
IMPACT REPORT

Results of Impact Study – Enlace

This report presents the social impact results at client level of housing microfinance products provided by Enlace in El Salvador. The study is based on an approach and (customized IT-based) survey tool developed by Oxfam Novib. This approach involves obtaining impact information directly from end-clients and includes their perception of changes experienced in key dimensions of poverty. At the start of the study, a theory of change was developed to articulate the expected results of the housing microfinance products and services provided by Enlace. The expected impacts were tested with the help of a survey conducted among a randomly selected sample of clients (target group) and a control group. Propensity Score Matching was used to analyze the survey. A positive impact was found on the confidence level to cope with future disasters as well as higher empowerment levels. In the study no impact was found on livelihoods, education, health, and wellbeing indicators.

Study into the social impact of housing microfinance for
ENLACE SERVICIOS FINANCIEROS



Housing loans

Enlace has USD 1.979 million outstanding housing loans

Technical assistance

Enlace provides advice on construction priorities, budgeting and long-term planning



84%

of clients have received **technical assistance** from Enlace

Loan usage



44% of clients use their loan to install/repair their roof

25%

of clients use their loan to improve the walls of their house



45% of clients use their loan for **other** (housing) purposes

Short-term outcomes



Loan recipients have a **moderately positive** perception of their house



Long-term impacts

<p>Livelihoods</p> <p>No impact on livelihoods</p>	<p>Education & Health</p> <p>No impact on education & health</p>	<p>Life & security</p> <p>Increase in confidence to cope with civil unrest and fire</p>	<p>Empowerment</p> <p>Women more involved in decisions on contraceptives and family planning</p>	<p>Wellbeing & happiness</p> <p>No impact on wellbeing and happiness</p>
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EXECUTIVE SUMMARY

This report presents the findings of an impact evaluation conducted among the clients of Enlace Servicios Financieros (Enlace). Oxfam Novib designed an evaluation to assess the impact of the housing loan products and technical assistance provided by Enlace. The results are based on an assessment of the differences in outcomes between 251 clients who received a housing loan from Enlace in 2011 (the target group) and 157 future clients who are on the waiting list for a loan (the control group). To reduce selection bias in the results, propensity score matching (PSM) was used for the statistical comparison of the two groups.

Table 1: Key findings

General observations
84% received technical assistance; 87% consider it (highly) relevant
Loan recipients have a moderately positive perception of their house

Theory of change – Domains	Impact
Livelihoods	None
Education & Health	None
Life & Security	Increased confidence to cope with civil unrest and fire
Empowerment	Women more involved in decisions on contraceptives and family planning
Wellbeing & Happiness	None

Key findings

- The fact that clients in the target group show **high values on each type of technical assistance received**, allows us to conclude that technical assistance is being delivered appropriately.
- **Enlace’s clients have a moderately positive perception of their house.** There is no significant difference between the target and control groups, contrary to expectations as formulated in the theory of change.
- The sustainable livelihoods indicators reveal that on average, the household of clients earn a monthly income of around USD 500 and save around USD 45 per month. Although Enlace assumes that their housing loans contribute to a positive effect on food security we found that that **the percentage of clients in the target group that skips meals due to insufficient funds is higher than in the control group.** It would be valuable to investigate this finding more in-depth by doing qualitative research on the reasons for clients to skip a meal and how often this happens during a year.
- The effect of housing microfinance loans on **education** and **health** is not significant. We found that in both the target group and control group roughly 95% of boys and girls go to formal school and over 95% of births are attended by skilled health personnel. **No significant impacts** are found on any of these indicators.
- This study reveals a positive long-term impact of housing loans on the life and security indicators. Clients in the target group are **more confident to cope with civil unrest and fire.** Furthermore, a positive impact of housing loans on the confidence index was found, implying that clients in the target group are more confident to cope with potential future disasters than the control group.
- Women empowerment appears to be quite high among the clients of Enlace, with scores exceeding 85% for all of the seven indicators. Moreover, we found a **significant and positive impact** on empowerment related to **family planning** and **contraceptives.**
- Finally, based on the wellbeing and happiness results we can conclude that **clients are quite satisfied with their lives** and **score an 8.7 on the wellbeing scale.** However, no significant difference between the target and control groups is found.

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INTRODUCTION

Oxfam Novib has conducted a study on the impact of housing microfinance on the lives of Enlace's clients. Enlace is a microfinance institution (MFI) offering housing microfinance products and technical assistance among other financial products and services. Habitat for Humanity International (HFHI) commissioned this study to support Enlace in becoming a more effective agent of positive social and economic change. This impact study provides Enlace insights in their social and economic impact at client level. Based on the findings, Enlace can review their processes and possibly adapt their housing products and technical assistance to create more impact in the future. Additionally, this impact evaluation allows Enlace to tell its story to stakeholders and be accountable to both donors and beneficiaries. Telling a good narrative requires facts and impact data, not just information on outputs. This impact evaluation shows the level to which Enlace delivers benefits to its clients. This transparency increases involvement of external stakeholders and it motivates employees and volunteers, since it enables them to see their effect on the organisation's progress.

BACKGROUND ENLACE

This study was carried out among housing microfinance clients of Enlace Servicios Financieros (hereinafter Enlace). Enlace is a microfinance institution in El Salvador, with roughly 44.200 clients and a loan portfolio of around USD 17.6 million. El Salvador is located in Central America with San Salvador as its capital and largest city. The population is approximately 6.1 million and the main religions are Roman Catholics (57.1%) and Protestants (21.2%). The literacy rate is 88% and the median age of the population is 25.6 years. Moreover, 66.3% of the country's population lives in urban areas and 29.6% (2013) of the population lives below the national poverty line¹. The GDP per capita (PPP) is \$8.000 (2014) and the country's labour force is mainly employed in the services sector (58%). Agriculture and industry still employ a substantial part of the population with 21% and 20% respectively (Central Intelligence Agency, 2015).

Enlace was founded in 1997 by American Catholic Relief Services as a microcredit program, but the legal status was changed in 2002 and it is now a private company and a non-regulated MFI. Enlace has a strong focus on group lending and has developed expertise in the needs of low-income population in rural areas. Besides housing loans the company offers trade loans, services and agricultural loans. Enlace has a conservative (risk-averse) approach with a high quality portfolio featuring steady growth. Furthermore, the MFI has purposely kept its average loan amount low to benefit the population most in need of its services, despite the fact that increasing the average loan size would increase the company's profitability.

