1)	(166.9)	(164.8)
Debre Markos			-493.7	-957.6
			(662.1)	(718.5)
Debre Birhan			1622.7**	2045.7***
			(543.4)	(595.5)
Bahir Dar			4215.7***	3974.3***
			(817.5	(883.4)
Dessie			811.5	1117
			(788.1)	(799.5)
Kombolcha			1390.4*	1043.6
			(621.1)	(657.6)
Fiche			147	1639.2
			(833.8)	(1067.6)
Ambo			4204.4	4231
			(2637.5)	(2651.9)
Jimma			3570.1*	4101.0*
			(1445.3)	(1629.8)
Shashemene			2635.6**	2000.3*
			(853.1)	(916.6)
Adama			7940.8***	8626.9***
			(1852)	(1825.4)

Total annual income (log)				745.1**
				(242.7)
Private organization Employee				384.6
				(997.6)
NGO Employee				-1619.5
				(1208.7)
Domestic Worker				-85.47
				(1326.6)
Self Employed				1232.8
				(879.3)
Daily Laborer				-1538.7
				(930.5)
Pensioner				1668.1
				(2163.2)
House Wife				-394.4
				(1046.2)
Unemployed				109.4
				(1048.1)
Constant	3435.5***	-4045.9**	-5692.9***	-11719.8***
	(374.1)	(1272)	(1294.7)	(2913.2)
N	1119	1119	1119	1119
adj. R-sq	0.039	0.193	0.227	0.24

Table 4. 16. Regression estimate result on annual educational expenditure

Variables	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
Partner Households	2.334***	1.573***	1.502***	1.600***
	(0.276)	(0.231)	(0.235)	(0.237)
Male		-2.741***	-2.613***	-2.723***
		(0.266)	(-0.27)	(-0.281)
Age		0.204***	0.201***	0.205***
		(0.0113)	(0.0114)	(0.013)
Education		0.0721**	0.0529*	0.0319
		(0.0243)	(0.0251)	(0.0281)
Household size		-0.431***	-0.451***	-0.438***
		(0.0792)	(0.0787)	(0.0792)
Total annual income (log)		0.198	0.316**	0.236*
		(0.109)	(0.118)	(0.118)
Debre Markos			-1.150*	-1.417*
			(0.557)	(0.573)
Debre Birhan			0.398	0.26
			(0.457)	(0.471)
Bahir Dar			-0.762	-0.919
			(0.557)	(0.567)
Dessie			0.605	0.392
			(0.566)	(0.582)
Kombolcha			0.858	0.768
			(0.531)	(0.545)
Fiche			-0.415	-0.555
			(1.073)	(1.163)
Ambo			0.179	-0.191
			(1.206)	(1.327)
Jimma			1.655**	1.541**
			(0.53)	(0.569)
Shashemene			-0.0143	-0.333
			(0.526)	(0.543)
Adama			0.685	0.658
			(0.767)	(0.78)
Private Organization Employee				0.271
				(0.466)
NGO Employee				-0.236
				(0.814)
Domestic worker				0.369
				(1.093)
Self Employed				-0.0282
				(0.394)
Daily Laborer				-0.397
				(0.484)
Pensioner				-0.174
				(0.614)
House Wife				-1.136*
				(0.555)
Unemployed				-1.509**

				(0.552)
Constant	5.058***	-3.293**	-4.544***	-3.363*
	(0.206)	(1.2)	(1.331)	(1.527)
N	979	979	979	979
adj. R-sq	0.067	0.415	0.436	0.442

Table 4. 17. Regression estimate result on children average education schooling year at household level

Variables	(1) Model 1	(2) Model 2	(3) Model 3
Partner Household	-1.706*	-1.697*	-1.520*
	(0.73)	(0.759)	(0.736)
Male		-0.534	-1.234
		(0.835)	(0.803)
Education		-0.233**	-0.113
		(0.0728)	(0.0725)
Household Size		0.354	0.0823
		(0.247)	(0.224)
Total annual income (log)		0.981*	1.312**
		(0.42)	(0.471)
Debre Markos			-3.843*
			(1.625)
Debre Birhan			-0.246
			(1.653)
Bahir Dar			-3.005
			(1.707)
Dessie			-2.063
			(1.63)
Kombolcha			-0.0885
			(2.01)
Fiche			3.639
			(4.591)
Ambo			23.25*
			(9.364)
Jimma			-3.423*
			(1.684)
Shashemene			8.489***
			(2.219)
Adama			-4.993**
			(1.559)
_cons			-7.614
			(5.006)
N			866
adj. R-sq			0.127

Table 4. 18. Regression estimate result on Average number of days child absent from school per semester

	ATT	Std. Err.	t – static
Educational expenditure	2527.083	585.174	4.319***
Years of schooling	1.470	0.420	3.501***
Av. school days absent	-1.706	0.657	-2.597***

Table 4.19. ATT estimation with Nearest Neighbour Matching method

Children's Study Habit: Study habits are the most important predictor of academic performance and global research has revealed that study habits affect academic performance. The perception of habit program participants to compare the study habits of their children before and after moving into habitat home was enquired and 79 percent of the households reported that children habit is good while only 3 percent of the households reported poor habits of their children's study habit; this might reflect that home provides stable and conducive environment for children that will impact the study habits of children's which in turn indicates Habitat's home ownership program improve the study habits of the households.

