AN IMPACT EVALUATION STUDY OF SUSTAINABLE LIVELIHOOD INITIATIVE

HDFC BANK | PARIVARTAN
A step towards progress

Report Submitted by Centre for Digital Financial Inclusion (CDFI@IFMR) to HDFC Bank

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Foreword

HDFC Bank's Corporate Social Responsibility (CSR) mission is to contribute to the social and economic development of the community. The bank has undertaken a series of initiatives to mainstream economically, physically, and socially challenged groups, and to draw them into the cycle of growth, development, and empowerment.

The Sustainable Livelihood Initiative (SLI) was started even before the CSR mandate came in force in 2014, and since then it has been a flagship CSR program of the bank. The bank started SLI as it duly recognised that women's financial inclusion and empowerment are pre-requisites for the nation's sustained economic growth and harmony. The program has focused on creating financial awareness and building capacities among women, which helps them to gain access to credit from formal financial institutions and start a journey of economic empowerment, independence, and enterprise. Since its inception, SLI has worked exclusively with women by forming more than 7 lakh groups (self-help and joint-liability groups) across the country.

The purpose of this evaluation was to assess SLI's direct and indirect impacts on the women and their households. It measured impact in the domains of financial literacy and inclusion, women's financial activity and enterprise, and women's empowerment at personal and household level.

The bank's experience of conducting this study with Centre for Digital Financial Inclusion (CDFI@IFMR) has been truly enriching. It is envisaged that the evidence and learning from this assessment will help the bank to take informed decisions and develop its strategy for future of the SLI program.

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Executive Summary

Sustainable Livelihood Initiative (SLI), a microfinance program under the CSR (Corporate Social Responsibility) initiative of HDFC bank, is aimed at the financial and social empowerment of women through the mediums of Self-Help Groups (SHGs) and Joint Liability Groups (JLGs). It adopts a multi-pronged approach of provisioning credit, financial literacy training and other services. Since this program has been running for more than a decade, it becomes even more important to measure its impact on rural women and their households. Against this backdrop, the report presents the findings from the impact evaluation study conducted by the Centre for Digital Financial Inclusion on the impact of the Sustainable Livelihood Initiative (SLI) in the states of Maharashtra, Madhya Pradesh, and Tamil Nadu. The results reflect a positive effect of the SLI programme in general, thereby offering insightful observations, which could be translated into better policy outcomes.

Objectives of the Study

The overall objective of the study is to measure the impact of the Sustainable Livelihood Initiative on women and their households. Specifically, the study focuses on the outcome measures like the impact of SLI on financial literacy, household savings, indebtedness, income, livelihood diversification, entrepreneurial behaviour, assets portfolio, and women empowerment at the intra-household level.

Methodology and Sampling Strategy

The study examines the impact of HDFC's Sustainable livelihood Initiative on households across three states- Maharashtra, Madhya Pradesh, and Tamil Nadu. In order to study the impact, the entire study sample was divided into SLI households (Treatment group) and non-SLI households (Control group). Data on financial literacy, socio-economic status and livelihood status of the woman and her household was collected from Mid-December, 2021 to January 2022.

Multistage stratified sampling method was followed at three levels across both the groups to select the sample; HDFC branch, SHGs/JLGs, and households for selecting the SLI households and branch, village and households for selecting the non-SLI households. Two criteria were used to select the sample; first, maturity of the institutions (i.e., above 3 years of age for selecting SHGs/JLGs) and second, the possibility of control branches (HDFC branches where SLI has not been introduced) in selected districts. The sample household surveyed includes 1593 households (782 SLI and 811 non-SLI households), which included districts such as Chengalpattu, Cuddalore, Tiruvannamalai, and Villupuram from Tamil Nadu; Jalgaon, Jalna, and Aurangabad from Maharashtra; and Dhar and Chhindwara from Madhya Pradesh.

Data Analysis

This report is broken down into two distinct analyses, which help in providing a broader picture of the program under study. The first part of the analysis is the core - measuring the impact of the SLI program using the quasi-experimental retrospective method called Propensity Score Matching (estimates are of kernel matching) and quantile regression estimates, which aids in estimating the distributional effect of the program on income, savings and outstanding borrowings. The second part of the analysis is of supplementary nature, as it adds value to the findings in the first part but causality cannot be attributed to these results. Here, descriptive analysis was done to assess the performances of the program in the three states on various outcome variables using averages and percentages.

Program Impacts (Findings)

Financial Literacy

Financial literacy is a composite concept, which is basically an aggregation of financial behaviour, financial attitude and financial knowledge (basic financial knowledge and analytical literacy). Financial literacy is quantified as Financial Literacy Index, which is the sum of Financial Behaviour Index, Financial Attitude Index, Basic Financial Knowledge Index and Analytical Literacy Index. The findings show a significant positive impact of financial literacy on the SLI households, as SLI women scored 13.91 index points more than their counterparts. This markedly higher financial literacy is further implicated in the subsequent sections, where we observe a higher preference of SLI households towards formal sources.

When it comes to financial behaviour, the impact estimates showed that SLI women are more likely to exhibit positive financial behaviour than non-SLI women, as evident from the fact that SLI women scored 22.24 index points higher than their counterparts. The individual analysis of behaviours like prioritising savings and investment and maintaining budget showed favourable financial behaviour being inculcated in the SLI women when compared to their counterparts.

In Financial attitude, we basically analysed a person's approach to money management and planning for the future. Overall, we could observe a positive impact of the program on financial attitudes of SLI women, as they scored 14.45 index points significantly more than non-SLI counterparts. Furthermore, SLI women exhibited a consistent financially literate attitude when it came to specific attitude statements like saving is more useful than spending, long-term planning, not taking small things on rent rather settling the amount at the same time and so on.

Proceeding on to the third component, Financial Knowledge, which comprises two sub-components- basic knowledge about financial concepts and analytical numeracy skills. It includes questions measuring understanding of financial concepts such as division of money, inflation, simple interest and compound interest, and interest rate on loan and risk. In the case of Basic Financial Knowledge,

there is no significant difference found between the SLI women and the non-SLI women. With regard to Analytical Literacy Index, SLI women have scored 12.08 index points more than the non-SLI households. Moreover, the results of the specific analysis of each of the 6 basic analytical literacy questions are also on similar lines.

In order to understand the extent of financial inclusion, we explored the awareness and usage of the financial products or services. These were quantified in the form of a Financial Awareness Index and Financial Product Usage Index. In the Financial Awareness Index, SLI women scored 6.35 index points higher than their counterparts. Independent analysis of products or services posited a significant but moderately positive proportion of SLI women aware of fixed deposits, loans from MFIs or banks and debit cards.

In the case of using these financial products, 31.56% more SLI women reported using at least three financial products or services out of eight. Significantly higher proportion of SLI women have used fixed deposits, debit cards and internet banking; taken loans from banks; and deposited through post office and insurance. Overall, in the Financial Product Usage Index, SLI women scored 13.01% more than their counterparts. The overall results indicate that, despite the smaller effect size in the Financial Awareness Index, proportion of SLI women who have used financial products or services are considerably higher than their counterparts. Hence, we could decipher that financial literacy programs under SLI have helped women understand the importance of financial products and services, leading to greater financial inclusion.

Savings Habit

Results on savings show the inculcation of two positive behavioural changes among SLI households- firstly an inducement of savings as a habit and secondly, a positive inclination towards formal saving sources. To qualify it further, results showcase SLI households with 118.89% more per capita formal savings; 66.79% more per capita savings; 33.51% more SLI households with savings as a habit; and 34.8% higher share of formal savings in their total savings, when compared to non-SLI households. Though such a high share of formal savings is magnified by SHG savings, other formal sources are also contributing to it. This fact is validated by the inference that despite the removal of SHG savings, the amount of formal savings and per capita formal savings are still significantly higher for SLI households.

Loan behaviour

A shift towards credit system as a whole, especially formal financial sources, as envisaged by the program itself is evident in the results, where we could find a 43.13% higher proportion of SLI households availing one extra loan on an average; 55.23% more SLI households taking on an average one formal loan more than the non-SLI households. SLI households have a 24.4% higher share of formal loans than their counterparts. While SLI households took more formal loans, their average formal loan amount was 45.01% lesser than that of their counterparts, but the difference was weakly significant. However, there were no significant differences between the SLI and non-SLI households in terms of the cost of debt (interest rate) and duration of loans.

Moreover, loans taken by SLI households mostly require no collateral. Further, the percentage of households who reported having received lesser loans than demanded was 16.67% more in SLI households than their counterparts. When it comes to the utilisation pattern of loans, more SLI households take loans for enterprise, livestock and consumption purposes. However, agriculture and medical loans are of significantly lower demand among SLI households when compared to their counterparts. In the financial products and services section, we could see a significantly higher proportion of women using loans from MFIs or banks. This observation was reiterated by the finding of 57.67% more SLI females taking 1.04 more loans than the non-SLI females.

Household Income

Results posit SLI households to have 11.62% higher per capita income; 13.27% more monthly income; 14.55% higher wage income per person than their non- SLI counterparts. However, there is no significant difference between SLI and non-SLI households regarding income from agriculture, livestock, and enterprise, despite the former earning comparatively higher than the latter in every income type. Especially, for enterprise income, SLI households earn 40.98% more than their counterparts, which is one of the fundamental causes behind the higher monthly income of the SLI households. Furthermore, a positive shift can be seen in the livelihood diversification of SLI households, having 0.15 additional sources of income.

Entrepreneurial Behaviour

The SLI program has been found successful in building a positive outlook among women towards having a business. This is validated by the 14.49% higher proportion of SLI households having enterprises and running 171.88% more of such enterprises than their counterparts, which are home-based in nature. Above all, the positive inducement of entrepreneurship could be comprehended from the fact that 24% more SLI households have female-owned enterprises. However, SLI households were not significantly different from non-SLI households in terms of other enterprise features like the number of hired workers, capital borrowed, and so on. Similarly, there are no significant differences in the business and financial management aspects between the SLI and non-SLI women.

Assets Portfolio (Consumer, Productive and Livestock Assets)

In the case of livestock assets, except for poultry, no significant differences can be seen between the groups. SLI households have on an average 0.23 poultry more than their counterparts. Moreover, SLI households possess one additional consumption asset, and out of that 0.67 more normal consumption assets and 0.35 more superior productive assets than the non-SLI households, which could be attributed to the higher proportion of SLI households taking consumption loans. However, SLI households possess comparatively lesser productive assets than their counterparts but the effect size is insignificant, which might be ascribed to the inclusion of agri-related productive assets in the study and the lesser proportion of SLI households availing agriculture loans compared to non-SLI households.

Women Empowerment

In this study, women empowerment was gauged using indicators related to intra-household decision making. A significant positive effect could be observed in the SLI women being involved as a primary decision maker related to food, healthcare, clothing, education of child, availing and giving loan and so on in the household. The result could be substantiated from the fact that SLI women scored 10.25 index points more than their counterparts in the Decision-Making Index. When the decision making is further divided into general household related and financial product related decision making, the results still remain positively significant.

Moreover, SLI has instilled confidence among women in communicating with bank officials in matters related to loans or savings, as 4.61% more SLI women reported being confident in such matters than their counterparts.

Distributional Effects of Program (Quantile Regression)

The distributional effect of SLI on income, savings and total outstanding borrowing is positive and more pronounced for SLI households in the bottom percentile (25th) than their counterparts. However, in top percentiles, savings remain positively affected, but there is an insignificant effect on income.

State Wise Descriptive Statistics

There is a considerable impact of SLI on financial literacy, irrespective of state, as SLI women have higher financial literacy than non-SLI women. Also, among the states, the differences in financial literacy of SLI households are minimal. Further in all three states, a positive inclination towards formal saving and credit sources has also been more prevalent among SLI households than non-SLI households, SLI women in Tamil Nadu excelled their counterparts in other states in the inducement of positive loan behaviour and the majority of loans taken by SLI households were female-owned. In terms of income, SLI households in Madhya Pradesh earn more than their peers in the other two states. On the other hand, with regard to entrepreneurial behaviour, SLI households in Maharashtra are more likely to have a higher number of enterprises and a majority of those businesses are owned by women. Also, SLI women in Tamil Nadu are more likely to invest in consumptive assets. However, Madhya Pradesh ranks the lowest among the three states in terms of female empowerment, enterprise ownership, and proportion of female-owned loans among the SLI households.

Conclusion and Way Forward

Overall, the Sustainable Livelihood Initiative (SLI) has resulted in a favourable impact on financial literacy. The ripple effect of higher financial literacy is evident in more usage of financial products and services by SLI households. Furthermore, we could observe higher preferences towards formal savings and formal credit sources; more female-owned enterprises and loans; and greater involvement of women in intra-household decision making among the SLI households than their

counterparts. However, we do not see much impact of the program on productive asset ownership and managing the business and its finances among the SLI households.

The findings, though in general, provide a brighter picture of the outcomes which the SLI aims at, a further honing of the program could improve the enterprise management, and female empowerment outcomes. The SLI team could link the SHG/JLG network within districts, which would enable them to synergize and subsequently form an institution akin to a producer organisation that would strengthen their bargaining position. Secondly, promoting and encouraging cashless modes of transaction, among women entrepreneurs as well as their household in general, could improve their overall digital literacy and enhance the former's accessibility to digital markets. Thirdly, by formulating a right blend of training that caters to the local need and by diversifying the micro-credit products based on the loan-utilisation patterns, the program's efficacy could be maximised. Fourthly, rolling-out an entrepreneurship scheme for enhancing women's enterprise management outcomes, which were found to be on a bleaker side by the study. Finally, the SLI team could implement a targeted approach to women empowerment indicators on the targeted population in Madhya Pradesh, as the state lags behind its peers in these aspects. To qualify it further, they could provide more skill-oriented training sessions in Madhya Pradesh, so that it would make them more capable of pursuing diverse livelihoods, as economic empowerment is the key to women empowerment.

01 Introduction

The empowerment of women empowers the whole nation, which is evident in the interlinkages that exist between women's empowerment and economic development (Duflo, Esther, 2012). Two rationales have been put forward, the first being that economic development could initiate a virtuous circle of growth, where poverty could be reduced, economic opportunity increased and gender inequality would be reduced, thereby empowering women. A second rationale is an inductive approach which begins with empowering women economically, socially and thereby having a direct impact on development.[1] Especially in the case of developing countries such as India, economic growth can lead to gender equality and women empowerment at a much slower pace due to the existence of huge gender disparities and a predominant patriarchal society. World Bank in its report underscores how closing these gender gaps matter for development and policy making.[2] Gender equality can lead to higher economic productivity and improved development outcomes for the next generation. So, the second path is the one that should be hinged on, but for this path to be initiated and sustained, constant policy influx to promote women is vital.[3]

In this context, the formation of Self-Help Groups (SHGs) in rural areas was a revolutionary tool for poverty alleviation and women empowerment. Participation in economic SHGs made women both economically and socially empowered. Economic SHGs provide collective finance[4] in tandem with enterprise or livelihood services like skill training, financial education and so on. Further, studies indicate a positive impact of such programmes on women empowerment.[5]

SHGs are gaining popularity today as governments, non-government organisations (NGOs) and international organisations channel their growth initiatives through them, since it can reach the grassroot levels of society and contribute towards the Sustainable Development Goals (SDGs). Such livelihood initiatives include microcredits, financial education and skill development programmes. These will empower women by making them financially independent, thereby improving their role in intra-household decision-making. The National Rural Livelihood Mission (NRLM), launched by the Ministry of Rural Development, Government of India is a great example of such livelihood-based poverty reduction plans that organise women into SHGs,[6] with adherence to Panchasutra.[7] It aims to eradicate poverty among women by helping them launch microenterprises and empowering them in all aspects of life and it mainly works through the SHG -Bank Linkages.

The corporate social responsibility (CSR) program of HDFC Bank named, Sustainable Livelihood Initiative (SLI) is a livelihood program, which has been in operation since 2008.

1.1 About Sustainable Livelihood Initiative (SLI)

Sustainable Livelihood Initiative (SLI) of HDFC is aimed at the economic and social empowerment of women and their families. Since its inception, the SLI has been working with Self-Help Groups (SHGs) and Joint Liability Groups (JLGs).[8] The initiative is a holistic approach which aims to provide financial support to the section of the population who do not have access to formal banking services. The services range from financial to non-financial facilities provided to the women. The objective is

[1,3]Duflo, Esther. 2012. "Women Empowerment and Economic Development." Journal of Economic Literature, 50 (4): 1051-79.DOI: 10.1257/jel.50.4.1051
[2] World Bank, 2011, World Development Report 2012: Gender Equality and Development (Washington).
[4]Collective finance includes savings, loans and insurance.
[5]De Hoop, T, Brody, C, Tripathi, S, Vojtkova, M and Warnock, R, 2019. Economic self-help group programmes for improving women's empowerment, 3ie Systematic Review Summary 11. London: International Initiative for Impact Evaluation (3ie).
[6]https://aajeevika.gov.in/en/content/mission.
[7]Panchasutra are five basic principles followed by SHGs which include Regular meetings; savings; inter-loaning; Timely repayment; and books of accounts.
[8]JLGs are Included in SLI from 2010 onwards.

to work with SHGs/JLGs to give rise to financial independence. The guiding principle for working with SHGs and JLGs is to empower women and in turn their families at the bottom of the pyramid of society. As of June 2021, SLI had 7,30,258 active SHGs and JLGs across 32 states in India.[9]

Formation Process of SLI/JLG Groups

Over time, the SLI programme has evolved and adapted to developments in the larger microfinance ecosystem. SLI is currently operating in two modes:

1) The SLI team identifies and allows women in need to access credit through the formation of SHGs or JLGs. While the loans are given to individual women in both the circumstances, they are given through the SHG or JLG to which the woman belongs; the bank decides the loan amount and credits it to the individual woman's name.
2) It collaborates with various state agencies such as State Rural Livelihood Missions or similar organisations to identify existing groups in need of financial assistance and then offers loans to the women in these groups, after evaluating their individual creditworthiness.