In this impact study we focus on the housing loan products provided by Enlace. In December 2013, 3.582 housing loans were registered for a total amount of USD 1.979 million. The average loan size is USD 850 and the total amount of outstanding loans is 11.2% of Enlace's full portfolio.

STUDY OBJECTIVE

The objective of this impact evaluation is to measure achieved changes in the lives of people who are housing microfinance clients of Enlace, to identify some common strengths and weaknesses in the effects. In particular, this report answers the question: *what is the social impact at client level of the housing products provided by Enlace?* The study was conducted between February-July, 2015.

¹ This national poverty line is based on the food basket. The food basket for the urban population is USD 46.77 and for the rural population USD 29.36.

METHODOLOGY

The distinctive characteristics of the applied method are:

The methodology was developed to give a strong voice to clients. For this reason data is collected at client level. This study goes beyond measuring output. Instead it measures the changes in the lives of clients.

The survey sample was selected randomly. To get a reliable representation of the clientele, a sample was randomly selected from the full list of Enlace's clients who received a housing loan in 2011 (the target group). Dropouts are included in the sample, they are defined as the people who received a loan from Enlace in 2011 but are no longer registered as clients. Including dropouts is important because they may be impacted differently. Moreover, including dropouts controls for the fact that there will likely also be future dropouts among the control group.

We used a control group to identify impact. The control group was used as a proxy for what would have occurred had there been no intervention. In total 408 respondents were interviewed; 251 respondents in the target group and 157 respondents in the control group. The target group consists of clients who received a housing loan in 2011 and the control group consists of people on the waiting list for a housing loan. By composing the control group in this way we ensure that any potential selection bias towards people who are, for whatever reason, more interested in housing loans is a constant factor for both the target and control group.

The selection criteria for clients in 2011 and 2015 are the same. Enlace applies three selection criteria for clients obtaining for a housing loan. These selection criteria did not change during the past five years and therefore the selection criteria for the target and control group are equivalent.

The questionnaire is based on a theory of change. The theory of change (see next section) was discussed and finalised during a workshop with Enlace and Habitat. Based on the theory of change, the most relevant questions were selected from the right-based poverty survey² developed by Oxfam Novib. A few questions were adjusted to better reflect the specific context in which Enlace works.

A smartphone application was developed to collect survey data. The app facilitates cost-efficient and reliable data collection. The app features a questionnaire that consists of multiple choice questions where respondents are asked to rate and comment on different aspects of their livelihoods.

Volunteers from HFHI were trained to collect reliable data. These volunteers were recruited in El Salvador, which had the advantage that they could verify the answers with reference to the locale Salvador context. Clients are therefore more inclined to provide truthful information. Due to security reasons, most of the interviews were conducted by phone. In addition we hired a local consultant to do quality checks during the fieldwork.

Propensity Score Matching (PSM) was used to calculate impact. PSM is used to reduce bias in the outcome by making clients in the target and control groups directly comparable. It is a statistical method that matches individuals from the target group with individuals in the control group who are observationally similar in terms of general characteristics not affected by the intervention. This can include pre-program characteristics, such as sex, level of education, and marital status. The average difference in outcomes between the two groups is then compared to ascertain the impact of the intervention, in this case housing microfinance.

The data analysis was performed by Oxfam Novib. The data analysis and impact calculations are based on statistical methods. The methodological choices are made in consultation with the Wageningen University in The Netherlands.

² Oxfam Novib has developed the World Citizens Panel; a poverty survey to support partner organisations measuring the impact of their projects and programs.

The recall method is used to measure changes in income and savings. A recall method was used to define a baseline³ for these two topics, with the recall period being 12 months. Clients were asked to define their level of income and savings twelve months ago and last month. This information is then used to calculate the change in these two indicators during the last twelve months.

The control group used in this study has limitations. Under ideal circumstances the control group would consist of future clients, i.e. people who will receive a loan in the near future but are currently on the waiting list. However, due to practical limitations the waiting list also includes clients whose application will not be accepted. Enlace estimates that 80 percent of all applicants on the waiting list will ultimately receive the requested housing loan. This introduces a small, unavoidable bias into the results, due to the fact that the few applicants who end up failing the selection criteria are included in the control group.

A more detailed explanation of the used research design is provided in the **Annex** to this report.

³ This baseline is constructed for 12 months ago and not before and after the intervention. Clients in the target group received their housing loan in 2011, so 12 months before the interview they already had the loan.

THEORY OF CHANGE

This study uses a multidimensional approach to determine impact, and is based on the assumption that multiple factors determine poverty beyond just income. To decide which impact indicators are relevant to include in the questionnaire a theory of change was used, which was developed in cooperation with Habitat and Enlace. A theory of change is an approach to navigating the complexity of social change processes (Eguren, 2011). This is done by making our assumptions explicit and analyzing them critically. This study is based on a set of assumptions regarding the expected and intended benefits from housing microfinance, which have been made explicit in **Figure 1**.