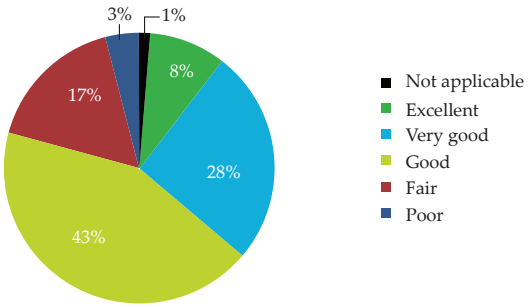


Figure 4. 16.Children's study habit after moving to habitat home
Source: Own Computation based on Qualitative Survey

4.7 Habitat Homeowners Perceptions of their Quality of Life: Results from Qualitative Survey

In addition to quantitative survey, the study conducted the qualitative survey of 56 habitat home program participants' households to understand the perception on changes in their quality of life after they move to habitat home.

Safety: Ninety-five percent of the habitat homeowners feel "very safe" or "safe" in their own homes, 3 percent feel no different safety-wise, and 2 percent feel less safe. The results suggest an association between living in a Habitat home and feeling safe.

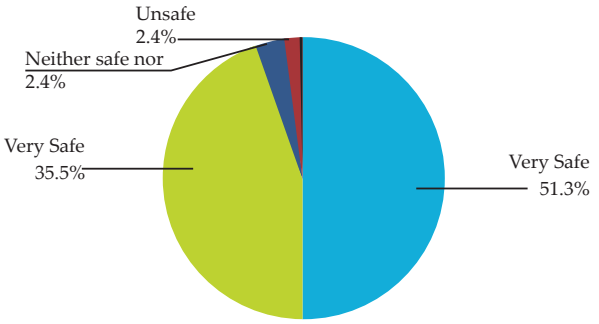


Figure 4. 17. Respondents' feelings of safety in their current home (N=56)

Children's Safety: Ninety-six percent of respondents consider their children safer after the family's move into a Habitat home, three percent feel that no change has occurred in their children's safety, and 1 percent consider their children less safe.

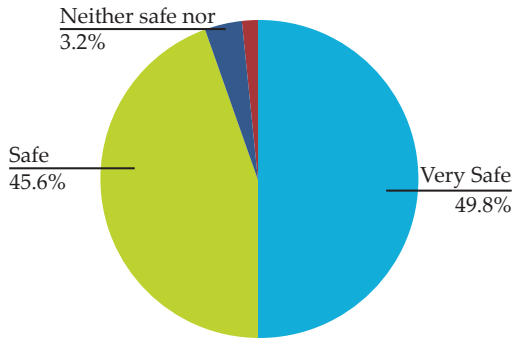


Figure 4. 18. Household's perceptions about their children safety

Home compared to Neighbourhood: The perceptions of respondents regarding the quality of their previous and Habitat neighbourhood in regards to home are depicted in in Figure , which shows that 34 percent of the respondent feel that habitat provided homes are better than homes at the neighbourhood , 29 percent reflect that it is the same as home compared to its neighbourhood while 28 percent of them mentioned that habitat's home is worse relative to the neighbourhood homes.

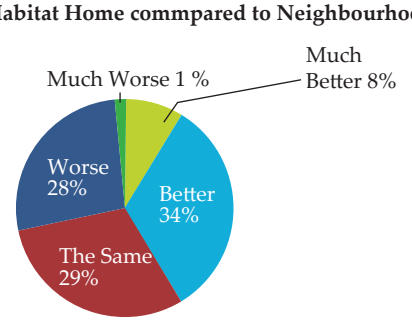


Figure 4. 19. Perception of Habitat Households about quality of Habitat Home compared to Neighbourhood

Room Size: Households were also enquired about the room size of habitat home and 73 percent of the households responded it is much better than the previous home, while 20 percent of them responded that it is better while only percent of the households responded

that the room size is worse. Thus, the implication derived from the finding is that habitat families are satisfied with the size of the Habitat provided homes and signals that the home ownership program of the Habitat meets the expectation of the size of the household members.