SLI Inputs given to SHGs/JLGs

Pre-Loan: Awareness-raising activities are conducted by a team of outreach managers in both rural and urban areas. These activities are aimed at providing economically underprivileged women with general financial literacy. However, the activities are for the public in general and are not confined to those who seek financial assistance from HDFC Bank through SLI. The SLI team also provides targeted financial literacy sessions to groups of women who are eligible to form a new SHG or JLG and are looking for credit.

Post-Loan: The SLI outreach team's primary role after loan disbursement is to track loan repayments. In certain cases, the team also provides additional support to groups of women to help them overcome repayment challenges and deliver catalytic inputs for the growth of their businesses or livelihood activities.

Expected Impact

At the heart of SLI lies the bank's commitment to be an integral part of financial inclusion in the country. The inputs provided by the SLI team, along with the loans made available to SHG and JLG members, are expected to bring about a change in the woman's life at the individual level. While the primary impacts are desired in the domains of the woman's financial literacy and inclusion, it is also anticipated that SLI creates corollary impacts in terms of woman's social and economic empowerment and her household's overall economic empowerment.

1.2 Objectives of the Study

The overall objective of the study is to measure the impact of the Sustainable Livelihood Initiative on the households covered. The specific objectives are as follows:

[9]Communicated by HDFC Bank officials.

Figure 1.1 Objectives of the Study

To measure the impacts of SLI on the financial literacy of the beneficiaries.

To assess the direct impact of credit on women beneficiaries' (including household) economic welfare as measured by household savings, indebtedness, income, livelihood diversification and assets portfolio.

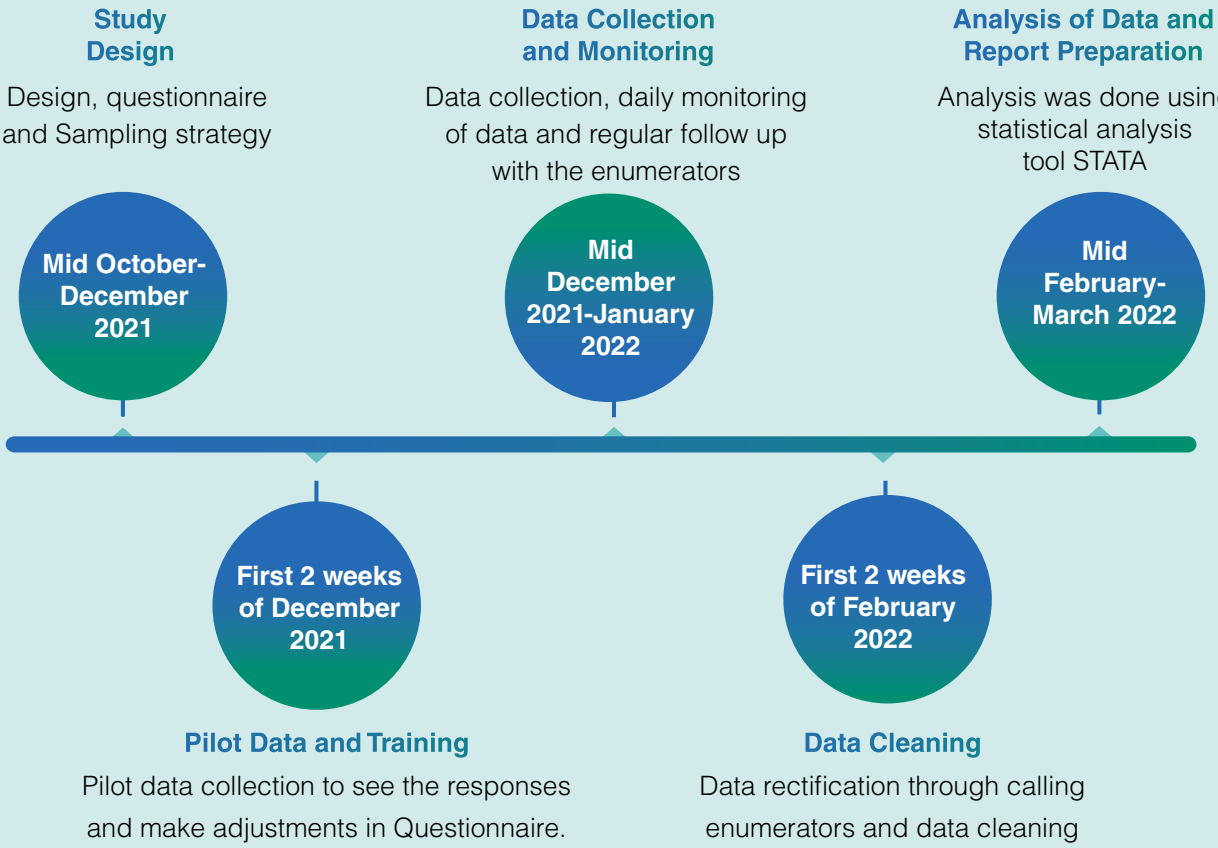
To measure the influence of SLI on self-employment and dependence initiatives secured by the beneficiaries.

To assess the impact of the program on women empowerment at the intra-household level.

1.3 Timeline of the Study

The study spanned for a period of five and a half months, starting from October 2021 and ending in March 2022. The study design included questionnaire, sampling strategy and sample selection of the project, started in mid-October of 2021. In mid-December 2021, the training was given to the supervisors and enumerators in Madhya Pradesh, Maharashtra and Tamil Nadu. Thereafter, the data collection began from mid-December 2021 to January 2022 along with daily monitoring of data and regular follow-up with the enumerators. The month of February 2022 was taken up for data cleaning and rectification through calling enumerators. Finally, in the month of March, data analysis and report were written.

Figure 1.2 Timeline of the Study



1.4 Limitations of The Study

The study has a few limitations. Firstly, the length of the questionnaire was kept optimum in order to draw quality responses and eliminate the possibility of response fatigue from the households. Secondly, this study used cross-sectional data as there was no baseline data available. This limits the comparison of the impact of the program over a period of time. Lastly, though qualitative tools were not employed in the study, we did collect some qualitative data points in the form of quantitative questions. Qualitative data helps in triangulating quantitative results.

02 Literature Review

2.1 Evidence on financial literacy

Financial literacy is "the ability to read, analyse, manage, and communicate about the personal financial conditions that affect material well-being" (Vitt et al.,2000). It has become an essential survival tool rather than a convenience as poor financial choices and decisions could create undesirable outcomes for individuals, society, and the economy. Though there are very scant pieces of literature measuring the impact of microfinance on financial literacy outcomes, the existing studies hint at a positive correlation between them.

Microfinance is a blanket term for a set of components like credit, provision of thrift, livelihood training, financial education and other support services. It impacts financial literacy through both direct and indirect channels. The direct channel is through the financial education classes for the poor women, especially in case of India it is directed through SHGs. On the other hand, indirect channel works mostly through the adult learning model, which basically includes "self-directed learning, accumulated and growing experience for learning, readiness to learn, and the shift from a subject-centred to a performance-centred approach to learning" (Knowles,1980). It is mostly through the latter channel that financial literacy of the SHG members is enhanced. Adult learning is basically an informal learning that happens through daily productive activities like managing of savings, bookkeeping, use of credit to run livelihood activities and other services (Suryadi, A. et al.,2020). However, Edgcomb, Elaine L. (2002) found that livelihood training like effective microenterprise training helps clients learn financial and marketing skills that make them competent in managing finances. Therefore, both pathways play a major role in enhancing financial literacy.

2.2 Evidence on household income, savings, enterprise and asset portfolio

Microfinance helps in the socioeconomic development of the poor by making formal institutional credit accessible for them. Though numerous impact evaluation studies throughout the world support this proposition, there are mixed results. Khandker (2005) looked at the impact of microcredit on households in Bangladesh, and showed that poverty declined by 18 points in microfinance villages, and by 13 points in non-program villages. In addition to the impact on household income, Tilakaratna et al. (2005) identified the beneficial effects of microcredit on household assets and housing conditions. Despite the fact that these effects were disproportionately felt by rich and middle-class households, microcredit disbursal had little impact on poor households except in terms of consumption levels. But Silva, I. D. (2012) finds gains from microfinance on households' savings and income to be pro-poor.

The targeting of microcredit on women is mainly based on two propositions. Firstly, women are considered to have less default rates, and they tend to share their benefits with the family as a whole, thereby instrumental in their overall development (Fofana et al., 2015; Gomez, 2013). Secondly, women are mostly credit constrained to start enterprise in male dominated society, so microcredit will reduce their dependence on informal credit sources (Madichie & Nkamnehe, 2010). Though access to inclusive finance has indeed empowered women by enabling them to run their own enterprises (Gunatilaka and De Silva, 2010), findings by Lavoori and Paramanik (2014) hint at a possible adverse

effect of ownership of loans and assets on women's decision-making powers.

Nevertheless, the overall effect of microcredit on savings income and assets seems to be positive across different countries. Studies of self-help groups in various parts of India: Impact evaluation of NRLP in Bihar, Jharkhand, Odisha, West Bengal, Uttar Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra and Rajasthan by Kochar et al.(2021), showed SHG households to have increased savings, diverse sources of income and more likelihood of taking loans than the non-SHG households; In Orissa, Jharkhand and Chhattisgarh, Panda DK (2009) highlighted a positive impact of microfinance on income, asset position, savings and literacy of the households. In Bangladesh (Hashmi et.al.,1996; Pitt and Khandker,1998) showed microfinance participants to have increased asset and income control because they provided more support to their family. While in Ghana (Adjei et al,2009) positive impacts were seen in the form of increased physical capital (sewing machine, refrigerator and electric cooker), financial capital (savings and subscription to government schemes) and human capital (health status of household members).

2.3 Evidence on women empowerment

Microfinance is considered as an effective tool to end feminization of poverty all over the world (Chant 2014). Research studies suggest an ambiguous relationship between microfinance and the empowerment of women, as mixed results are found across various aspects of empowerment.

Microfinance through SHGs is found to be fruitful in empowering women overtime through increase in savings, awareness of rights and active participation in political spheres (Galab & Rao, 2003; Swain & Wallentin, 2009). Case studies done in SHGs in Pakistan and Malawi found women's participation in microfinance programmes to be beneficial in developing collective business plans, generating their own income and increase in savings and facilitating the utilisation of pooled resources for contingency expenditure (Rashid & Jonathan, 2014).

Women empowerment is multidimensional, it includes economic empowerment, social empowerment, psychological empowerment and political empowerment.[10] Though, studies (Sinha et al., 2012; Weber & Ahmad, 2014; Khan, S. T., Bhat, M. A. and Sangmi, M.-U.-D., 2020) endorse the positive impact of microfinance programmes on women's participation in household expenditure decisions and asset ownership, certain findings by Rehman et al. (2015) and Addai (2017) recognize age, marital status, education, and family type as other determinants of household purchase decisions.

Social empowerment deals with a person's freedom and self-confidence to interact freely with people around, enjoy free mobility, be able to make decisions and face problems (Khan, S. T., Bhat, M. A. and Sangmi, M.-U.-D., 2020). Participation in microfinance improved women's self-confidence (Kim et al.,2007), problem solving and decision-making skills, increased role in expenditure decisions and ownership of both productive and consumer assets (Sinha et al., 2012). Qualitative studies by Rehman et al. (2015) further corroborated these findings by observing increased instances of women's participation in social gatherings and visits to Microfinance Institutions (MFIs). However,

[10] In the literature we deal with the first two dimensions of empowerment (economic, social and psychological), as if they are in the scope of the study.

Khan, S. T., Bhat, M. A. and Sangmi, M.-U.-D. (2020), in their study in Jammu and Kashmir, found microfinance to have a limited impact in the case of social empowerment.

2.4 Evidences from Impact Evaluation Studies in India

A closer look at the impact of different microfinance studies (Pandey, V, Gupta, A & Gupta, S, 2019; Kochar et al., 2021; Singh & Pandey, 2019; and Panda, D. K, 2009) across various states in India show that there has been a positive impact of microfinance programs on savings, loan behaviour and income.[11] When it comes to savings, there has been a higher proportion of treatment households practising saving than control households; the percentage gain in savings is also positive across the former than latter. Also, treatment households are more likely to save through formal sources.

In case of loan, similarly we could observe a higher proportion of treatment households availing a greater number of loans than their counterparts. Additionally, treatment households earn a higher average monthly income than controls, and their income sources are also more diverse. Furthermore, most of the studies found a significant proportion of the program households with enterprise.

[11]For more details regarding each study, refer to the annexure 1.

03 Methodology and Sampling Strategy

Methodology

Data
Cross-sectional data.

Study Population
SLI and non-SLI households in Maharashtra, Madhya Pradesh and Tamil Nadu.

Districts Selected
Chengalpattu, Cuddalore, Tiruvannamalai and Villupuram - Tamil Nadu
Jalgaon, Jalna and Aurangabad – Maharashtra
Dhar and Chhindwara - Madhya Pradesh.

Sampling Strategy
Multi-stage stratified sampling at the branch, SHGs/JLGs and household's level.

Sample Size
782 SLI households (treatment) and 811 non-SLI households (control).

Impact Evaluation Method
Propensity Score Matching (PSM), a quasi-experimental retrospective method.

The data for the study was collected from the households in Maharashtra, Madhya Pradesh and Tamil Nadu. The household's survey was done across two groups. First, the treatment group[12] households who are the members of SHGs/JLGs, part of the Sustainable Livelihood Initiative (SLI). Second, the control group[13] households who are not members of SHGs/JLGs. The survey data collection took place during the period of December, 2021 - January, 2022.

3.1 Sampling Method and Sample Size

The study followed a multi-stage stratified sampling at the branch, SHGs/JLGs and household's level for selecting the treatment and control group. Due to the nature of implementation of the program, the number of SHGs/JLGs were not evenly distributed across the three states. Hence, the sample size for the three states was selected in proportion to the total number of SHG and JLG households present. The inclusion and exclusion criteria for selecting the sample was based upon two criteria; first, maturity of the groups i.e., above 3 years of age for selecting the SHGs/JLGs and second, the potential existence of control branches in the selected districts.

The data of the study was collected from 782 SLI households and 811 non-SLI households. A total of 1583 households were surveyed across the three states. The districts selected for conducting the study were: Chengalpattu, Cuddalore, Tiruvannamalai and Villupuram from Tamil Nadu; Jalgaon, Jalna and Aurangabad from Maharashtra; and Dhar and Chhindwara from Madhya Pradesh.

[12]Treatment group is a statistical term for the group of subjects that receive the treatment in an experiment. Treatment group will be referred to as SLI households in this paper.
SLI Households refer to the households where at least one female member is a part of a Self-help group under the Sustainable Livelihood Initiative (SLI).
[13]Control group is a statistical term for the group of subjects closely resembling the treatment group in many demographic variables but not receiving the treatment. Control group will be referred to as non-SLI households in this paper.

3.1.1 Selection of branch, SHGs/JLGs and SLI Households

Stage 1: We selected the SHGs and JLGs that were more than three years old in the selected districts of the three states.

Stage 2: Proportionate number of SHGs and JLGs were selected randomly from the list of the matured 13353 SHGs and 4991 JLGs from the districts selected (Table 3.1).

Stage 3: From the selected SHGs and JLGs, 782 SLI households were selected proportionately. 485 households were selected from Tamil Nadu, 214 households from Maharashtra and 83 households from Madhya Pradesh.

The number of households surveyed is highest in Tamil Nadu compared to the other two states due to the higher number of matured SHGs and JLGs. The sample size of Madhya Pradesh is the least because of the least number of matured SHGs and JLGs in Madhya Pradesh.

3.1.2 Selection of Non-SLI households (Control Group)

Control group households were selected from the non-intervention branches and blocks of HDFC bank. The selection was done by first calculating the proportion of villages in a block to the total number of villages in all the blocks in a state and then selecting villages randomly from the proportion. Thereafter, households were selected from the sampled villages randomly. A total of 811 households were selected from the three states. 508 households were selected from Tamil Nadu, 221 households from Maharashtra and 82 households from Madhya Pradesh.

Table 3.1.1: State Wise - Sample Distribution of SHGs, SLI and Non-SLI Households

State	Districts selected	Treatment Group			Control Group		
		Branches	SHGs/ JLGs	SLI Households	Block	Villages	Non-SLI Households
Tamil Nadu	4	8	90/60	485	12	45	508
Maharashtra	3	6	33/27	214	6	18	221
Madhya Pradesh	2	2	8/21	83	3	6	82
Total	9	16	131/108	782	21	69	811

3.2 Survey Design

The survey data collected in our study is cross-sectional and collected for a period of one year in all the sections except income where we collected data for a period of three months. There are some data questions on the pre-program characteristics of the households which were incorporated in order to use them as a matching variable for the SLI and non-SLI households. A comprehensive household module was developed for data collection.