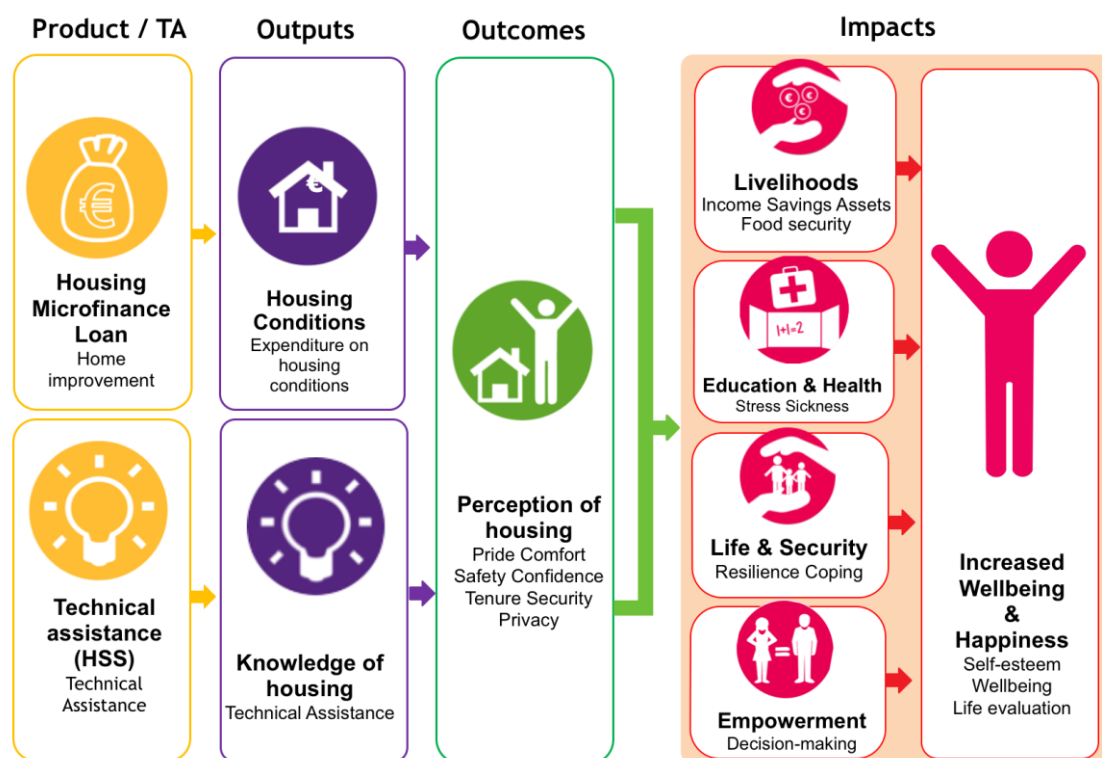


Figure 1: Theory of change Housing Microfinance

Enlace offers a **housing loan product** and provides **technical assistance**⁴ (TA) on different housing themes to its clients. This housing microfinance product should result in improved **housing conditions**. Additionally, the TA provided is expected to result in **knowledge of housing** among Enlace's clients (outputs).

The combination of improved housing conditions and knowledge on housing is expected to have a positive effect on client's **perception of housing**. Improved quality of housing would lead to, among other things, a higher level of confidence, safety, and privacy.

The final step in the theory of change takes us to the impact. These are the long-term changes that are expected due to the housing microfinance product and TA. By improving the overall quality of their homes we expect to see a change in the **livelihoods, health, security, and empowerment** of Enlace's clients. All of this should ultimately lead to a long-term improvement in **wellbeing and happiness** among the clientele of Enlace.

The most relevant questions from Oxfam Novib's right-based poverty survey were selected to ensure the questionnaire reflects the above theory of change. Moreover, several questions were adjusted to better suit the local context faced by Enlace.

⁴ Technical assistance (TA) is a common concept in microfinance; therefore we use TA to describe the housing support services provided by Enlace.

RESULTS

Before the various impact indicators are analysed, the general characteristics of the target group and the control group are compared to assess to what extent the control group has similar observable characteristics to the target group. This analysis is important for determining whether the differences in outcomes on the impact indicators can be attributed to the services provided by Enlace.

Interpretation of results

In the following section the results of the survey are presented. From the perception of housing analysis and onward, comparisons between the target group and control group are presented in terms of the average treatment effect on the treated, which is the difference between the “matched” mean of the target group and the control group. The statistical significance of the differences between the matched means is expressed with one, two, or three asterisks (depending on the level of significance):

- * indicates $p < .1$: there is a 10% chance that the value is found “by chance” and 90% confidence that there is significant difference,
- ** indicates $p < .05$: there is a 5% chance that the value is found “by chance” and 95% confidence that there is significant difference,
- *** indicates $p < .01$: there is a 1% chance that the value is found “by chance” and 99% confidence that there is significant difference.

Hence, if for a specific indicator the difference or impact figure does not show an asterisk, the difference between the target and control group is not statistically significant. Should there be a significant difference; more asterisks indicate a higher level of confidence in the result. The concept significance can be interpreted in different ways. In this study we use significance in the strict statistical sense as the extent to which a result is unlikely to be due to chance. We do *not* use significance as a means to indicate size (e.g. large or substantial).

A number of questions were explicitly asked to quantify any change during the last 12 months. The outcomes on these questions should be seen as the impact over the last 12 months in the context of obtaining a loan 3 to 4 years ago.

General Sample Characteristics

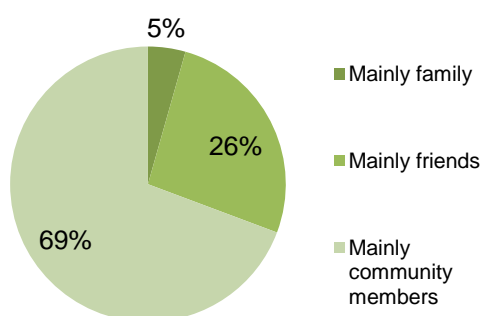
Enlace works with a group methodology, including village banking and solidarity groups. The groups are voluntarily formed within a certain community. These groups have frequent meetings, ranging from weekly to monthly, and are jointly liable for the repayment of loans.

Table 2 gives an overview of the characteristics of these groups.

Table 2: Group characteristics

	Target Group	Control Group	Difference
Average # group members	14.6	11.2	3.4***
% members applied for housing loan	36.1	32.4	3.7
Average housing loan size (US\$) group	3860	4126	-266
Individual housing loan size	1014	1039	-25
% respondents used collateral for their housing loan	14.7	14.7	0.0

Target group composition



Target group meeting frequency

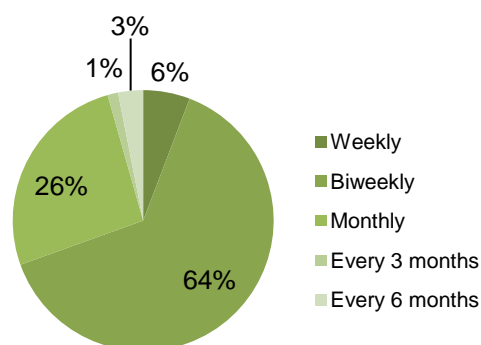


Figure 2: Composition and meeting frequency of groups

- On average groups consist of **14.6 members**;
- **Most groups mainly comprise community members**, followed by friends, and only a few groups are comprised mainly of family;
- Approximately **a third of the group members opted for a housing loan**;
- **Biweekly meetings are most common** followed by monthly and weekly meetings;
- **The average group loan size is around USD 4.000** and the **individual housing loan size** is around **USD 1.000**. Group loans will be distributed among group members, while housing loans are assigned to individual members.

The general characteristics of both the target group and the control group are summarized in **Table 3**. These general characteristics are the so-called independent variables; implying that these variables are assumed to be independent from the microfinance interventions.