HHs Perception	Percentages
Much better	73.21
Better	19.64
The same	3.57
Worse	3.57
Total	100

Table 4. 20. Household's perception of Room size of Habitat's home compared to previous houses

Feeling about Future of Household's children: The study also asked the perception of Habitat Home owners about their future and stated that 73 percent of the households mentioned that they feel much more positive, while 25 percent reported a little more positive about the future and only 2 percent of them believe that there is no change concerning their future.

What do you feel about future your child…..	Percent (%)	Cumulative (%)
Much more positive	73.21	73.21
A little more positive	25	98.21
There was no change	1.79	100
Total	100	

Table 4. 21. Household's perception about future of their children

Government or Safety net program participation: Habitat homeowners were eligible or safety-net programs of the government before becoming homeowners also at the time of application, 13 percent of homeowners were using the safety-net program At the time of our survey, no one has reported to still being beneficiary of the safety net program, which indirectly implies, the housing interventions enabled households to be self - sufficient.

Have you ever been participating HH of Government supports like safety-net …?	Households	Percentage (%)
Yes	7	12.5
No	49	87.5
Are you participating in the safety-net program after habitat home ownership……?		
No	56	100

Table 4. 22. Habitat's household Government support before Home Ownership program

Social connectedness: Habitat homeowners (84%) reported that they feel "very connected" or "somewhat connected" to their community. Findings from Key Informant Interview with selection committee member of Habitat home showed that:

'Habitat owners are more connected, have good social relationships, are more relaxed and much more connected to society. The way the community developed relationships that are interesting, and they supported each other for communal living. It gave us a stronger connection to our community.'[KII, Adama]

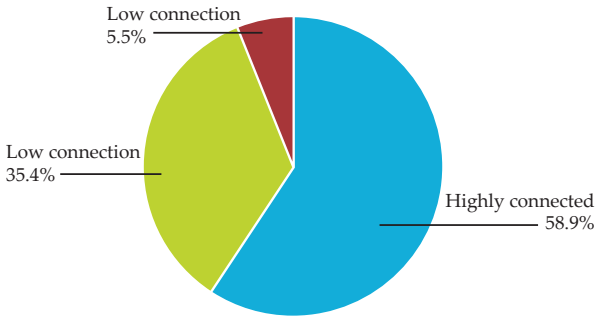


Figure 4. 20. Household's perception about social connectedness

5. Conclusion and Recommendation

5.1 Conclusion

This impact evaluation study of HFHEs home ownership program on quality of life of partner households shows that the program has contributed to better outcomes as manifested in improving academic achievements of children and health conditions, creating wealth and asset accumulation, income, food security, living standards and reduction in the multidimensional poverty status of the households.

Using the average scores of as academic performance indicators, the study indicated on average children from the home ownership program of HFHE performed and scored higher academic results than the control group. The average scores of children in their last academic year, standard regional and national test scores and maths scores by households of home ownership program was higher than the control group, although the difference was not significant. Finding also show that Habitat's home ownership program has a positive and significant contribution on the reduction of the average number of days children get absent from school. Moreover, results mirrored that a participation in the habitat housing program will increase, on average, the years of children's schooling by 1.59~, i.e nearly 2 grades.

Better health outcomes were obtained from households in the treatment group with regard to child mortality, malnourishment, and exposure to diarrhea, health expenditure and visit made to a health centre based on comparison on the mean differences across the two groups. However, the statistically significant difference was obtained only for child mortality and exposure to diarrhoea. Similarly, there is a significant difference on the frequency of visits made to health care centres indicating that more visits are made by households in the control group than the treatment group.

The results also show that participants from home ownership groups reported the highest asset and wealth accumulation than the control group. Further, Habitat home owners had the highest proportion of households within the richest quintiles of wealth index than the control group. Based on the indicators used to measure living standards, a statistically significant difference is observed between the treated and control group. In terms of quality of houses, 58.4 % of the households in the control group have poor housing quality only 22.3 % in the treatment group have poor quality houses. On similar vein, the number of households with access to electricity, safe drinking water, improved sanitation facility, improved cooking methods and asset ownership in the treatment group are higher than those in the control group by 2.2%, 6.8%, 31.6%,6.5% and 12.5%, respectively. The results also indicated that on living conditions before moving to habitat house, 76% of the households in the treatment group reported that they were living in rented houses, which

justifies the significant decline in overall housing expense. Total annual income of households in the treatment group found to be higher for households in the control group and components of the total income indicates that there is statistically significant difference in household incomes from business and rental activities. Further, findings also indicated home ownership program increased the level of income and saving of the households in significant way.

Finding also showed that home ownership program of the habitat helped to improve the social connectedness among the participating households. The program has created a strong culture of volunteerism with maximum commitment in supporting the overall implementation, which also has a long term individual impact in building the leadership and service providing capacity. In addition to that has put a huge and lasting impact on the lives of socially excluded people due to their disability in its vulnerable group program. The program has made the process of social inclusion and connectedness of previously excluded and discriminated households so easy and helped to bring the best out of them in terms of economic empowerment as they started to engage in productive income generating activities such as manufacturing of detergents, animal husbandry and retail trades among the many. It has also reduced the risks towards being victims of gender based violence as partner households and their children has a safe place and community they trust to reside in.