3.2.1 Household Survey

The household survey was administered, at the household level, to the head of the household along with the program beneficiary woman for SLI households and the wife of the head or eldest woman for the non-SLI households. The survey had 10 different sections: Basic profile, Household composition, Financial literacy, Savings and debts, Household income, Self-employment business, Ownership of asset, Proximity to basic resources/services, Women empowerment and Benefits of SLI intervention (only for treatment group).

Table 3.2.1.1: Household Survey Module

Section	Section Description
Household Basic Profile	The section contains information on the household's area of residence, Household's head, SHG member, caste, religion, number of household members, type of house and basic contact details.
Household Composition	Member level details in this section are collected on marital status, education, age, gender, migration status, occupation, having bank account or not and having Aadhar card or not.
Financial Literacy[14]	The section includes questions for women of the household to check her financial literacy (behavioural and analytical). This section was administered only to the women who were part of SLI and the wife of the head or eldest woman of non-SLI households.
Savings and Debt	The data on Household's savings in formal and informal sources. Household's number of debts from different sources and individual loan details on amount, interest rate, reason for borrowing, source of loan, loan repaid, subsidy and moratorium period and the reason for loan rejections (if any) were also collected.
Household Income	Income details of the households; Income from wages (agricultural, non-agricultural and MGNREGS), salary, agriculture, horticulture, livestock, business, transfers, pensions and any other source.
Self-employment Business	Household's enterprise data on primary activity, year of establishment, location, ownership, borrowings, workers, sales and expenses were asked. This section also assessed enterprise related behaviour and literacy from the women (only if the enterprise was owned by the women).
Ownership of Assets	This section includes data points on productive (high and low value), consumption (normal and superior), livestock (different types present in the household) and natural assets of the household.
Access to Basic Resources	This section includes questions on proximity of the household to the town, markets, health centre, post office and primary school.
Women Empowerment	The section includes data points on intra-household (decision making etc.) as well as community level women empowerment. This section was also administered only to the women who were part of SLI and the wife of the head or eldest woman for the non-SLI households.
Benefits of SLI Intervention (only for SLI households)	This section includes questions only for the members of SLI to know their opinion on the benefits received from the intervention through formation of SHGs/JLGs.

[14]The survey questions on financial literacy were prepared with some reference from OECD financial literacy questionnaire and methodological guidance developed by the OECD International Network on Financial Education (OECD/INFE).

3.3 Methodology

The main objective of the study is to assess the impact of HDFC's SLI initiative on the financial literacy and the economic and social empowerment of women. In order to estimate the impact of SLI initiative on individual households, we have to compare the two potential outcomes of the individual household- outcome when they received SLI benefits with that of the outcome had they not participated in the initiative. The first outcome is only observable (factual outcome) while the second is unobservable (counterfactual outcome). The inability to observe the counterfactual, is considered as the fundamental problem of causal inference (Holland 1986). The only way to estimate the counterfactual is by creating an artificial counterfactual or using a proxy, which is a control group (in this case non-SLI households). This control group should have characteristics similar to that of the treatment group (SLI household) before the intervention started.

However, the control group selected would not make a perfect counterfactual because of the potential inequality between SLI and Non SLI households. Since program initiation and roll out are not random (program placement bias) and households' acceptance of the program is demand-driven (self-selection bias), it is unlikely that program households and non-program households will be similar in the absence of the program. As a result of program placement bias and self-selection bias, impact estimates will be inconsistent and inaccurate. Given the non-random allocation of the program to households, the parameter of interest is Average Treatment effect on Treated (ATT). ATT is the expected value of the outcome of those who received the intervention, conditional on observed characteristics unaffected by the program. Now using the notations of impact evaluation literature, we can explain the aforementioned treatment evaluation problem using the following equation:

$$\mathbf{ATT = E\,[Y1, D = 1] - E\,[Y0, D = 1]}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\mathbf{(1)}$$

Here, E [Y1 | D = 1] and E [Y0 | D = 1] represent the potential outcomes of SLI households when they received the program and outcome of SLI households had they not received the program, respectively. E [Y0 | D = 1] is the counterfactual that cannot be observed. However, we can observe E [Y0, D = 0] i.e., expected outcome of the non-SLI households, given that they did not receive the intervention. In the absence of intervention and selection bias (program placement bias and self-selection bias), those who participated in the program and those who did not should have the same outcome. In other words, E [Y0, D = 1] = E [Y0, D = 0]. However, due to the presence of biases, the impact estimate will be inaccurate.

In such cases, randomised experiments are the best, but since the program cannot be randomised because of its voluntary nature, such experimental methods are completely ruled out. Panel data methods like double difference and triple difference cannot be used due to the absence of baseline data. Regression Discontinuity Designs (RDD) can be eliminated because of the absence of strict cut-off criteria for program assignment. In this context, one methodology used extensively in the literature is the Instrumental Variable (IV) estimation, where the access to SLI program is estimated in the first stage and the effect of the SLI programme is estimated in the second stage. But such an estimation is robust only if there are strong instruments, which affects the access to SLI programme

but not financial literacy and women empowerment. Though instruments were explored, a valid instrument was not found.

Linear regression is also not feasible, as it assumes linear relations between the dependent and independent variables and impose distributional assumptions on explanatory variables (Foster, 2003).[15] Hence the most appropriate approach in this study is Propensity Score Matching (PSM). PSM, developed by Rosenbaum and Rubin (1983)[16] helps to mimic an experimental design using observational data by obtaining Propensity Scores (PS), which measure the extent of matching of the SLI households and the non-SLI households in a set of pre-program characteristics.

3.3.1 Propensity Score Matching

PSM is a quasi-experimental, retrospective method of impact evaluation. The program evaluation has no impact on the program implementation process. The propensity score is the conditional probability of receiving a treatment (or in this case being a HDFC SLI household) given pre-treatment characteristics, X (Rosenbaum and Rubin ,1983).

$$P(X) = Pr[D = 1 | X] = E[D | X \quad \text{.....(2)}$$

where D = {0, 1} is the binary variable on whether a household is a SLI household (1) or not (0) and X is the multidimensional set of pre-treatment characteristics. It captures the effects of various covariates on participation in one score.[17] In this method, individuals with similar propensity scores are matched and their outcomes are compared to estimate the treatment effect. The PSM method could solve the selection bias only if two conditions are satisfied. The first one is the conditional independence assumption (CIA), which requires outcomes to be independent of treatment status, conditional on observables, which means that uptake of the program should be only based on the observed characteristics. If any unobservable characteristics are guiding the program participation, then the PSM estimate would be biased. The second assumption is the common support condition, which states there should be sufficient overlap in characteristics of both treatment and control groups, so that adequate matches could be found (Rosenbaum and Rubin,1983).

[15] Foster, M. (2003) Propensity Score Matching: An illustrative Analysis of Dose Response. Medical Care, 41(10), pp.1183-1192.

[16] Rosenbaum, Paul and Rubin, Donald. 1983. The Central Role of the Propensity Score in Observational Studies for Causal Effects. Biometrika, Vol.70, No.1:41-55.

[17] Khandker, Shahidur R.; Koolwal, Gayatri B.; Samad, Hussain A. 2010. Handbook on Impact Evaluation: Quantitative Methods and Practices. World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/2693 Licence: CC BY 3.0 IGO.

04 Findings

4.1 Financial Literacy[18]

Financial Literacy is one of the key objectives of the study. Financial literacy can be measured as a combination of financial behaviour, attitude and knowledge (basic financial knowledge and analytical skills). This section presents the analysis on financial literacy along with awareness and use of financial products and services by the SLI women.

Key Highlights on Financial Literacy

SLI households performed better than non-SLI households on financial behaviour (22.24 more index points) which is attributed to the SLI women considering saving and investments as priority and their practice of maintaining a budget for income and expenses.

SLI households are found to have a better financial attitude showing a positive impact as the SLI women scored 14.45 index points more. They exhibited a consistent financially literate attitude by taking lesser risk with impulsive investments, considering saving more useful than spending and money as a component of long-term planning. However, the indicator related to debt does not show positive result since SLI women feel the burden of debt.

With regard to Analytical Literacy Skills, SLI women scored 12.08 index points more than the non-SLI households, shown by their accurate calculation on inflation, simple and compound interest, loan interest and identification of better discount options questions.

A significantly positive Financial Literacy Index towards SLI women (13.91 index points more) than their counterparts reflected in their superior financial behaviour, attitude and knowledge.

In the Financial Awareness Index, SLI women scored 6.35 index points higher as a larger number of SLI women were aware of MFI/bank loans, debit cards and deposits through post office. However, the SLI and non-SLI women were equally aware of savings bank accounts and insurance products.

In the case of Financial Product and Services Usage Index, SLI women scored 13.01% more than the non-SLI women. A higher proportion of SLI women have availed in the past and currently credit products, payment services and saving and investment products.

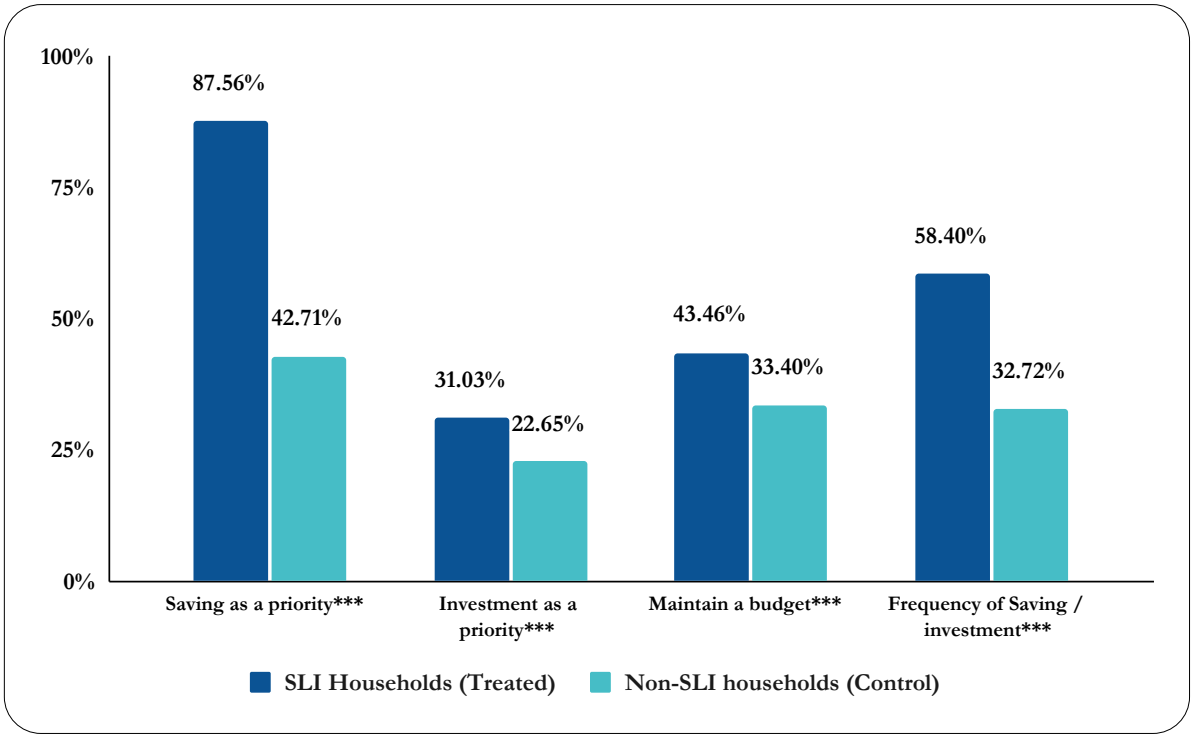
[18]Financial literacy and its component indices were prepared with some reference from OECD financial literacy methodological guidance, prepared by OECD/INFE.

4.1.1 Financial Behaviour

Financial behaviour is one of the major components that impacts financial literacy. Positive financial behaviour is essential for making rational decisions to attain financial wellbeing. It is quantified using a Financial Behaviour Score, where it measures the financial behaviour by incorporating statements related to prudent financial behaviours like savings, investment and budgeting. If a woman considers savings and investment as a priority, she was given a score of 1 for each or else 0; if she maintains proper budget regarding income and expenses, the score is 1 or else 0 and for question pertaining to the frequency of savings and investments, individuals who save or invest "regularly" were given a score of 1, while those who save or invest "sometimes" were given a score of 0.5, and others were given a score of 0. Hence the Financial Behaviour Score is out of 4. The Financial Behaviour Score is scaled to 100 to create a Financial Behaviour Index.

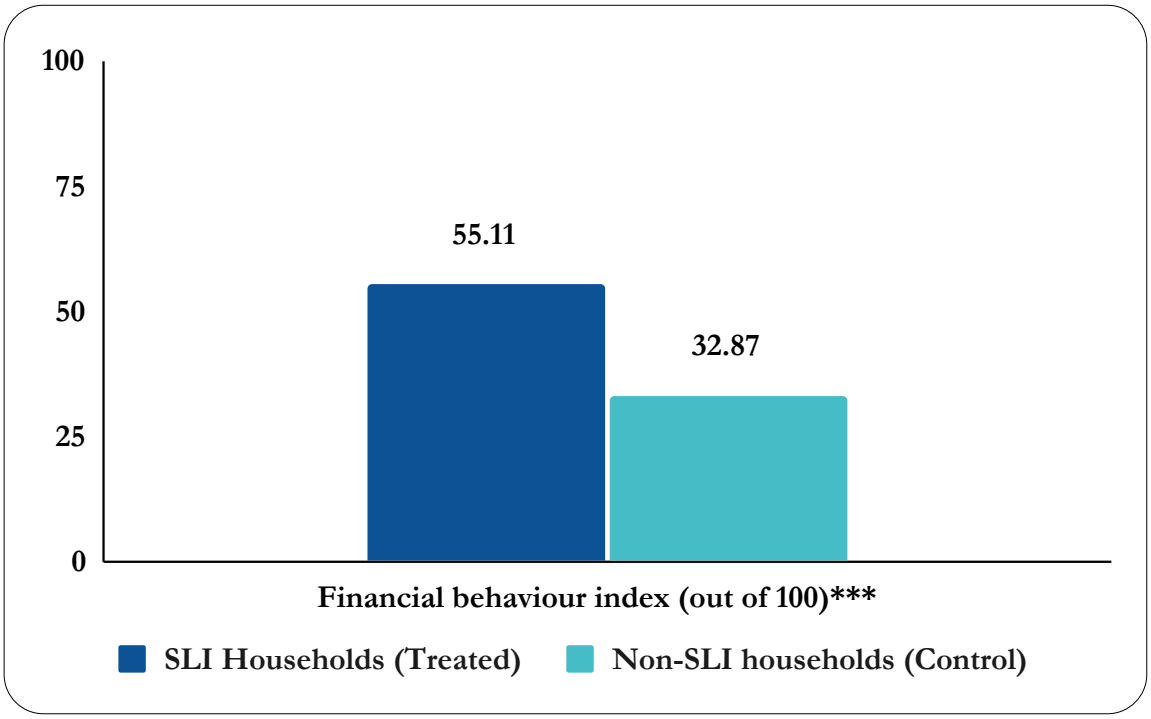
Savings mostly act as a financial cushion against financial stress or shortfalls. The findings depict that 44.86 % more SLI women are likely to prioritize saving than their counterparts. Additionally, 8.38% more SLI women were found to prioritise investments, when compared to their counterparts, which suggests a long-term prudent approach to finances. When it comes to maintaining a budget for income and expenses, SLI women account for 10.06% more than their opposite peers (Figure 4.1.1.1). Hence, in the case of the overall Financial Behaviour index, SLI households scored 22.24 index points more than their counterparts, with highly significant results. This starkly posits a favourable impact of SLI on financial behaviour of SLI women (Figure 4.1.1.2).

Figure 4.1.1.1: Impact of Program on Behavioural Thinking about Savings, Investment and Budgeting



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.1.1.2: Impact of Program on Financial Behaviour Index



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.1.2 Financial Attitude

Even if an individual has proficient financial behaviour, ample knowledge and ability to financially communicate and take prudent decisions, it is their attitude that determines their actions, playing one of the key roles in the financial literacy of a person.[19] This section gives insights into individuals' financial attitudes that could shape their financial position and thereby well-being in the long run. Financial Attitude Score is computed based on 7 statements that test a person's attitude towards money management and planning for the future. The Score is out of 7, where the statements are marked based on the degree of positive and negative response by the women.[20] Those respondents who "completely agree" to a statement are given a score of 1; "agree" is given 0.66; "neutral" is scored 0.33, while the rest of the negative responses are marked 0. The Financial Attitude Score is scaled to 100 to create a Financial Attitude Index.