Table 3: General characteristics

	Target Group	Control Group	Difference
% female clients	94.4	84.7	9.7***
% clients living in urban areas	53.4	43.9	9.4*
Age (average)	48.1	47.1	1.0
% Protestants	48.2	52.0	-3.8
% Catholics	41.0	37.3	3.8
% married	55.8	46.5	9.3*
% completed no education	33.2	30.6	2.6
% completed primary level education	28.4	37.6	-9.2*
% completed basic level education or higher	38.4	31.8	6.6
% literate	90.0	89.8	0.2
Household size (average)	4.3	4.3	0.0
% owns a house	89.2	78.3	10.9***
% own business as main source of income	74.9	81.5	-6.6

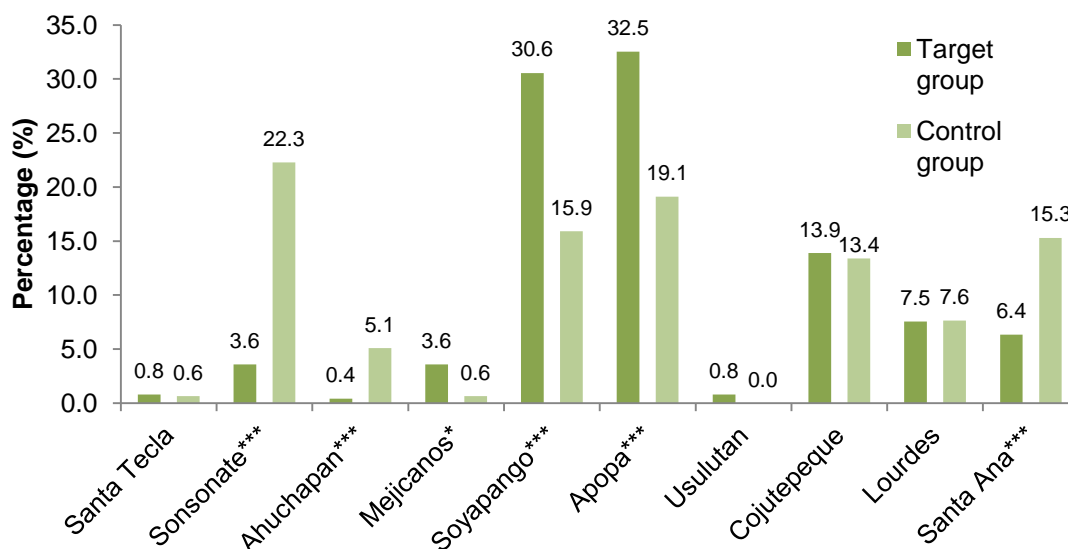


Figure 3: Respondents per local office

General observations:

- Both groups mainly consist of women, however the target group contains **significantly more women** than the control group;
- Around 50% of the clients live in urban areas, this holds for both groups;
- The two main divisions of Christianity professed are **Catholicism and Protestantism**;
- Completed education by respondents is roughly divided into three groups: no education completed, primary level, and secondary or higher. Only **completed primary level shows a significant difference between the groups**;
- In both groups around **90% of the respondents are literate**;
- On average **households⁵ are comprised of 4.3 members**;
- In both groups most respondents own a house; at 89.2% **respondents in the target group own a house more often** than respondents in the control group (78.3%);
- In the target group **significantly more respondents are married** (55.8%) than in the control group (46.5%).

Based on the data in **Table 3** and **Figure 3**, we can conclude that the target group and control group do not differ significantly with regard to age, religion, literacy, household size, and main source of income. However, there is a significant difference between the target and control groups in **percentage of women, respondents living in urban areas, marital status, education, ownership of house and local offices**.

We applied the Propensity Score Matching method (PSM), to calculate the impact despite the differences between the target and control group. Without this method it would be difficult to conclude that observed differences in outcomes on the impact indicators are the results of microfinance. The difference in outcome could be caused by the differences in these independent variables. Matching reduces this issue and diminishes the bias in the final results. It should be mentioned that PSM is not a panacea; the method diminishes the bias of the control group based on observable characteristics but can, by definition, not include any bias contained in unobserved characteristics of respondents.

Housing loan and technical assistance (Product/TA)

Enlace offers a home improvement loan and provides technical assistance on different housing themes to its clients. This subsection provides an overview that illustrates the usage of the loan

⁵ We define household as a social unit comprised of one or more individuals living and / or eating together in the same dwelling or place, often (but not always) tied to together through a marriage or kinship.

and types of home improvements measures that Enlace's clients in our sample have taken. Additionally, the technical assistance provided to these clients is shown.

Housing loan

Enlace provides a **home improvement loan** which ranges from USD 200 to USD 5.000 at an annual interest rate of 30%. The repayment period is fixed at 24 months.

Technical assistance

In addition to its loan products, Enlace offers technical assistance based on HFHI's expertise. This expertise consists of identifying gaps and the formulation of long-term goals in the housing process. Technical assistance is provided by credit advisors and contains the assessment of the clients' needs and purposes for the housing loans. Technical assistance ensures that households focus on improving comfort levels in the home, the quality of life therein, and that the construction intervention was carried out correctly. Technical assistance is provided on setting construction priorities, creating awareness on energy savings, and giving advice on the selection of construction material, suppliers, and constructors. **Table 4** illustrates the different types of TA received and the level of implementation.

Table 4: Received technical assistance

	Target Group
% received assistance	83.5
% thinks assistance was relevant	87.2
% checked by credit advisor	90.6

- Based on **Table 4**, we conclude that **most clients received technical assistance** from the credit advisor, with 84% in the target group indicating receiving assistance;
- More importantly, 87% of the clients in the target group consider the **advice (highly) relevant**;
- Furthermore, in 91% of the cases the credit advisor **checked the construction** during and after implementation.

Housing conditions and knowledge (Outputs)

The housing loan product and technical assistance which are provided by Enlace can be used by clients for different purposes. The assumptions following from the theory of change are that clients use their housing loan to make home improvements. Additionally, the technical assistance provided by Enlace is aimed to increase clients' knowledge on how to improve their housing conditions in a cost-efficient way.

Housing conditions

The percentage of the housing loan that clients in the target group use for house improvement is summarised in **Table 5**.

Table 5: Use of loan

Target Group	
	% spent
Home improvement	92.0
Other	8.0

- The home improvement loans are mostly spent on their **intended uses**, with over 90% spent on home improvements and only a small portion of the loan spent on **other purposes** (e.g. school expenses, food).