In general, the key externalities generated from the implementation of habitat's home ownership program included: improved children's learning outcome and academic achievements, improved health status of the households, increased level of income and savings as well as better asset and wealth accumulation capacity of the households. It has also enabled households to report better living conditions, better aspirations of the households about their children and increased level of social connectedness and participation in societal life. Further, from the overall social impacts and externalities that extended beyond the immediate targets of the housing interventions it can be concluded that it is a project worthy of the investments made.

5.2 Recommendations and Way-forward

Based on the study findings, HFHE's hypothesis that provision of housing does not only target the physical structure rather it is a platform and foundation to access wider development opportunities that contribute to the multidimensional aspect of the human well-being holds true. As such, we strongly recommend scaling up of the home ownership program based on the analysis of the findings and lessons learned during project implementation.

In reference to findings from both the qualitative and empirical assessment the following recommendations are proposed for key stakeholders;

Habitat for Humanity Ethiopia

Economic Empowerment: Beyond providing new homes or upgrading substandard ones, HFHE needs to introduce a subsequent interventions aimed at economic empowerment of the partner households in order to meet the intended impact of improvement in overall quality of life. Given the fact that the partner households came from the poor economic group and status, home ownership program needs to be complemented with additional income generating interventions. On top of this, the findings shows that the spill over generated from home ownership program is significant; HFHE should have a mechanism to strategically partner with the other non-governmental organization that work on education, health, environment and job creation intervention so that the long term impact will be paramount. Moreover, in future interventions, HFHE should also prioritize specific contexts that existed with partner households; for instance findings show that households in Shashemene and Ambo needs to prioritized with specific interventions that aimed at economic empowerment of the households. This might be by partnering with other NGOs providing households with training on business development skills and offer them with seed capital for business start-ups.

Communication and Advocacy - HFHE needs to work objectively on the area of policy advocacy where it can initiate policy agendas, dialogues through different seminars and workshops on urban housing development agendas on regular basis. HFHE can also develop a joint action plan with various actors and stakeholders to bring them on board on similar area of emphasis. One mechanism to achieve this could be through engaging stakeholders on problem identification, intervention design and implementation. The other area that HFHE needs to invest extensively is in promoting success stories from the home ownership program; the improvements in quality of life of the partner households should be better communicated through documentary production, using national media to show case the magnitude of impact of the homeownership program. Also, the revolving fund concept which is very innovative approach to meet the housing finance demand should be promoted and used as the main financing approaches in future projects. And this needs a concrete understanding, acknowledgement and support of the policy maker and local government, to be created through frequent discussions and lobbying, short trainings and awareness creation campaigns. The awareness creation campaign should be provided intensively so as to bring the local administration on board.

Ensuring sustainability - One of the key challenges observed in implementing the HFHEs home ownership approach was the lack of coordination of capacity at lower level of administration specifically at the program area, cities and towns, which threatens successful implementation of the program and any gains in improvement of quality of life of households. Partner households also raised that they lack clear

understanding of project implementation framework and communication channels. In order to address these challenges, smooth and transparent communication path should be introduced from the initial stages so the households can have a full understanding of the project, their rights and responsibilities as well as clear understanding of the scope of the project. Construction plans and quality of the house should be improved by incorporating individual comments and preferences if possible and or by giving permissions to self-modify in line with the overall project implementation plan. Local representative office /sub-branch of HFHE should be established for effective communication with the main office and to bring any issue related with the project to the local administration and concerned stakeholders on time. In addition, there should be frequent follow-up on how the project is progressing with regular monitoring and evaluation taking into account the full engagement of important stakeholders. The partnerships needs to be fostered in the housing interventions program – between HFHE, government agencies and local organizations – so as to nurture a key opportunity to mainstream the home ownership program into the government's implementation strategies of urban housing development.

Government

The revolving fund concept which is very innovative approach to meet the housing finance demand of the low income group should be promoted and used as the main financing approaches in future housing projects. In this regard, HFHEs housing intervention found to be an ideal project that can provide decent and affordable housing to the low income households and this should be encouraged, and enabling environment in terms of financial market policies that can accommodate housing and housing finance interventions and innovations that emanate from civil society organizations and development partners. Given the fact that decent and affordable housing is not only "wall and roof", functional collaborative platforms among various stakeholders/development partners should be initiated for a long term impact on overall quality of life of households.

Development Partners

Should work in collaboration with Government and HFHE with their respective focus areas – Shelter provision, employment and income generation, WASH - and support the realization of low income households housing need and livelihood improvement.

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