Overall, Financial attitude index showed a positive impact of the SLI programme on the women, as SLI women scored 14.45 index points significantly more than the non-SLI women (Figure 4.1.2.2) Furthermore, SLI women, when compared to their counterparts, exhibited a consistent financially literate attitude when it came to specific attitude statements. The first statement gauges whether women make purchase decisions based on affordability of a product rather than readily purchasing products or services that are available in the market. In case of making a considered purchase, the SLI women scored 3.5% more than non-SLI women. The second statement explored women's attitude towards perceiving saving as more useful than spending. SLI women scored 20.11% higher than their counterparts when it came to exhibiting a positive attitude towards savings than spending.

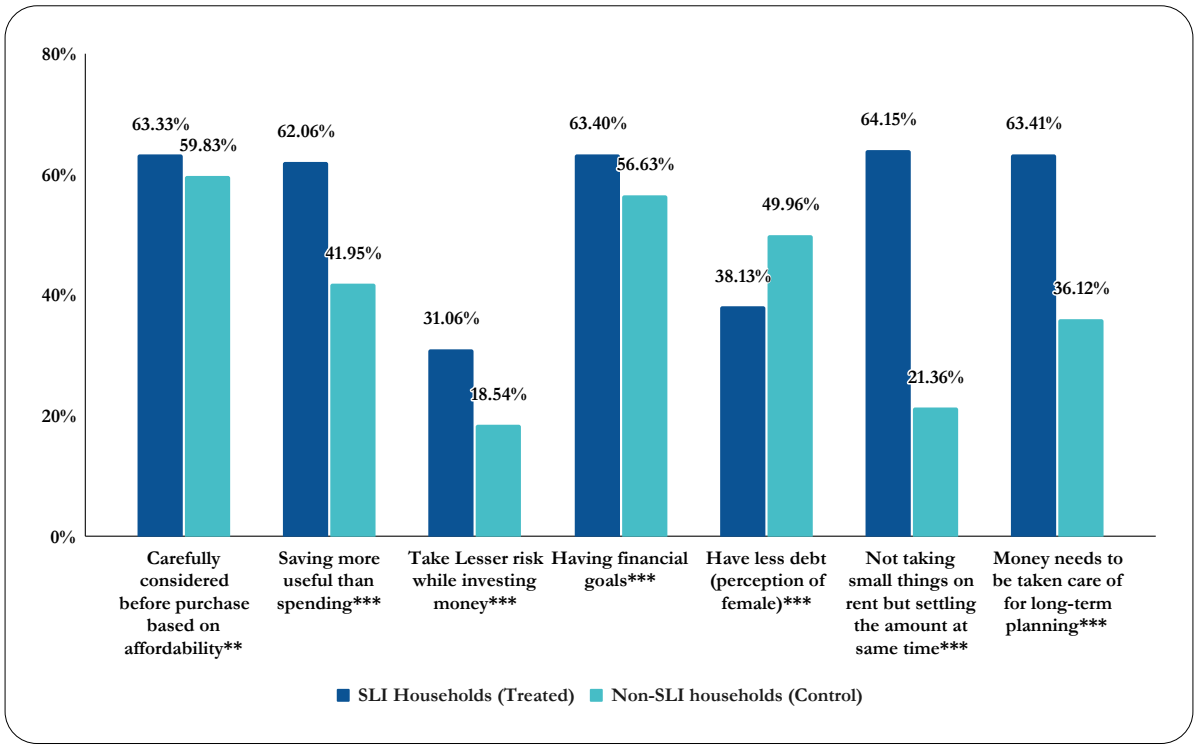
[19]OECD (2020), OECD/INFE 2020 International Survey of Adult Financial Literacy
www.oecd.org/financial/education/launchoftheoecdinfeglobalfinancialliteracysurveyreport.htm
[20]Completely agree, agree, neutral, disagree and completely disagree.

Further, the third one measured their attitude towards taking risks while investing money. Though risk increases the chance of earning more profits, making impulsive investments without evaluating the risk-return ratio is considered as an unwise attitude. Here, when it comes to taking lesser risk with investments, SLI women scored 12.52% higher than non-SLI women.

Having financial goals is thought to be essential for long term financial planning and in this too SLI women's score significantly outnumbered the non-SLI ones, by 6.77%. The next statement determined their attitude towards debt. Excess indebtedness is always considered unproductive as it puts any individual into financial stress. In contrast to the other results, women who are a part of SLI initiative scored 11.82% less than their counterparts in case of considering themselves in lower indebtedness. This may be due to the high number of loans taken by the SLI households compared to the non-SLI women.[21] The second last statement tested the respondents' attitude towards money flows and settling their bill on time rather than settling it later. SLI women scored 27.29% more in case of the attitude of settling money at the right time rather than making arrears, when compared to non-SLI women. Final statement tested whether respondents exhibited a positive attitude towards saving in the long run. SLI women scored significantly better than non-SLI women (27.29%) when it came to considering money as a component of long-term planning (Figure 4.1.2.1).

Overall, all the indicators of financial attitude show highly significant positive results towards SLI women compared to the non-SLI women except the indicator related to debt where the SLI female feels the burden of debt.

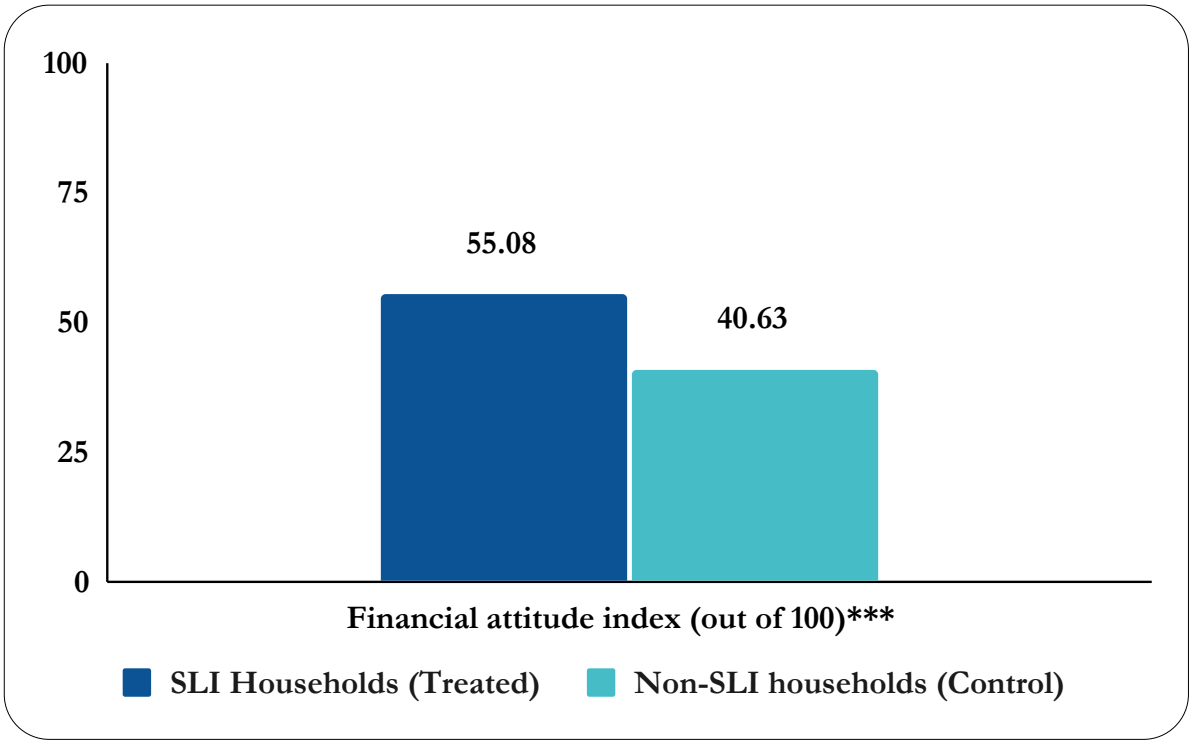
Figure 4.1.2.1: Impact of Program on Attitude towards Money and Planning for Future



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

[21]Refer to the section on Loan.

Figure 4.1.2.2: Impact of Program on Financial Attitude Index



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

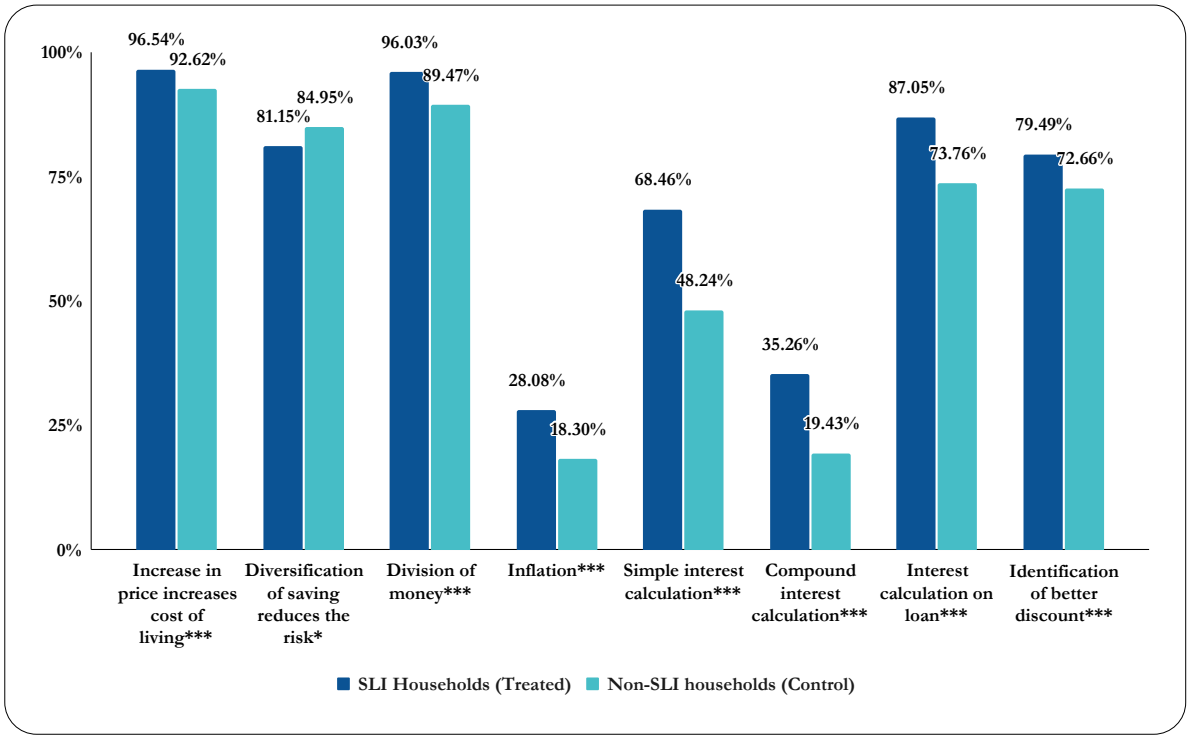
4.1.3 Financial Knowledge (Basic Knowledge and Analytical Skills)

Financial knowledge, a basic component of financial literacy, aids individuals in overcoming the information asymmetry in the financial system by enabling them to compare financial products and services in order to make informed decisions. Financial knowledge is a broader term that encompasses basic knowledge about financial concepts and analytical numeracy skills. This section contains questions to measure the level of knowledge on financial concepts like division of money, inflation, simple and cumulative benefits of interest (simple interest and compound interest), and interest rate on loan and risk (cost of investment).

We use the two sub scores- Basic Financial Knowledge Score and Analytical Literacy Score to gauge the overall financial knowledge, where each correct answer is scored as 1 and incorrect as 0. The Basic Financial Knowledge score and Analytical Literacy score are on 3 and 6 respectively. The Scores are scaled to 100 to form Basic Financial Knowledge Index and Analytical Literacy Index.

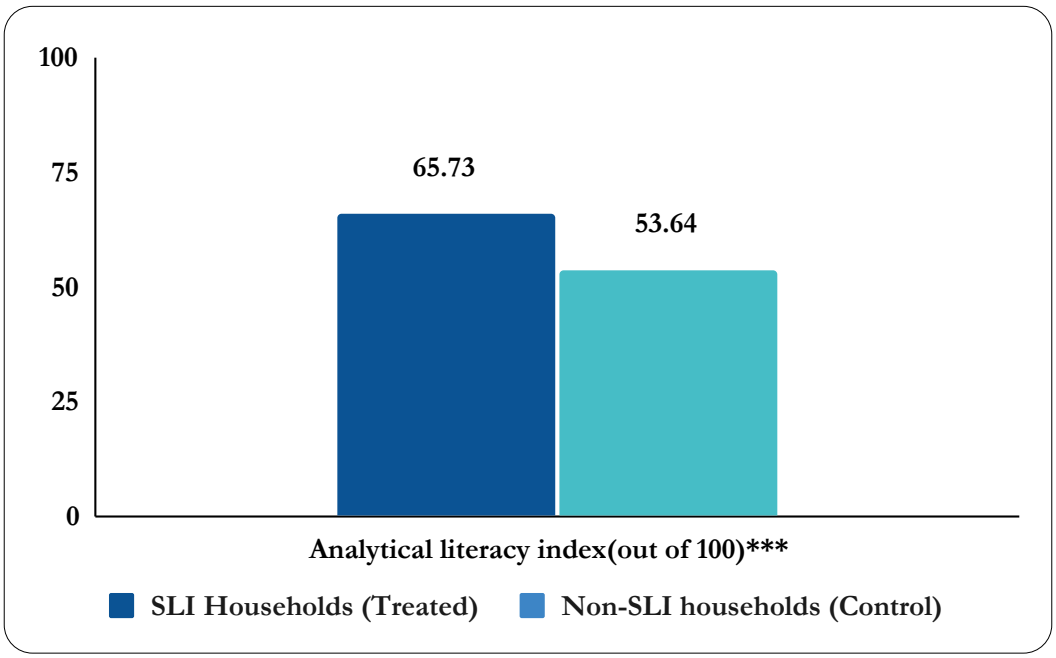
In the case of the Basic Financial Knowledge Index, we observe no significant difference between the SLI women and non-SLI women. However, in case of individual questions testing their understanding on the impact of price increase on the cost of living, there is a significantly higher percentage (3.92%) of SLI women answering it correctly than their counterparts. On the other hand, for the questions on risk and diversification of savings, the difference between the two groups were insignificant and weakly significant respectively (Figure 4.1.3.1).

Figure 4.1.3.1: Impact of Program on Basic Financial Knowledge and Analytical Skills



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.1.3.2: Impact of Program on Analytical Literacy Index



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

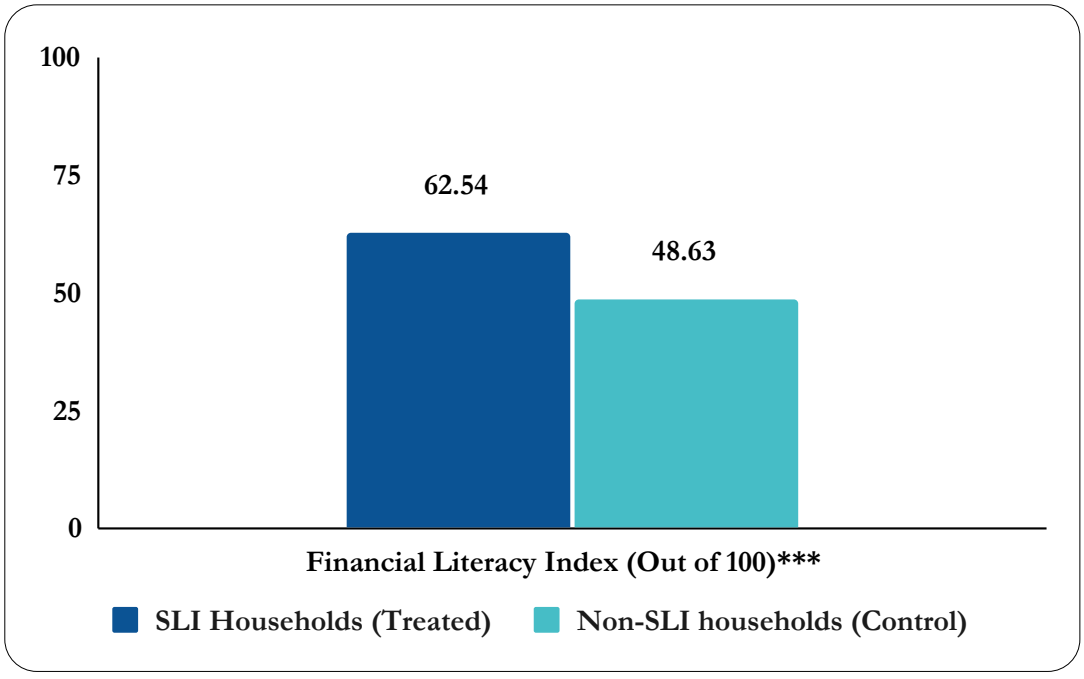
With regard to Analytical Literacy Index, we could see SLI households have scored 12.08 index points more than the non-SLI households (Figure 4.1.3.2). Specific analysis of each of the 6 basic analytical literacy questions reflects the positive impact of the SLI on women's analytical numeracy skills. The question on inflation (time value of money) was correctly answered by 10% more SLI women

than the non-SLI women. Over 9% more SLI women respondents accurately answered question on division of money[22] than their counterparts; about 20% and 16% more SLI women respondents accurately answered compound and simple interest questions, respectively. Further, on questions on interest calculation on loan and identification of better discount options, a significantly higher proportion of SLI women answered correctly than their counterparts (Figure 4.1.3.1). Overall, in all the questions testing analytical skills of women, SLI women overperformed non-SLI women. However, small differences were observed between the women of the two groups on questions assessing basic financial knowledge.