Table 6 describes in more detail how clients achieved the home improvements with their home improvement loans. The home improvement loan is used for many different purposes, such as building a concrete floor, installing / repairing a roof, improving walls and replacing doors or windows.

Table 6: Type of home improvement

Home improvement	Target Group
% concrete floor	13.6
% roof	43.7
% improve walls	24.8
% replacement windows / doors	9.7
% installation of sanitary	15.0
% solar panels	0.0
% add a room	17.0
% install water system	3.9
% install electricity	2.9
% tenure security	0.0
% buy furniture	0.0
% other	44.7

- The home improvement loan is **mainly used for repairing the roof (44%) and for other (housing) purposes (45%)**;
- Other popular categories are: **improving walls, building a concrete floor, adding rooms, replacing windows or doors, and installation of sanitary**;
- **Installation of water systems and electricity**, as well as **tenure security and the purchase of furniture** are less popular types of home improvement;
- None of the respondents opted to install **solar panels**.

Knowledge of housing

The technical assistance provided by Enlace enables clients to receive technical assistance on the usage of their loan. In **Table 7** below the different types of assistance are analysed in more detail. Three categories of assistance can be distinguished: 1) assistance on how to prioritise different construction elements; 2) assistance on the home improvement budget; and 3) assistance on defining a long term home improvement plan. These types of advice are not mutually exclusive; a client can receive assistance on priorities as well as on budgeting. For this reason, the sum of the percentages in **Table 7** is not 100%.

Table 7: Types of assistance received

Type of assistance	Target Group
% on construction priorities	37.9
% on budgeting	49.5
% on long-term plan	7.8
% on other	9.2

- **Assistance on construction priorities and budgeting are most requested** among clients of Enlace.
- **Defining a long-term home improvement plan is requested less often**, with around 8% of the respondents receiving this particular type of assistance.

Perception of housing (Outcomes)

The housing loan of Enlace gives clients the opportunity to increase their expenditure on home improvements. Additionally, they receive technical assistance on the proposed construction. Based on the theory of change, the combination of the housing loan product and technical assistance will improve the houses of clients and their knowledge of housing, which is subsequently intended to lead to an improved perception of housing. For example, clients might opt to add a new room to their home. This can increase their feeling of space and privacy and consequently affect their confidence, pride, and sense of beauty of their house.

Besides analyses between the full target and control groups, we conduct a number of more in dept analyses by focusing on specific client sub-groups. This segmentation to sub-groups allows Enlace to assess whether certain client sub-groups are impacted differently than others. This implies that if we focus on, for example, rural clients, only rural clients are included in the analysis and urban clients are not included in this particular analysis. The resulting analysis compares rural clients in the target group with rural clients in the control group.

To create sub-groups of the same size, we used median numbers to define the border of the sub-group⁶. For example, the median age of respondents is 48 years; we therefore used 50 as border to define the two sub-groups. Since most clients are female, it was not possible to compare female and male clients in the sub-group analysis. The sub-groups used in this study are the following:

- Sub-groups based on the age of clients
- Clients living in rural areas and urban areas;
- Client sub-groups based on their level of education;
- Client sub-groups based on the years of residence in their house;
- Sub-groups based on the number of members in their solidarity/community group;
- Two sub-groups based on the clients' total number of loans.

These additional analyses result in a substantial amount of data and in order to avoid presenting a copious amount of tables we will only present results that are unusual and not already covered by the full analysis. For the full analysis, with all target and control group respondents, the outcomes on all indicators are reported.

Table 8: Perception of housing

	Target Group	Control Group	Difference
I feel confident in my house	3.9	3.9	0.0
I have enough privacy in my house	4.0	3.9	0.1
I have a beautiful house	3.6	3.6	0.0
I have enough space in my house	3.6	3.5	0.1
I feel safe at my house	3.9	3.9	0.0
I feel proud about my house	4.0	4.0	0.0
I feel confident in my right and ownership of my house	3.9	4.0	-0.1
I feel confident that my house will not be taken from me	3.9	3.9	0.1
Perception of housing (average)	3.8	3.8	0.0

- The outcome values for perception of housing range from 1 to 5, with 1 indicating that the respondent strongly disagrees with the statement and 5 indicating a strong level of agreement. Since most values are close to 4, the general conclusion is that on average most respondents slightly agree with the statements and have a **slightly positive perception of their house**.
- Despite the generally positive perception on housing, there is no significant impact from the housing microfinance loan on this domain.

Impacts

Home improvements create a positive perception of housing for clients. As described in the theory of change, these changes in clients' perception are assumed to result in more

⁶ The exact borders for the different sub-groups are:

Age: <50 ; >=50

Years of residence in current house / apartment: <20 ; >=20

Group members of community group: <=12 ; >12

Total number of loans minus Enlace loan: <=3 ; >3

sustainable livelihoods, improvements in health, increased security, and higher empowerment. For instance, installing concrete floors in a house can significantly improve the health of inhabitants (Cattaneo *et al.*, 2007). Another potential pathway of change could be that improvements to the quality of housing increases overall long-term wellbeing and happiness of the residents (ibid; Coley *et al.*, 2010; Jones-Rounds 2014). Cattaneo *et al.* (2007) specifically point out the relationship between the perception of housing and reduced rates of stress.

More sustainable livelihoods, improvements in health, more secure households, and higher empowerment contribute to the improved wellbeing and happiness of clients. Or in other words: more prosperous, healthier, safer, and empowered people will tend to be happier and evaluate their lives higher. In this section we analyze these impact causalities. Impact on these domains is long-term and therefore differences between the target and control group are expected to be found.

Sustainable livelihoods

Table 9: Sustainable livelihoods

	Target Group	Control Group	Impact
Current income (in USD)	496	542	-46
Perceived change of income*	3.1	3.2	0.0
% change of monetary income*	18.5	21.7	-3.2
Current savings (in USD)	46	48	-2
Perceived change of savings*	3.1	3.1	0.0
% change of monetary savings*	7.1	10.7	-3.6
Assets index ⁷	3.8	4.0	-0.2
Average meals per day	3.9	3.8	0.1*
% cuts / skips meals due to insufficient money	11.4	4.3	7.1**
Food expenditure per week (in USD)	45.95	48.26	-2.31
% mainly buys food in supermarket	11.0	16.7	-5.7
% mainly buys food in local store	81.0	74.4	6.6

*these indicators reflect a change over the last 12 months.