4.1.4 Financial Literacy Index

Financial literacy is the combination of awareness, prudent financial behaviour and attitude and basic financial skills, that is imperative for an individual to make well-informed decisions in order to achieve an individual's financial well-being. Financial literacy Index is the sum of Financial Behaviour Index, Financial Attitude Index and Financial Knowledge Index (Basic Financial Knowledge and Analytical Skills) converted to the scale of 100. The results highlight a significantly positive impact of SLI programme on women's financial literacy. To qualify it further, SLI women scored 13.91 index points more than their counterparts (Figure 4.1.4.1). Overall, the findings showed that financial behaviour, attitude and knowledge (especially analytical skills) of the SLI women is much better than the non-SLI women which contributes to the overall financial literacy of the women. The positive result of SLI women's financial literacy is also reflected in the findings presented in the savings and loan section where we do find higher preference of SLI women and their households towards formal sources rather than the informal sources.

Figure 4.1.4.1: Impact of Program on Financial Literacy Index



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

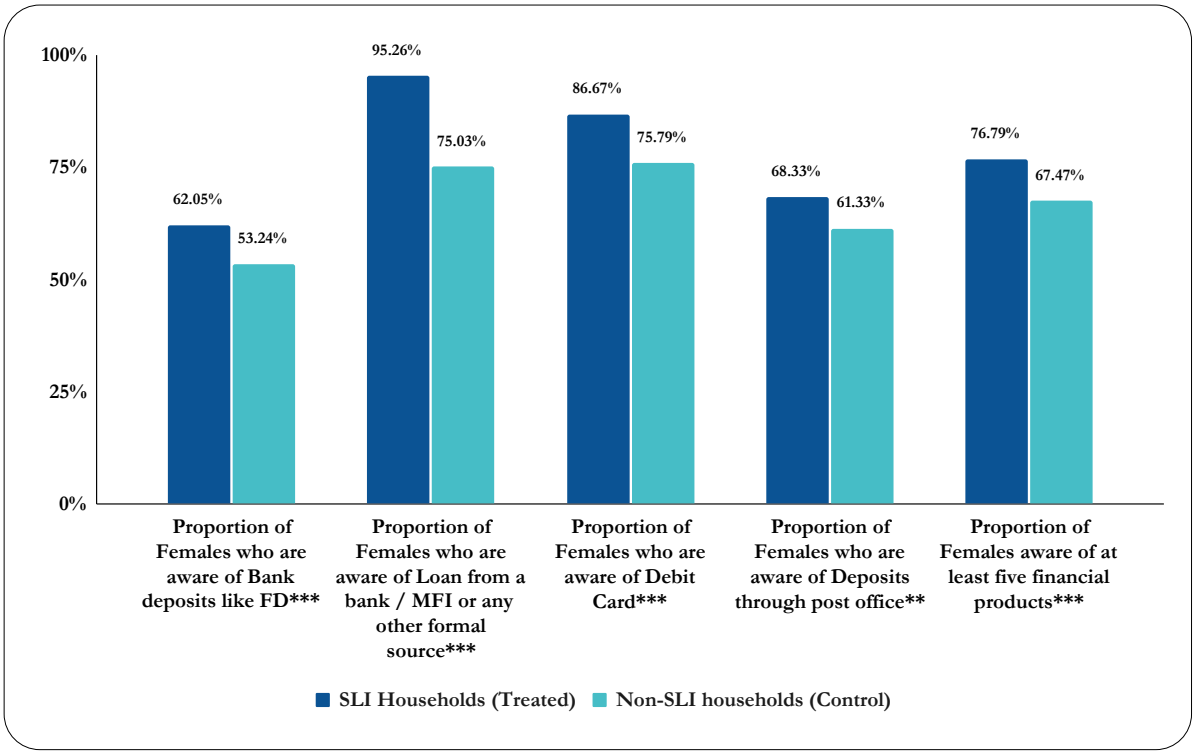
[22]Question was related to a hypothetical situation, where three persons were given a combined sum and were asked to divide it equally among them.

4.1.5 Awareness of Financial Products / Services

Awareness on various financial products or services measures the extent of financial inclusion among women. Financial literacy and financial inclusion work in tandem, and are vital for the empowerment of any individual. In this study, awareness on financial products or services like bank account (savings), Fixed Deposits, loan from bank or Micro Finance institutions (MFIs), insurance, debit card, internet banking, pension fund and post office savings were explored. Financial awareness is quantified using a Financial Awareness Score, where a score of 1 is given if women's response is "Yes" regarding awareness of a product (i.e., if they have ever heard about the product) or else 0, totalling the score to 8. The score is then scaled to 100 to form a Financial Awareness Index.

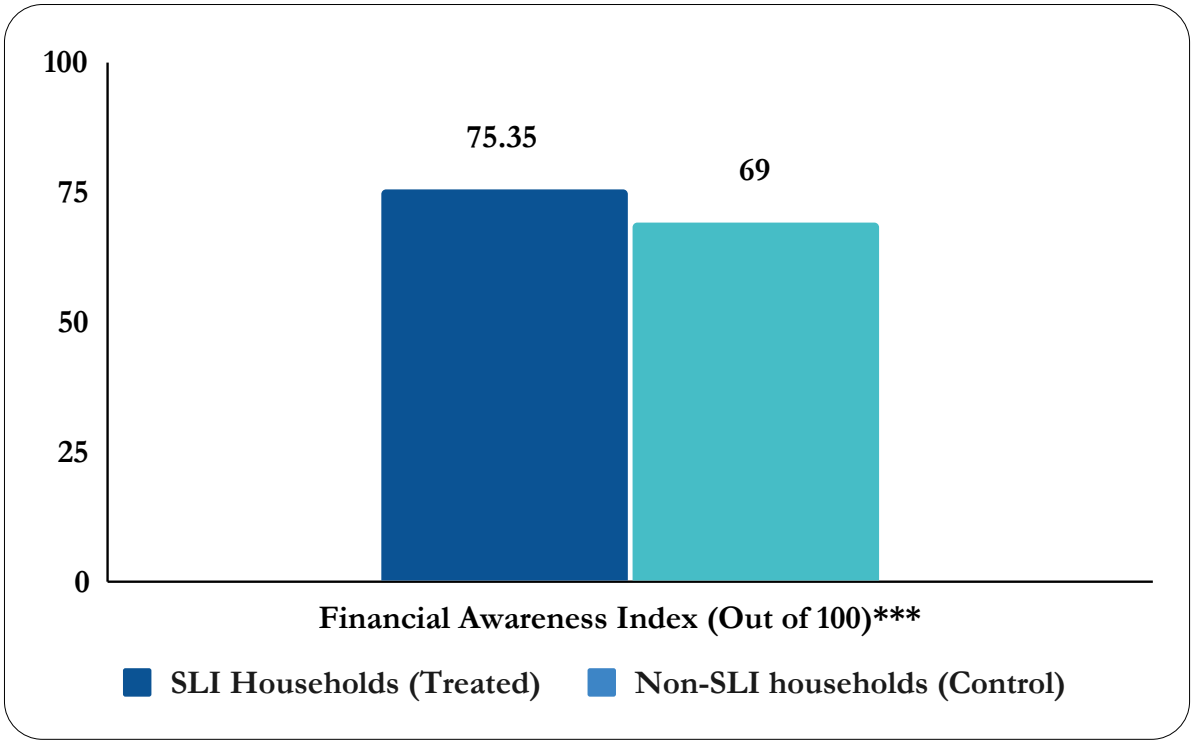
In case of fixed deposits, the proportion of SLI women who are aware are 8.81% more than the non-SLI women, whereas for loans from MFIs or banks, 20.23% more SLI households are aware than non-SLI women. Furthermore, SLI women are 10.88% more likely to know about debit cards than non-SLI women. Additionally, with regard to the deposits through the post office, 7% more SLI women are familiar than their counterparts. Finally, when it comes to awareness regarding at least five financial products/services out of the eight, SLI women are 9.32% more likely to know about them than their counterparts (Figure 4.1.5.1). Overall, in the Financial Awareness Index, SLI women scored 6.35 index points higher than their counterparts (Figure 4.1.5.2). However, SLI and non-SLI women showed no significant difference in their awareness of products or services like savings bank accounts, insurance, mobile or internet banking, or pension plans. The effect size of differences in the financial awareness regarding financial products and services is significant and moderately positive for SLI households.

Figure 4.1.5.1: Impact of Program on the Proportion of Females aware of Financial Products/ Services



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.1.5.2: Impact of Program on Financial Awareness Index



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.1.6 Usage of Financial Products / Services

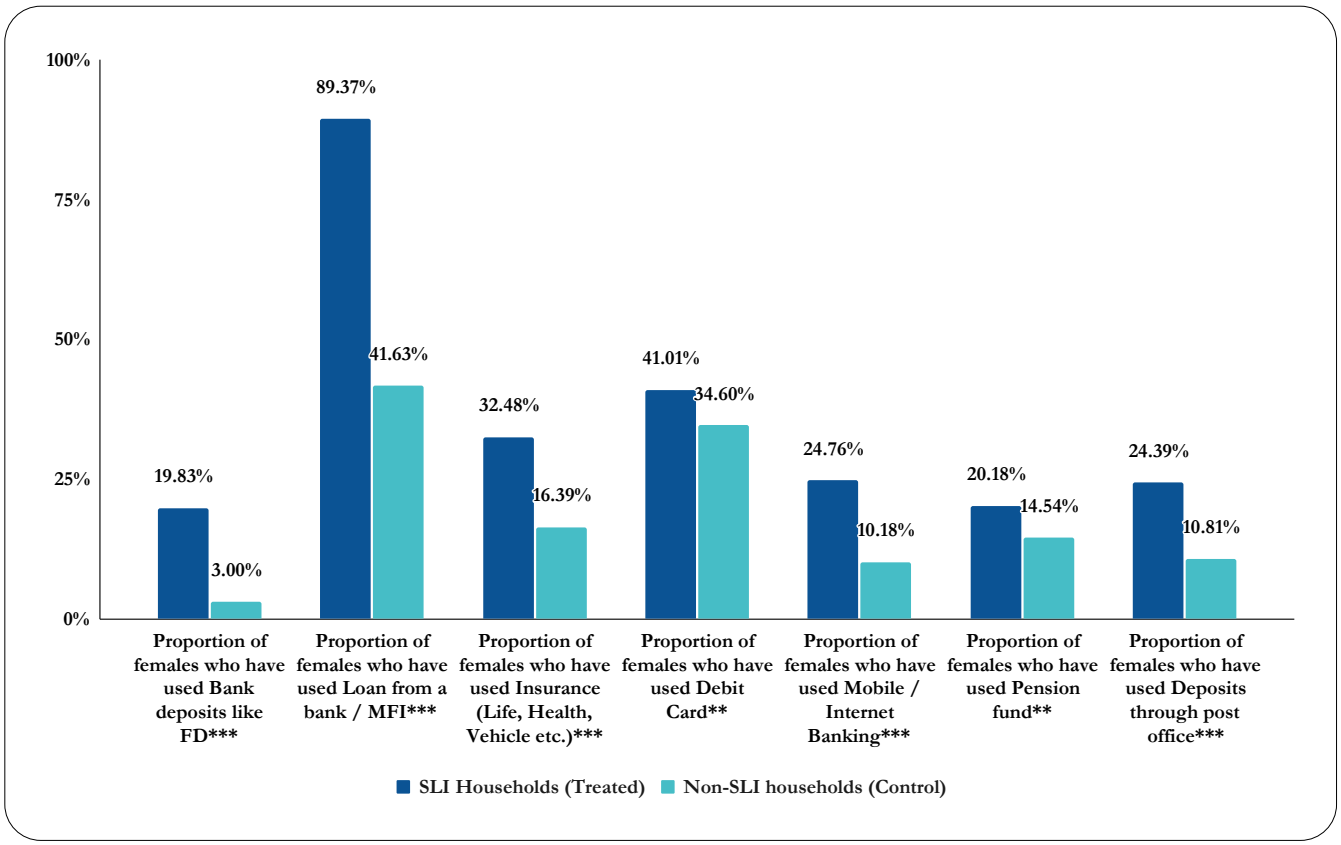
Financial inclusion necessitates both the awareness as well as use of financial products or services. We examined whether the females who are aware about the products or services mentioned in the financial awareness section have ever used them or not. The usage of the products or services is measured using the Financial Product Usage Score, where women who responded "Yes" are given a score of 1, else 0, resulting in an overall score of 8. The score is then scaled to 100 to form the Financial Product Usage Index.

The proportion of SLI women who have ever used Fixed Deposit are 16.84% more than the non-SLI women, whereas those who have availed credit products like loans from banks or MFIs are 47.75% more than non-SLI women. When it comes to the use of payment products/services like debit cards and internet banking, 6.41% and 14.57% more SLI women respectively had handled them some or the other time during their life, when compared to the non-SLI women. Further, with regard to use of investment products like deposits through post office and insurance, 13.58% and 16.08% more SLI women respectively utilised such products when compared to their counterparts. Additionally, 5.64% more SLI women have used pension funds than their counterparts (Figure 4.1.6.1). Also, the proportion of women who have used at least three financial products or services out of eight and at least five financial products or services out of eight is 31.56% and 7.65% higher among SLI women than their counterparts (Figure 4.1.6.2). Overall, in the Financial Product Usage Index, SLI women scored 13.01% more than their counterparts (Figure 4.1.6.3).

Overall, the results also show that although the difference between SLI and non-SLI women is not

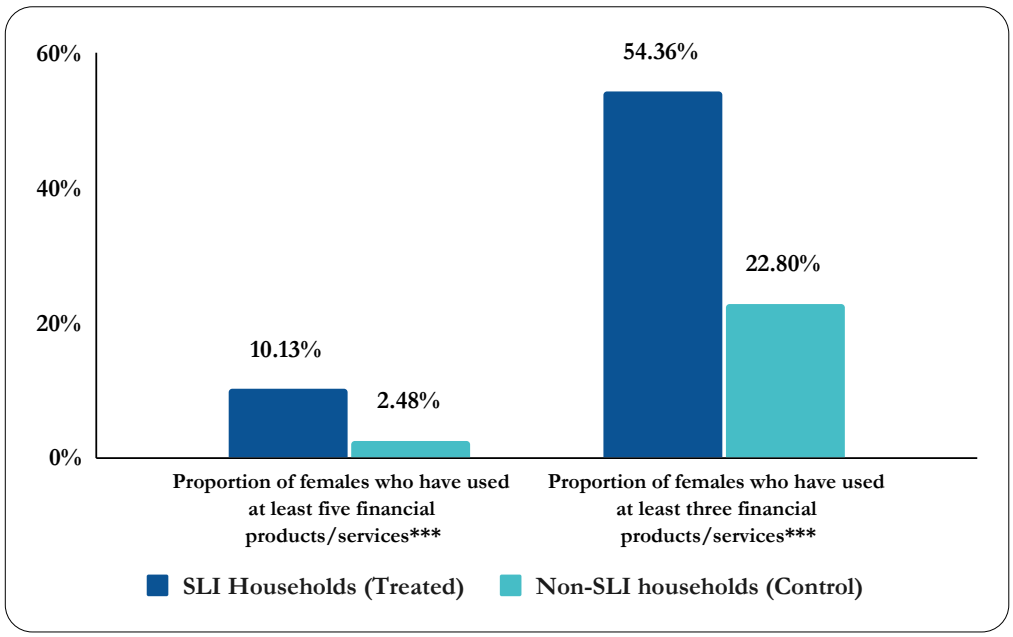
huge in terms of awareness regarding financial products or services, SLI women who have used these products or services are much higher than the non-SLI women. This shows how training programs under SLI on financial literacy have helped women to understand the importance of financial products and services leading to greater financial inclusion of SLI women.

Figure 4.1.6.1: Impact of Program on Usage of Financial Products/Services



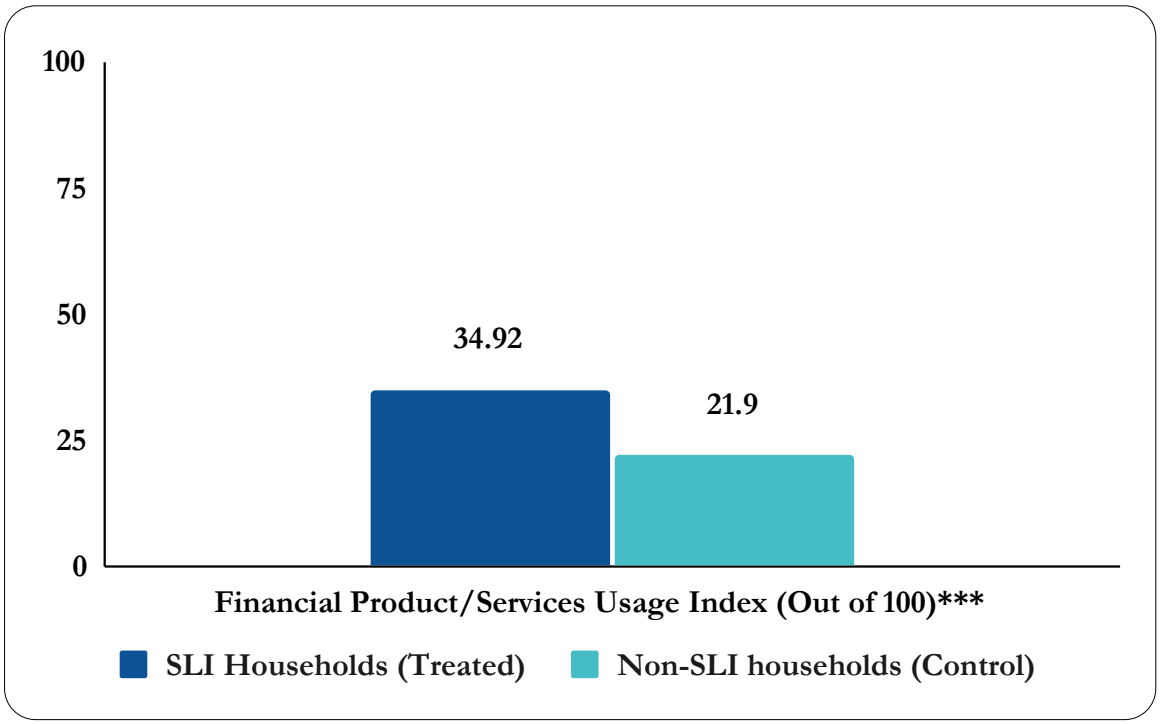
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.1.6.2: Impact of Program on the Proportion of Females using Financial Products/ Services



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.1.6.3: Impact of Program on Financial Product/Services Usage Index



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

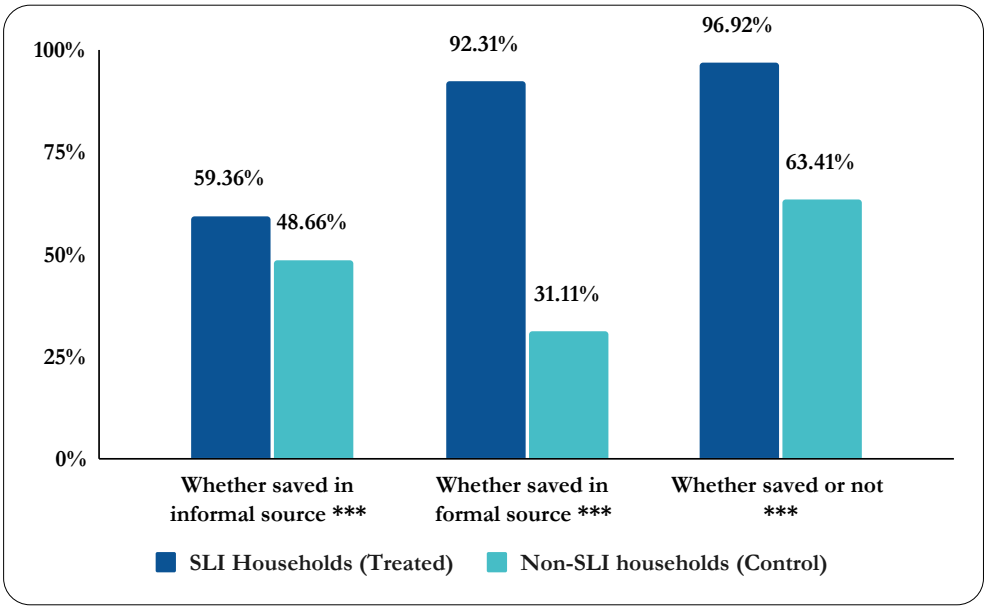
4.2 Saving Habit

Key Highlights on Saving Habit

- SLI households save 120.13% (INR 347.27) more in formal sources, which is also evident in their 118.89% higher per capita formal savings, positively pushing their total savings and per capita savings.
- No considerable difference is observed in the informal savings between the SLI and non-SLI households.
- SLI households are found to be more likely to save in formal institutions than informal sources, underscored by the 34.8% higher share of formal savings in their total savings and 33.5% more SLI households practising saving.
- While analysing formal savings after removing SHGs, it is observed that even then the preference of SLI households towards formal sources is higher but with reduced effect size (5.76% higher share of formal savings).

A major goal of all microfinance programmes is to instil the habit of saving, as it would have a butterfly effect in the overall economic system, especially when the savings are channelled to formal sources such as banks, microfinance institutions, SHGs, and so on. Figure 4.2.1 underlines such positive behaviour among the SLI households, where the percentage of SLI households practising savings are 33.51% more than non-SLI households. Though the percentage of SLI households saving in formal and informal sources are significantly higher than the their opposite equivalents, SLI Households are found to be more likely to save in formal financial institutions (92.31%) than informal sources (56.36%) like relatives, moneylenders, and saving at home.

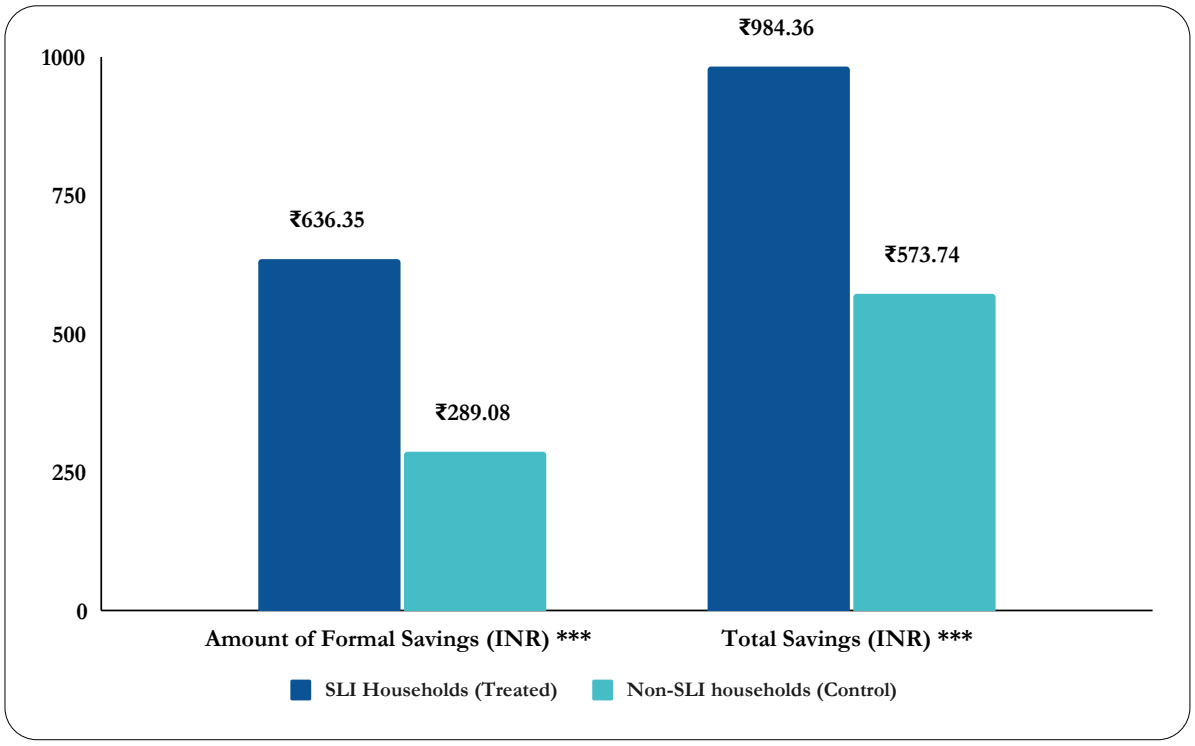
Figure 4.2.1: Impact of Program on Saving Habit of the Households



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

The positive impacts of any livelihood programme can easily be reflected in household savings. Savings are indicative of a healthy financial behaviour which makes households prepare for rainy days and also facilitates financial inclusion. The results clearly point to the positive impact of the Sustainable Livelihood Initiative (SLI) on the saving behaviour of the SLI households (Figure 4.2.2 and 4.2.3). In the case of formal savings, SLI households save 120.13% (INR 347.27) more than non-SLI households. Furthermore, per capita formal savings are also 118.89% higher for the same group of households when compared with their counterparts. However, there has not been much of a considerable difference in the informal savings between them. Altogether, the higher formal savings of the SLI households have significantly pushed their total savings and per capita savings, when compared to their counterparts, which is corroborated by their higher total savings (71.57%) and per capita savings (66.79%). Such a shift towards saving in formal financial institutions is a positive behaviour which has been induced by the SLI over the period of time.

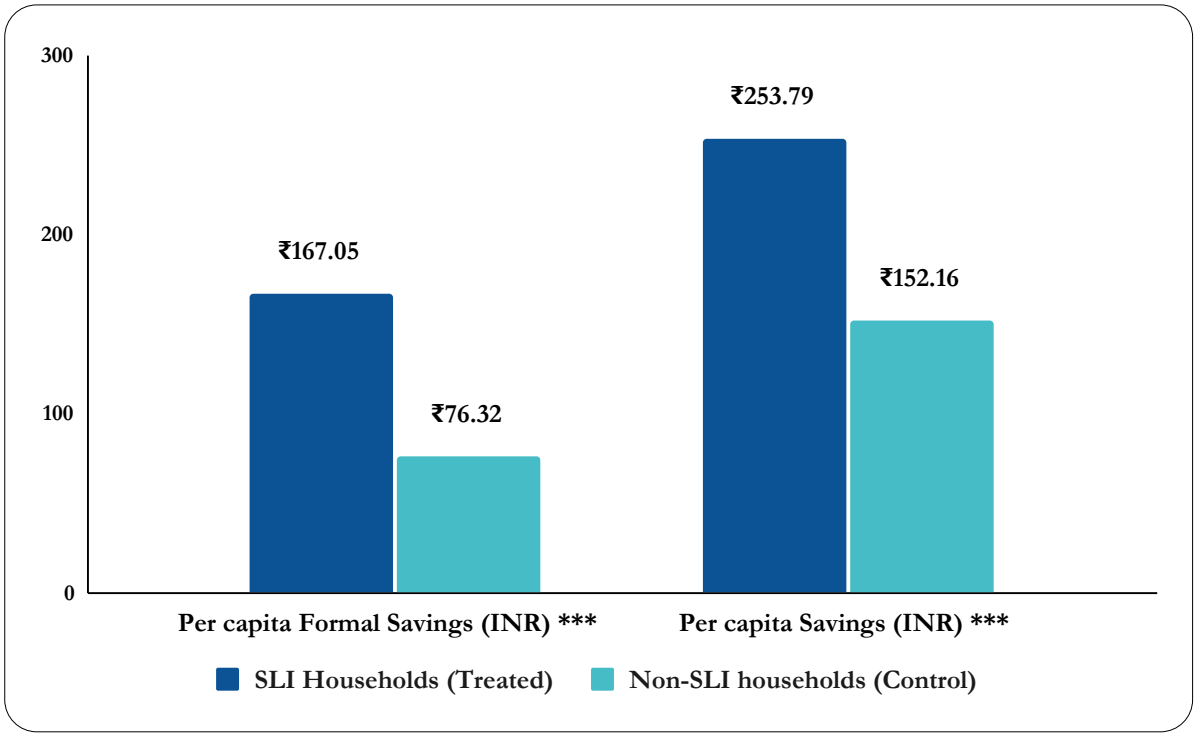
Figure 4.2.2: Impact of Program on the Amount of Monthly Savings of the Household



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

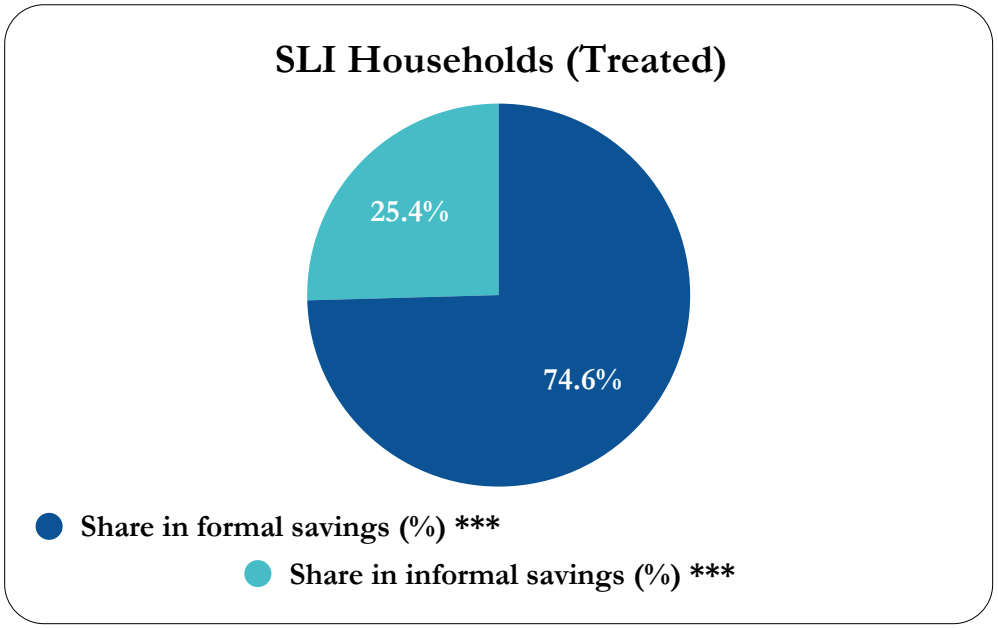
Besides, the increased preference towards formal sources is further evident from the 34.8% higher share of formal savings in their total savings for the SLI households than their counterparts (Figure 4.2.4).

Figure 4.2.3: Impact of Program on Per Capita Savings of the Household

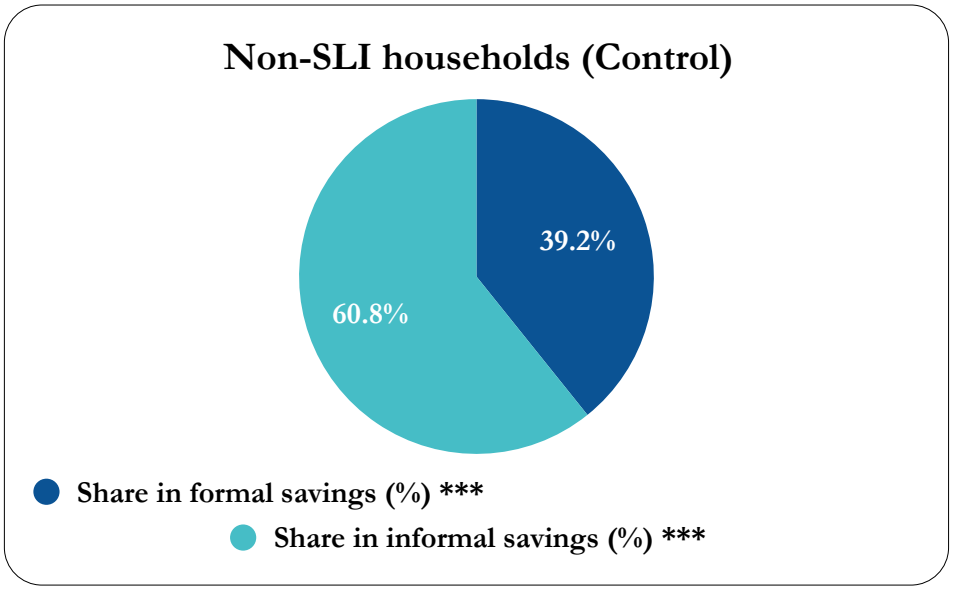


Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.2.4: Impact of Program on Share of Formal and Informal Savings of the Households



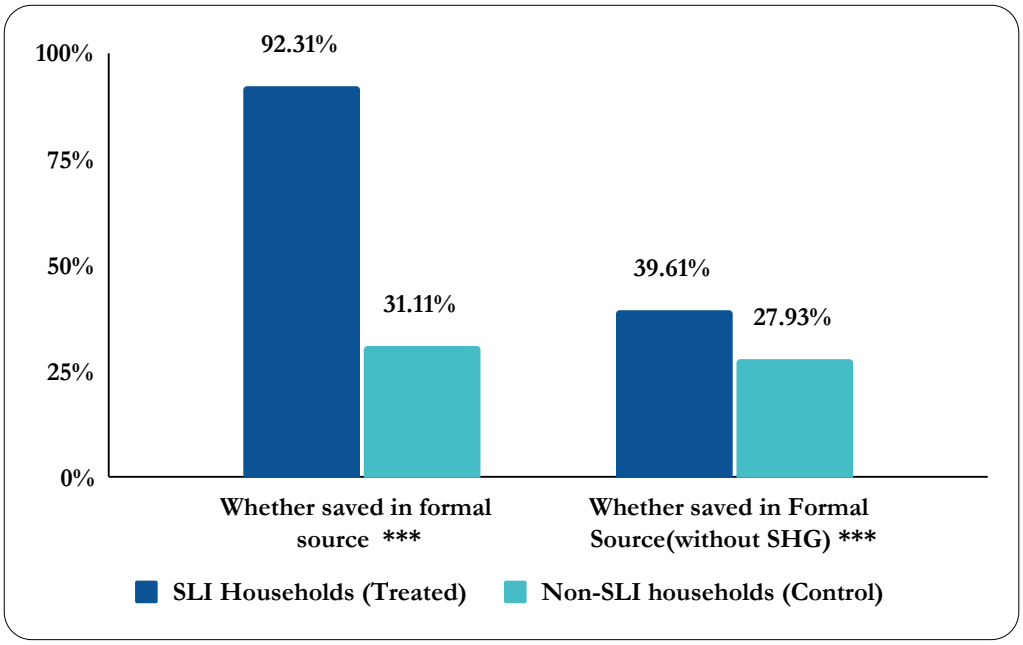
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