- The sustainable livelihoods indicators show that households (as sum of all household members that earn an income or safe money) on average have an **income of around USD 500 and savings around USD 45 a month in both groups**. Moreover, in both groups clients **consume almost four meals a day and spend around USD 50 a week on food**. Food is **mainly purchased at local stores** (around 80%).
- The consumption of meals indicators show contradicting outcomes. **A positive impact is found on the average number of meals per day**, with the target group consuming slightly more meals per day than the control group. However, **a negative impact is found on the percentage of household members who skip meals due to insufficient money**. The indicator reveals that household members of clients in the target group are more likely to skip meals due to a lack of available funds for food. The theory of change would suggest the opposite; i.e. people in the target group should have more cash available and therefore be less likely to have to skip meals due to budgetary restraints. So, the contradiction in these outcomes is that clients in the target group consume more meals per day, while simultaneously household members in the target group more often cut or skip meals due to insufficient money.
- Contrary to the theory of change, **no positive impact** of housing loans on the **other livelihood indicators** is found.

⁷ The asset index is a non-weighted index of thirteen assets used to measure the welfare of the household. For this index the following assets were used: washing machine, television, tablet, smartphone, computer/laptop, car, motorcycle, agricultural land, livestock, tractor, refrigerator, dwelling land, and other assets with a value of more than \$500.

Table 10: Sustainable livelihoods for clients with fewer than 3 loans in total

Total loans <= 3	Target Group	Control Group	Difference
% cuts / skips meals due to insufficient money	12.4	1.4	11.0***

Table 11: Sustainable livelihoods for clients with more than 3 loans in total

Total loans > 3	Target Group	Control Group	Difference
% cuts / skips meals due to insufficient money	10.5	5.5	5.0

- **A negative relationship is found between the number of loans held by clients and the consumption of meals.** A significant negative result is found for clients with 3 loans or fewer. This means that clients with fewer than 3 loans more often cut or skip their meal. The data does not provide a straightforward logical explanation for this result; additional qualitative research is required to clarify this unusual finding.

Education & Health

Table 12: Education & Health

	Target Group	Control Group	Impact
% girls going to formal school	95.7	96.4	-0.7
% boys going to formal school	94.0	95.5	-1.5
% girls dropout	3.9	3.0	0.9
% boys dropout	1.1	2.9	-1.8
% deliveries attended by health professional	96.8	97.8	-1.0
% of children who died before the age of five	0.6	0.8	-0.2
% of household members sick in last 3 months	7.5	7.0	0.5
% respondents sick in last 3 months	14.4	8.3	6.1
Stress scale ⁸	2.65	2.65	0.0

- In general it can be concluded that for both groups **the percentage of boys and girls going to formal school is high** at 95%, **most deliveries are attended by skilled health personnel** with values over 95% in both groups, and the **percentage of children who died before the age of five is low⁹** in both groups. Furthermore, the **sickness ratios are similar in both groups** and respondents are sick more often than their other household members.
- The effect of housing microfinance loans on **education** and **health** is not significant. This means that both groups show similar results on education and health.
- The stress scale **provides** information on how often clients perceive stress during the last three months. The values range from 1 (never feeling stressed) to 5 (always feeling stressed). The values of both groups are 2.65, which means that clients had some stressed feelings during the last three months.

Table 13: Education & Health for rural clients

Rural	Target Group	Control Group	Impact
Stress scale	2.71	3.03	-0.32*

- For clients who live in **rural areas** there is a **significant impact on the stress scale**. Clients in the target group indicate that they feel less stressed than clients in the control

⁸ The stress scale contains four indicators to measure the stress level. The scale is an unweighted average of those four indicators.

⁹ The average below five mortality rate in El Salvador is 1.6% (Worldbank, 2013).

group. The improvements made to the home thus seem to have a positive long-term impact on stress levels for rural clients.

Life & Security

Table 14: Life & Security

	Target Group	Control Group	Impact
Level of confidence to cope with theft	2.7	2.6	0.1
Level of confidence to cope with state action	3.2	3.1	0.1
Level of confidence to cope with civil unrest	3.3	2.9	0.4***
Level of confidence to cope with fire	3.1	2.8	0.3**
Level of confidence to cope with natural disaster	3.0	2.8	0.2
Confident to cope index ¹⁰	3.1	2.8	0.2**
% clients taken measures to cope with future disasters	13.6	19.3	-5.7

- The housing microfinance loans have a **positive impact** on the target group's **feeling of confidence to cope with future disasters** (reflected in the coping index). However, both groups score values around 3 on each indicator, which is a neutral score (the values range from 1 to 5, where 1 indicates that the respondent is not confident at all and 5 indicates that the respondent is very confident to cope with future disasters). Generally speaking there is thus not a very high level of confidence among the respondents in dealing with the five issues mentioned in the table.
- Impact is found on the indicators for the level of confidence to cope with **civil unrest, and fire**. For these two indicators the target group members feel significantly more confident in dealing with the issues than people in the control group.

Empowerment

Table 15: Empowerment

	Target Group	Control Group	Impact
% women involved in decision-making on durable items	89.9	93.1	-3.2
% women involved in decision-making on savings	91.7	91.7	0.0
% women involved in decision-making on house improvements	86.4	85.9	0.5
% women involved in decision-making on food	97.8	96.2	1.6
% women involved in decision-making on education	96.7	94.9	1.8
% women involved in decision-making on family planning	99.2	88.7	10.5**
% women involved in decision-making on contraceptives	96.4	75.0	21.4***

- Women in both groups generally seem to be quite involved in all decision making processes, with scores exceeding 85% for all of the indicators.
- The theory of change implies a positive impact on the empowerment of women. The above results reveal that a **significant and positive impact** is indeed found for empowerment related to **family planning** and **contraceptives**.

¹⁰ The confidence to cope index is a non-weighted index in which all confidence to cope questions are included.

Wellbeing & Happiness

Table 16: Wellbeing & Happiness

	Target Group	Control Group	Impact
Self-esteem scale ¹¹	19.5	19.4	0.1
Wellbeing scale ¹²	8.7	8.5	0.2
Life evaluation scale ¹³	27.6	27.6	0.1

- The self-esteem scale is used to measure self-worth of people by means of the positive and negative feelings they have experienced. The range is 0 to 30 and values from 15 to 25 are considered to be normal. Based on the above findings we can conclude that clients in the target group have the **same level of self-esteem** as clients in the control group.
- On average the target group gives an **8.7 to wellbeing** compared to an 8.5 for the control group. The wellbeing measures range from 0 to 10, with higher scores indicating a higher level of wellbeing.
- Both the target and control group score roughly 28 points on the OECD's life evaluation scale, which means that they are **satisfied with their lives**. The range for this indicator is 5 to 35.
- **No clear difference is measured on the self-esteem, wellbeing and life evaluation measures** between the target and control group and therefore we can conclude that no long-term impact seems to have been achieved here.