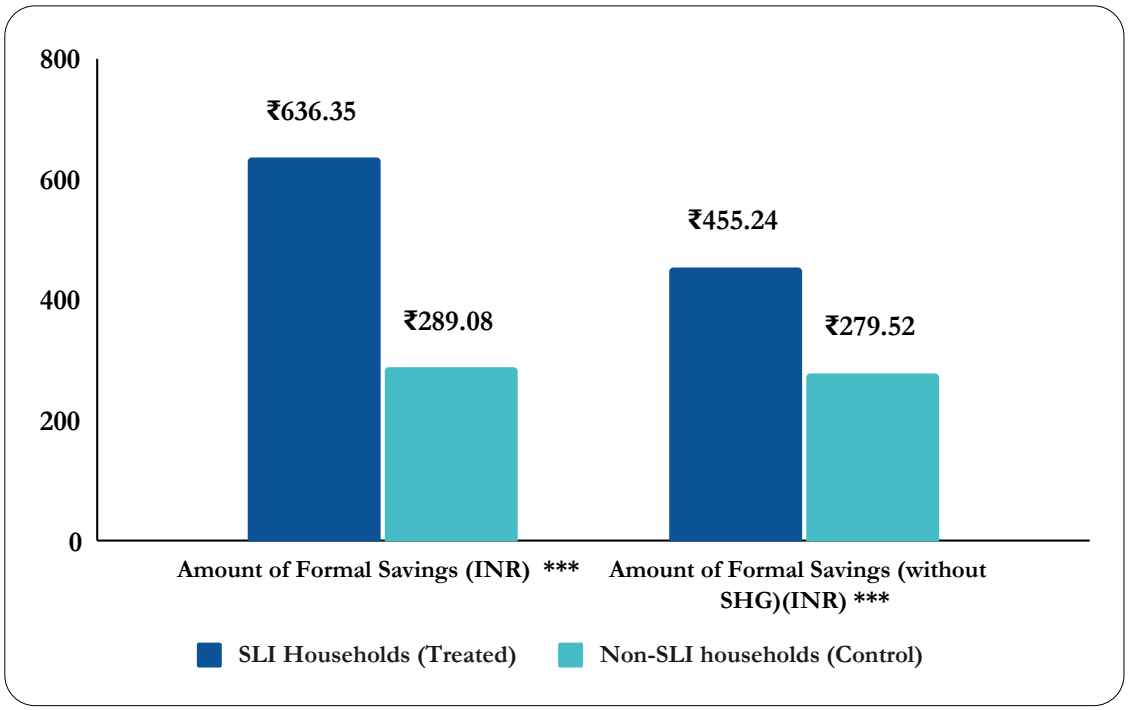
Impact evaluation studies have observed a higher preference for SHG households to save in SHGs when it comes to formal savings. Hence, to test that proposition, an analysis was conducted by removing SHG savings from the formal savings to check whether the sprouting of savings habits that is being inculcated among the SHG members is only due to SHGs or other formal sources are also playing a major role. The results in Figure 4.2.5 depict, when SHG savings are removed from the formal sources then also the preference of the SLI households towards formal savings is higher than the non-SLI households, although the effect size has reduced. The amount of formal savings and per capita formal savings remain significantly higher for SLI households when compared to non-SLI ones despite SHG savings being removed (Figure 4.2.6). However, the share of formal savings of the former is only 5.76 percent higher in comparison to the latter (Figure 4.2.7).

Figure 4.2.5: Impact of Program on Saving Habit in Formal Sources with and without SHGs



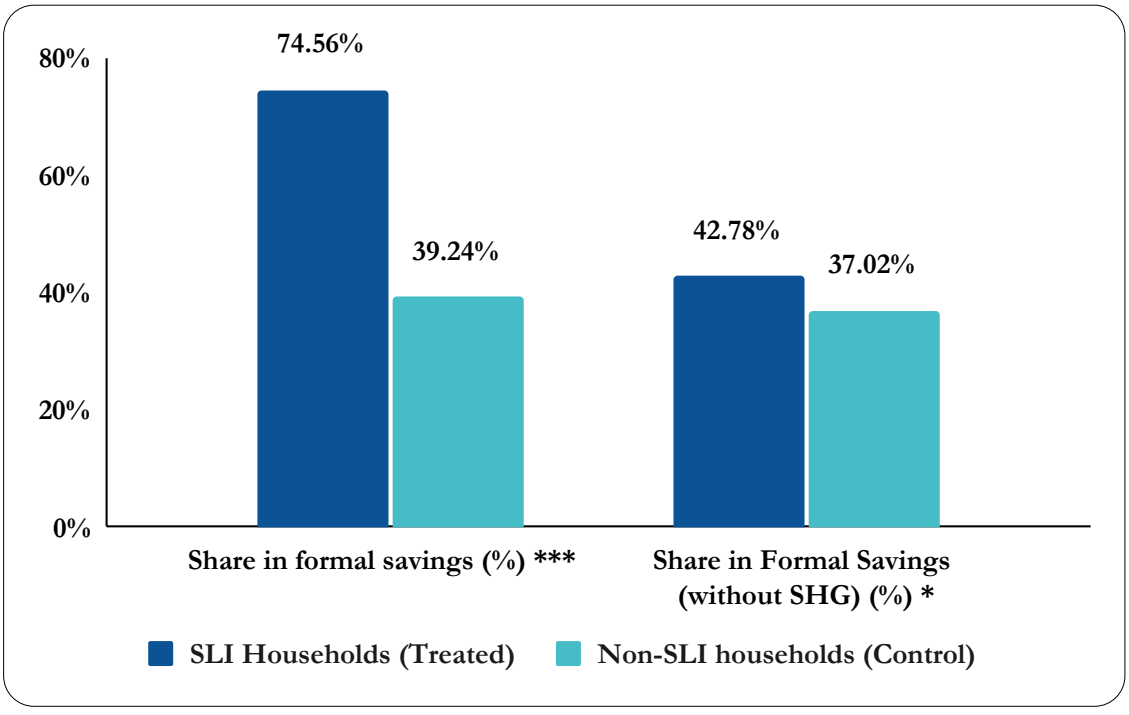
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.2.6: Impact of Program on Formal Savings with and without SHGs.



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.2.7: Impact of Program on Share of Formal Savings with and without SHGs.



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Overall, the aforementioned results show that the SLI program has made a positive impact on the saving habit and has infused thrift habits among the program households, especially towards formal sources than the informal ones.

4.3 Loan behaviour

Key Highlights on Loan Behaviour

A significantly higher proportion, 45.13% more SLI households are found to be taking loans than their non-SLI counterparts.

SLI households rely more on formal credit sources as 55.23% more of them depend on it for their credit needs, taking 1 more formal loan than non-SLI households on an average.

The average number of loans taken by female members of SLI households is 1.04 more, adding to the fact that the proportion of females taking loans is 57.67% higher than the non-SLI households.

The average amount of the formal loans taken by SLI households is 45.01% lesser as a probable consequence of the HDFC and SHG internal loans being smaller in size, ranging between 50,000 and 65,000.

38% higher percentage of loans taken by SLI households did not require collateral, although 23% higher proportion of the loans taken by them required a co-signer. There was no significant difference observed in the interest rate charged for the loans taken by SLI and non-SLI households, with the average interest rate standing at 14.9 and 14.84 respectively.

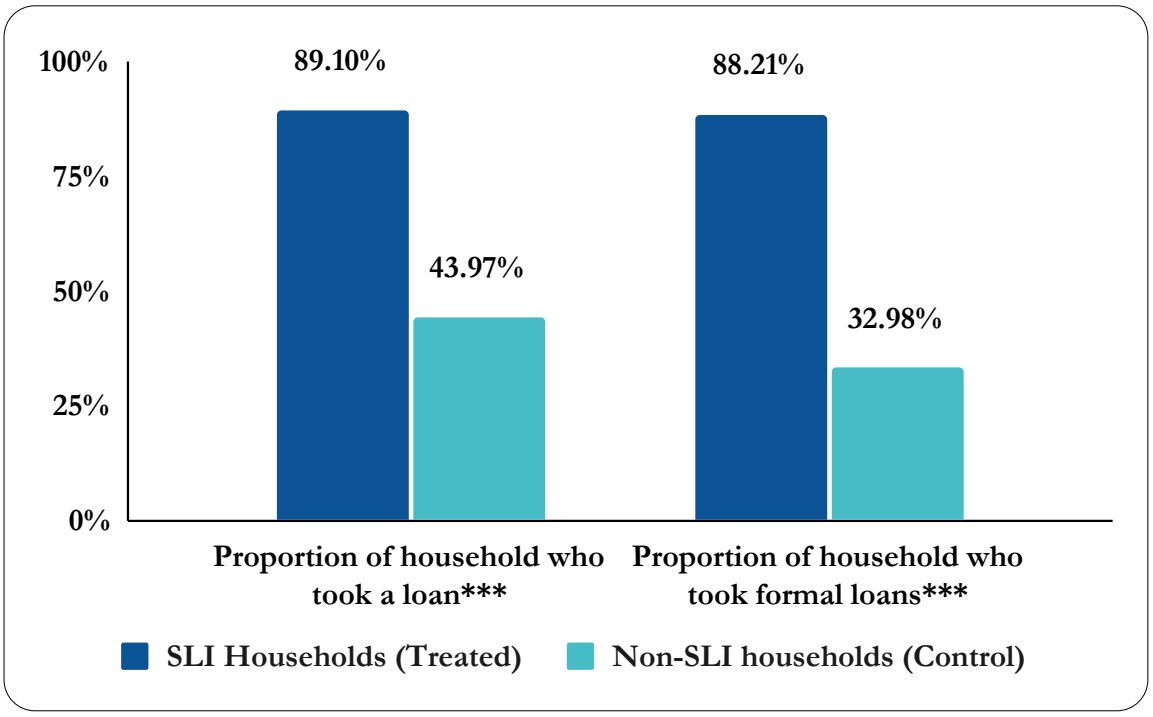
Looking at the loan utilisation, a higher number of SLI households tend to take consumption, enterprise and livestock loans. On the contrary, there seems to be a lesser demand for medical and agricultural loans among the SLI households.

4.3.1 Impact of Program on Households Borrowing Behaviour

For rural households, informal credit sources are often more accessible during financial shortfalls, as formal financial institutions, known for their high requirements (like collaterals, co-signer and so on) and creditworthiness standards, are mostly out of reach for them. Microcredit programmes like SLI bridge the credit gap by providing hassle-free credit and thereby instilling in them a positive loan behaviour, hence making them more dependent on formal credit systems like banks and MFIs. The results reiterate the inculcation of similar behaviour in the SLI households, where a significantly higher proportion (45.13%) of them are found to be taking loans and the average number of loans taken is one more than the non-SLI households (Figure 4.3.1.1 and 4.3.1.2). Reliance on formal credit sources could be gauged from the fact that a significantly higher (55.23% more) proportion of SLI households depend on formal sources for their credit needs and take on average one formal loan more than their counterparts (Figure 4.3.1.1 and 4.3.1.2). Likewise, the share of formal loans

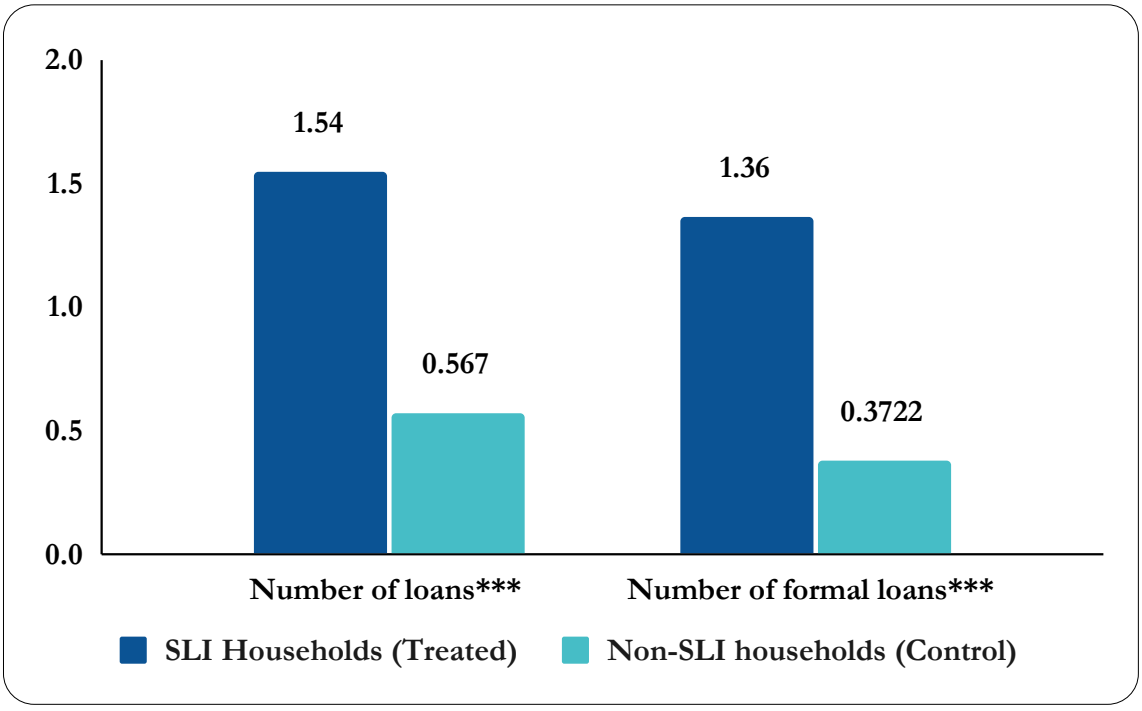
of the total loans taken is significantly higher (24.4% more) for the SLI households (Figure 4.3.1.3). Though non-SLI households depend more on informal loans than the programme participants, the differences are not significant.

Figure 4.3.1.1: Impact of Program on the Proportion of Households who Took Loans



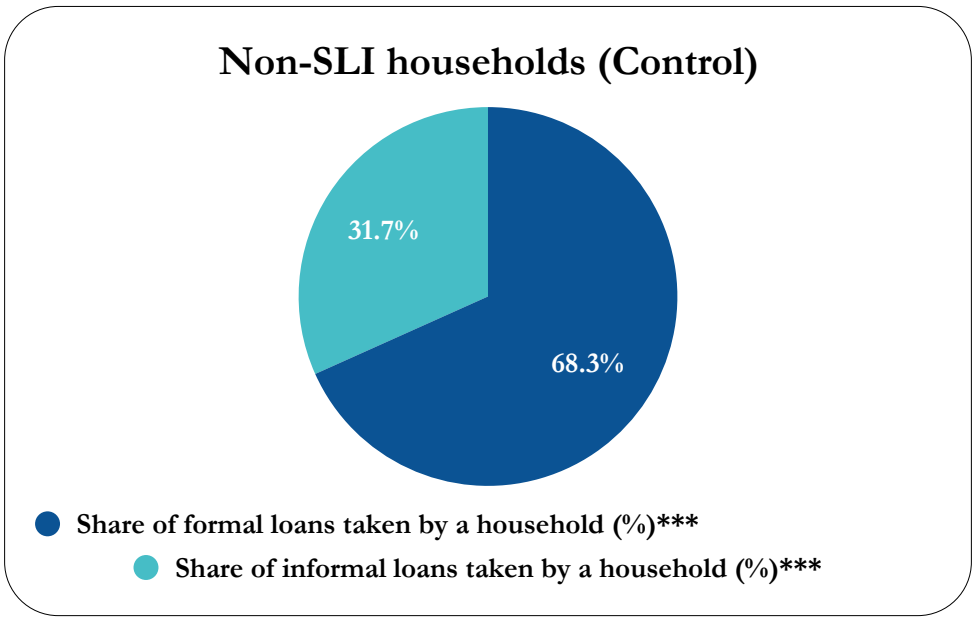
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.3.1.2: Impact of Program on the Average Number of Loans Taken per Household

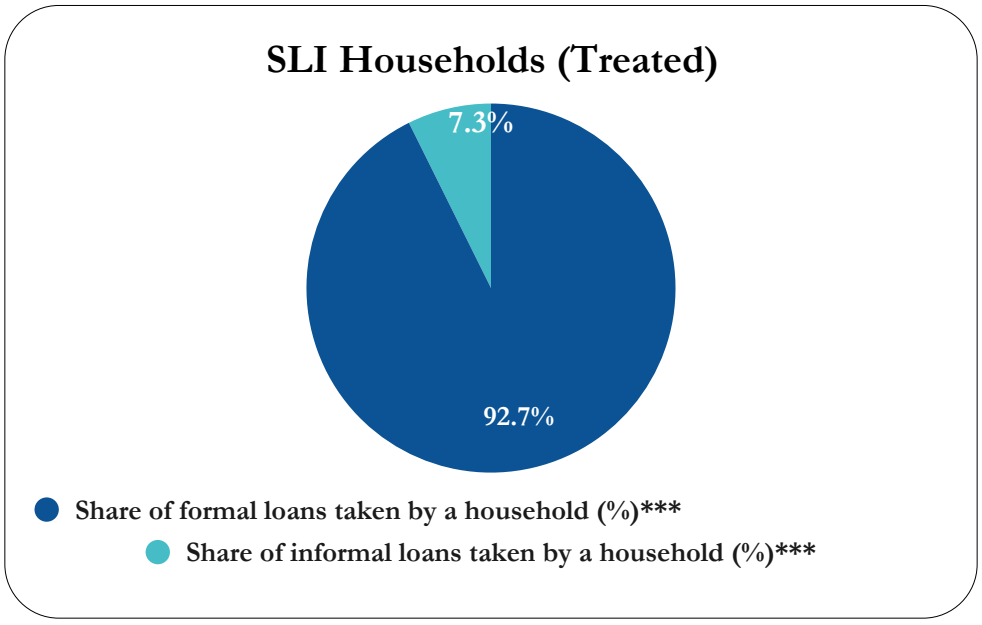


Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.3.1.3: Impact of Program on the Share of Formal and Informal Loans Taken by Households



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.