Table 17: Wellbeing & Happiness for urban clients

Urban	Target Group	Control Group	Impact
Wellbeing scale	8.8	8.3	0.5**

Table 18: Wellbeing & Happiness for clients who completed only primary education

Completed only primary education	Target Group	Control Group	Impact
Wellbeing scale	8.8	8.2	0.7**

Table 19: Wellbeing & Happiness for rural clients

Rural	Target Group	Control Group	Impact
Life evaluation scale	27.3	29.6	-2.3**

- Clients who live in **urban areas** or who have **completed only primary education** and are part of the target group have a **significantly higher score on the wellbeing scale**. In urban areas the long-term effect of housing microfinance, as formulated in the theory of change, on the wellbeing scale thus seems to hold.
- Clients who live in **rural areas** and are part of the target group have a **significantly lower score on the life evaluation scale**.

¹¹ The self-esteem scale consists of ten questions regarding self-worth by using both positive and negative statements.

¹² The wellbeing scale is the average value of four basic life evaluation indicators. These indicators provide information on which step of a ladder the respondents see themselves from 0-10. The indicators include: (1) the step on which respondents see themselves now; (2) how happy they are; (3) how satisfied they were 5 years ago; and (4) how satisfied they expect to be within 5 years.

¹³ The life evaluation scale consists of five indicators of the respondents' judgments on how they evaluate their lives.

CONCLUSIONS & RECOMMENDATIONS

This study investigated the impact of both financial and non-financial products on the quality of life of Enlace's clients over 3 to 4 years. The data was collected through a quantitative survey and the impact was determined by means of a statistical assessment of the differences in outcomes on key impact indicators. A control group was constructed as a proxy for the counterfactual (i.e. what would have occurred had these clients not received products and/or technical advice from Enlace) and comprised clients that were on the waiting list to receive a housing loan from Enlace. The total sample size was 408 randomly selected respondents: 251 in the target group that were clients (including dropouts) of Enlace in 2011 and 157 clients in the control group who are on the waiting list for a loan.

Deriving the assumptions from the theory of change, positive impact of housing microfinance is expected on perception of housing, sustainable livelihoods, education & health, life & security, empowerment, and wellbeing & happiness indicators. However, in the general analysis that includes all respondents there are few significant findings for the different impact indicators. The reason for this unexpected result might be that the impact assumptions underlying the theory of change are potentially overly optimistic. However, the low number of significant impact findings is in line with other international studies on the effects of microfinance (e.g. Banerjee *et al.*, 2014), which show more nuanced effects. Nevertheless, this study provides some interesting results on the housing loan products and technical assistance of Enlace that can help the organisation to learn and further improve its products and services. In addition, this study provides information on the direction and timeline of the impact of housing microfinance products of Enlace, what enables us to validate the assumptions underlying the theory of change.

Key findings

Based on the statistical analysis, this study found that Enlace's clients have a **somewhat positive perception of their house**. No significant difference is found between the target and control groups for this indicator. Following the theory of change the positive perception of housing impacts clients on the following five domains: sustainable livelihoods, education & health, life & security, empowerment, and wellbeing & happiness. For livelihoods significant impact is found on the indicator that measures how often clients **cut or skip their meals** due to insufficient funds. Clients in the **target group are found to do this more often** than clients in the control group. On the **education & health domain no impact is found** on any of the indicators. However, two positive outcomes are that **enrolment rates for children are high** (approximately 95% in both groups) and a **high percentage of births is attended by skilled health personnel**. The life & security domain shows several significant impacts on the confidence to cope indicators. Clients in the target group are **more confident to cope with civil unrest and fire**. Furthermore, a **positive impact on the confidence to cope index** is found. This is in line with the expectations from the theory of change; clients are more confident to cope with future disasters because they feel safer in their house. Moreover, significant impact is also found on the empowerment domain. Women in the target group are **involved in the decision making processes on the use of contraceptives and family planning more often**. As suggested in the theory of change, more sustainable livelihoods, improvements in health and education, as well as more secure and empowered households contribute to the improved wellbeing and happiness of clients. Or in other words: more prosperous, educated, healthier, safer, and empowered people tend to be happier and evaluate their lives higher, resulting in an impact on the final domain of wellbeing & happiness. This study reveals that clients from both the target and control groups score normal values on self-esteem and show high scores on wellbeing and life evaluation. This means that even though clients are satisfied with their lives and score an 8.7 on the wellbeing scale **no impact is found** between the target and control groups on the **self-esteem, wellbeing, and life evaluation** indicators.

Recommendations

- It is recommended that Enlace organizes a reflection session on the findings and considers developing specific actions in terms of further studies or possible program adjustments to strengthen positive impact and analyze potential causes for the observed lack of, or even negative, impact.
- Future qualitative research could assess the quantitative outcomes and create the context required to properly interpret some of the findings of this study. For example, through in-depth interviews Enlace might be able to understand how their clients became more confident to cope with future disasters and how impact can be achieved on livelihoods and health indicators.

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ANNEX: METHODOLOGY

This study uses a quantitative *ex post* impact evaluation method. The methodology was developed to give a strong voice to clients of Enlace. For this reason data is collected at client level by asking clients about changes in their lives. The questions are based on a theory of change. The theory of change was discussed and finalised during a workshop with Enlace and HFHI. Based on the theory of change, the most relevant questions were defined for this impact study.

COUNTERFACTUAL

This impact evaluation assesses the difference in outcomes on key impact variables between clients of Enlace and a control group to identify impact. The control group was used as a proxy for what would have occurred had there been no intervention (also called counterfactual). Without information on the counterfactual, the next best alternative is to compare the outcomes of participating respondents with those of a control group that did not participate. In doing so, it is important to select a control group that is very similar to the target group. This ensures that the target group would have had outcomes similar to those in the control group in absence of the intervention. To prevent a bias in the outcomes, the selected control group should be (1) close to identical to the target group, (2) if they received the intervention, respond to the intervention in a similar way as the target group, and (3) be exposed to the same set of externalities as the target group (Karlan, 2001).

QUANTITATIVE RESEARCH & SAMPLING

Quantitative research attempts to find causal relations between different variables in the research environment (Scrimshaw, 1990; Ellis, 2000). In this study we used a multiple choice questionnaire, respondents were asked to rate and comment on different aspects of their livelihood.

In order to obtain meaningful results, it is important to properly draw a sample. Only then can findings be generalized to the target population (representativeness of the clientele) and are risks of outcome biases minimized. It is therefore crucial to ensure that answers to the questions are given by a sufficient number of clients and that there is no bias in the selection of respondents.

To assess the impact of microfinance over 3 to 4 years, we have defined “people who became a housing loan client of Enlace in 2011” as the target population. The sampling procedure included five measures for composing a valid sample and minimizing biases in the sample selection:

- (1)** *A control group has been selected to overcome the problem of the counterfactual;*
- (2)** *The characteristics of the people in the target group and the control group are similar. The control group consists of people who received a housing loan from Enlace no longer than six months ago. By composing the control group in this way we ensure that any selection bias towards people who are, for whatever reason, more interested in housing loans is a constant factor;*
- (3)** *Respondents are selected using simple random sampling. Simple random sampling is used to select the respondents for the target and control group, where each person had the same probability of being selected (minimizing outcome bias). The sample of the target group was selected from a list of all clients receiving a housing loan in 2011 and the control group sample was selected similarly from a list of people on the waiting list for a housing loan;*
- (4)** *Dropouts are included in the target group sample. Dropouts are the people who were clients in 2011, but no longer are. Dropouts include clients who repaid their housing loan and therefore voluntarily are not a client anymore as well as forced dropouts of clients who did not repay their housing loan. By including dropouts, we control for the incomplete sample bias, since dropouts presumably were affected differently, from those who are still clients (Karlan, 2001). Moreover,*

including dropouts controls for the fact that there will likely also be dropouts among the future clients.

(5) *The selection criteria for the target and control group are similar.* Enlace applies three selection criteria for clients to obtain a housing loan: (i) the client should be with Enlace for at least one year, (ii) the client has to be a member of a solidarity group or community bank, and (iii) the clients provides a plan in which repayment of the loan is formulated. These selection criteria have not changed during the past five years and therefore the selection criteria for the target and control group are similar.

This study is based on a sample size of 408 respondents (N=408). In order to create maximum statistical power we have selected almost the same number of respondents in the target group and control group: of the 408 respondents 251 participants were from the target group and 157 participants were from the control group.

DATA COLLECTION

In order to assure high quality and reliability of the data we have developed a questionnaire, which primarily consists of multiple choice questions. An app is used to collect the data on a tablet, which is a cost-efficient and reliable way of gathering data. The app contains a number of built in quality checks to reduce the risk of incorrect data entry.

The interviews were conducted by 10 HFHI volunteers. These volunteers were recruited in El Salvador, which had the advantage that they speak the local language and could verify the answers with reference to the local context. Clients are therefore more inclined to provide truthful information. Additionally, a local consultant was hired to do quality checks during the fieldwork (e.g. to check if the answers were interpreted correctly). The local consultant also trained the interviewers in interview techniques. During the extensive training all interviewers received a tailor-made manual with explanatory notes for each question; regarding the interpretation of the response categories, tone of voice, and instructions on how to deal with potential cultural sensitivities. This contributed to a homogeneous and reliable process of data collection.

DATA ANALYSIS

Before we started analysing the data we did some quality checks by crosschecking different answers to verify if values were realistic when compared to other questions. In case of an unrealistic answer (e.g. the number of people working in the household is higher than the total number of people in the household) we have not included the answer in our analyses. In addition, we have aggregated some data to create more meaningful variables. We have composed an asset index and various scales as quantitative indicators for a number of underlying impact indicators. The composed index and scales are non-weighted. We then simply sum up the scores on different indicators. This method has the virtue of simplicity, but also has the limitation of assigning equal weight to all indicators. The statistical program STATA 13 was used to make the calculations.

We used the Propensity Score Matching (PSM) method to calculate impact and used a control group that is as similar as possible to the target group in terms of *general (or observable)* characteristics. The idea of PSM is to find individuals in a large group of nonparticipants who are *observationally similar* to participants in terms of characteristics not affected by the program (this can include pre-program characteristics, since those are clearly not affected by subsequent program participation). Each participant is matched with an observationally similar non-participant (Khandker *et al.*, 2010). In this study the following general characteristics are used to match the control group with the target group: sex, location, age, level of education, marital status, religion, regional office and main source of income.

STUDY LIMITATIONS

Impact is measured by comparing the results of Enlace's clients with a control group. However, the control group used in this study has limitations. Under ideal circumstances the control group

would consist of future clients, i.e. people who will receive a loan in the near future but are currently on the waiting list. However, due to practical limitations the waiting list also includes clients whose application will not be accepted. Enlace estimates that 80 percent of all applicants on the waiting list will ultimately receive the requested housing loan. This introduces a small unavoidable bias into the results, due to the fact that clients who end up failing the selection criteria are included in the control group. The reasons clients will not receive a housing loan are fourfold: 1) the client is not the owner of the house; 2) the client already has other credits which are not compatible with the housing loan; 3) the budget is not well constructed in relation to the project; and 4) the client is delayed in repayment of other loans at Enlace. It should be noted that part of the unobserved bias is already dealt with by only including individuals who are interested in, and apply for, housing loans.

ETHICS

For Oxfam Novib research ethics are of the utmost importance. We emphasized that participation in the study was completely voluntary. Before each interview started, room was created to turn down participation. In order to allow people to turn down participation, a reserve sample list was composed for each region. Furthermore, all interviewers guaranteed anonymity and confidentiality. At the beginning of the interview it was explained that the research is for scientific purposes only. Finally, working with a control group raises ethical issues. As a solution, in this study the control group consisted of clients who are on the waiting list for a housing loan.

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ABOUT THE REPORT

This report is the result of a joint impact evaluation project initiated by **Habitat for Humanity International** and conducted by **Oxfam Novib**. This impact report is written to contribute to increased transparency on effectiveness, to support accountability, and to improve by taking the impact results in strategic decision-making. They do not necessarily reflect Oxfam's or Habitat for Humanity International's policy positions. The views expressed are those of the author and not necessarily those of Oxfam and Habitat for Humanity International.

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