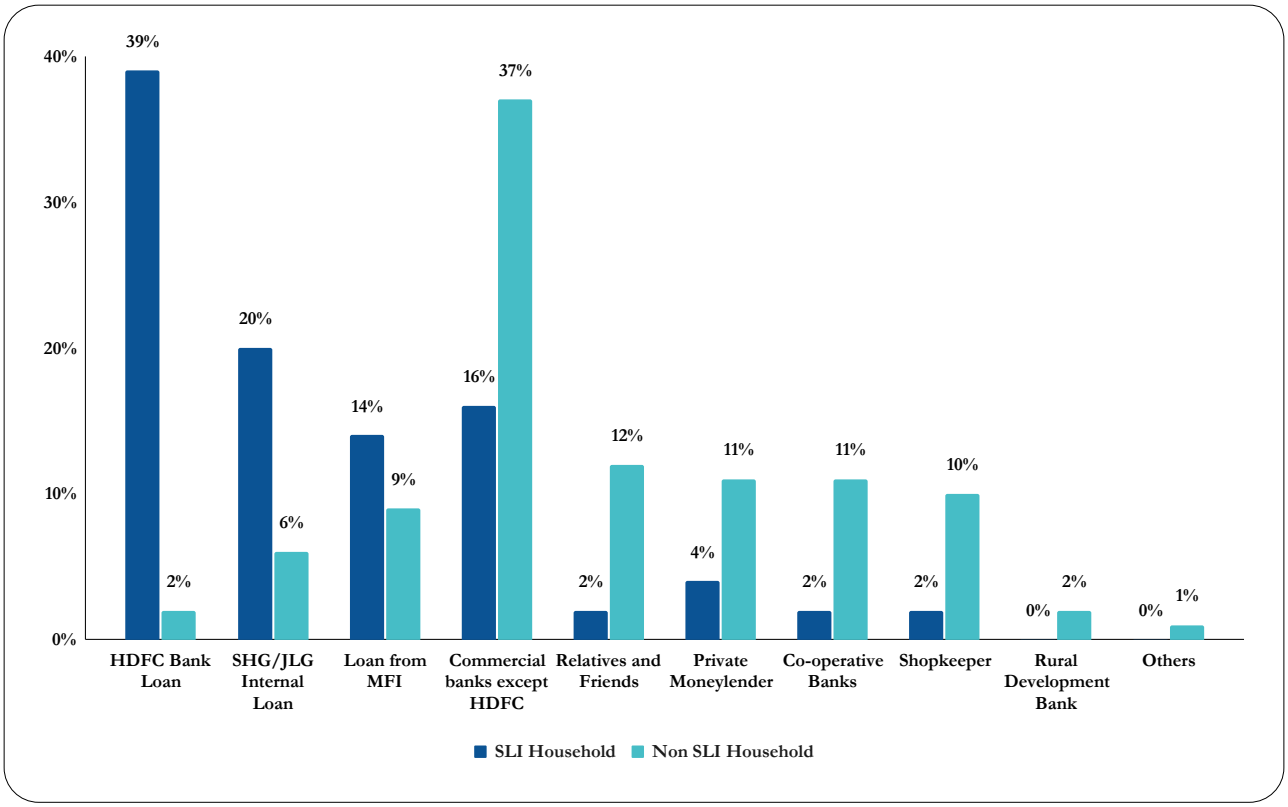
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Distribution of the Sources of Loan

The primary sources of credit for the SLI Households consist mainly of formal institutions. The highest percentage of loans (39%) have been taken from HDFC Bank Loan, followed by SHG/JLG Internal Loans (20%). Other major formal sources being other banks (16%) and microfinance institutions (MFIs) (16%). These add up to close to nine-tenth of the total number of loans taken by SLI Households (Figure 4.3.1.4).

Similarly, for the non-SLI Households the maximum number of loans have been taken from banks (37%). However, they are followed by a majority of informal sources which include Relatives and friends (12%), private money-lenders (11%) and shopkeepers (10%). These three informal sources account for about one-third of the total number of loans taken by non-SLI households.

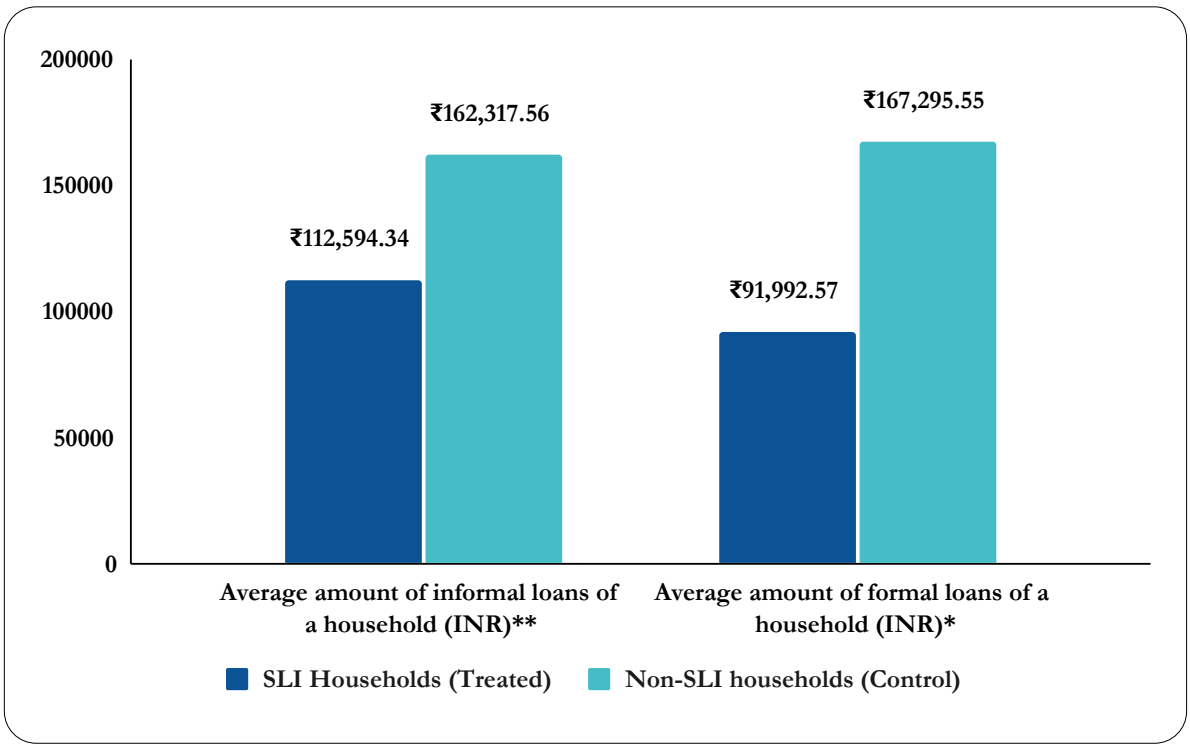
Figure 4.3.1.4: Distribution of the Sources of Loan



4.3.2 Impact of Program on Size and Duration of Loan

Similar in line with the aforementioned findings, informal loans occupy an inferior position in the loan basket of SLI households. To qualify it further, the average amount of the informal loan is 30.63% less for the SLI households when compared to non- SLI households (Figure 4.3.2.1). Though the number and share of formal loans taken by the SLI households were significantly higher, the average amount of the formal loans is 45.01% less for SLI households than their counterparts, but the result is weakly significant. This could be due to the fact that more than 50% of the credit availed by SLI households are HDFC bank loan and SHG/JLG internal savings loan, which are smaller in size (ranges between 50,000 and 65000) when compared to the loans availed by non-SLI households which are mostly from banks with a higher loan size. The other reason could be the smaller number of formal loans taken by the non-SLI households compared with SLI households. Further, the moratorium period and duration of loans taken by SLI households are lesser compared to non -SLI ones, but the differences are insignificant.

Figure 4.3.2.1: Impact of Program on the Average Amount of Loans



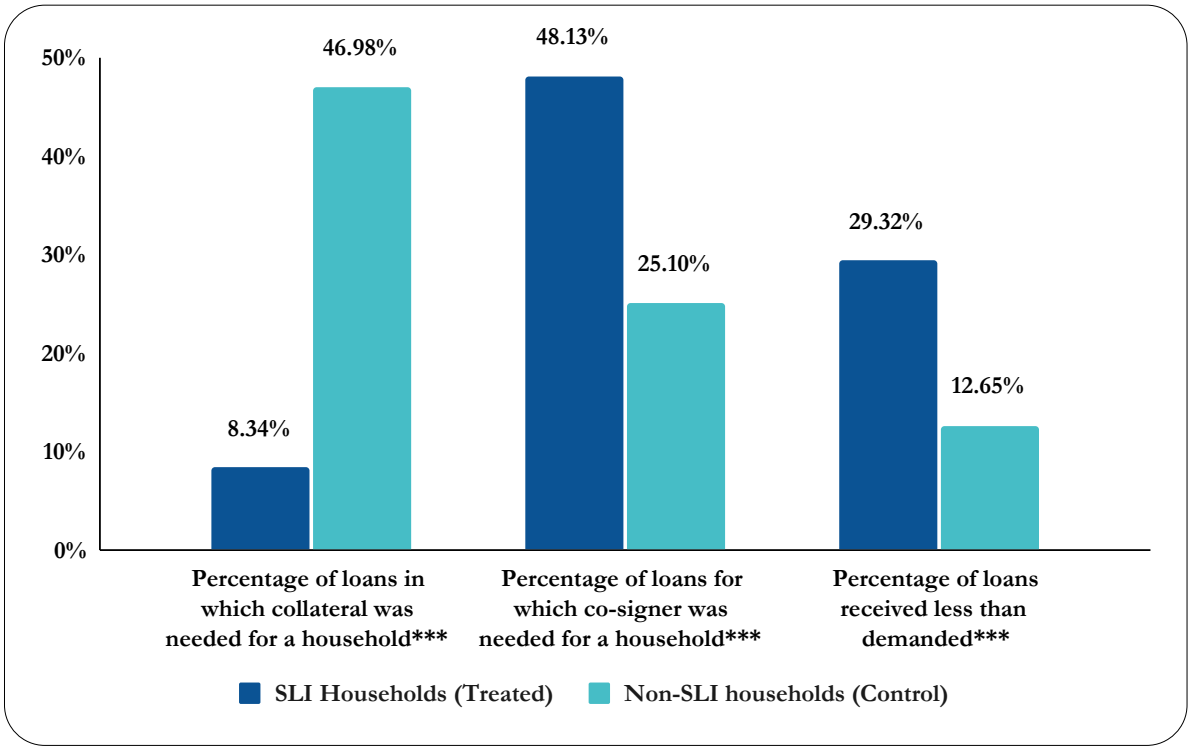
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.3.3 Impact of Program on Interest Rate, Collateral and Co-signer Requirement

Microcredits typically have the benefit of lesser requirements like collaterals and co-signers. Nonetheless, the findings show a mixed result. The percentage of loans for which no collateral was needed were 38% higher for the SLI households whereas the loans with co-signer requirements were 23% for the same (Figure 4.3.3.1). The main reason behind lesser collateral requirement in case of SLI household loans is the higher share of HDFC bank loans, SHG/JLG internal loans and loans from microfinance institutions (MFIs) which provide collateral free loans to the household, whereas the reason behind higher percentage of loans with co-signer requirement in case of SLI households is due to the need of two authorised signatory (within the SHG/JLG group).

Further, the percentage of households who reported having received lesser loans than demanded was 16.67% more in SLI households than their counterparts (Figure 4.3.3.1). There was no significant difference observed in the interest rate charged for the loans taken by both SLI and non-SLI households. The average interest rate on loan for SLI and non-SLI households was 14.90% and 14.84% respectively.

Figure 4.3.3.1: Impact of Program on the Percentage of Loans which Required Collateral, Co-signer or Received Less than Demanded



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.3.4 Purpose of Loan Utilisation

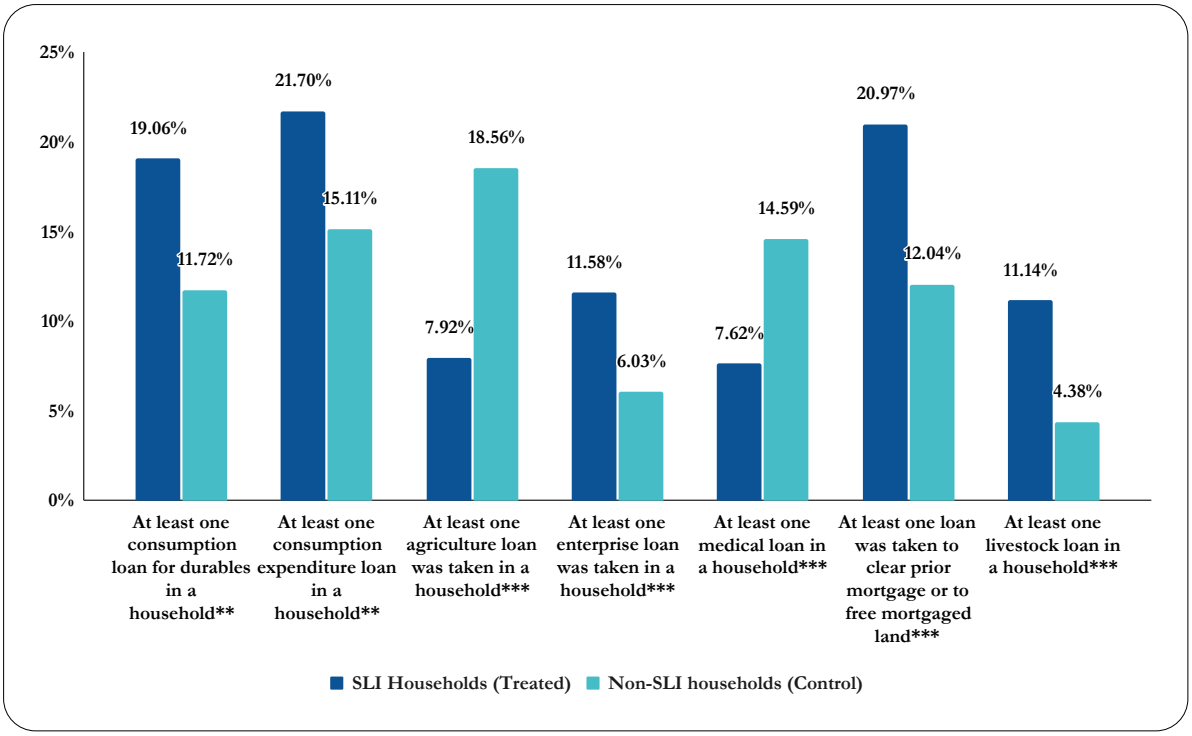
Loan utilisation pattern of households justifies the program's objectives, as it could initiate virtuous cycles of growth within the household and economy as whole, if utilised more for the productive purposes. The impact of SLI on loan utilisation is indirect and it happens gradually over the period. Livelihood initiatives like SLI teach its members the importance of savings through the formation of SHGs, where they begin to save and develop good loan habits through availing internal and SLI loans. Gradually, a positive outlook will be generated towards formal credit institutions, as they start to rely on them more than informal sources. Also, the livelihood initiative encourages its member-households to utilise loans for starting new enterprises or any other productive purposes. This section will shed light on whether or not the loan use patterns of SLI households are towards productive uses. Here, the empirical estimates posit a mixed result.

About one in five of the SLI households are likely to take consumption loans for both purchasing durables and other consumption expenditures when compared to non-SLI households for whom it is 12% and 15% respectively. Further one-fifth of the SLI households are likely to take loans to clear mortgaged land or to clear the prior mortgage, whereas it is almost one-eighth for their counterparts (Figure 4.3.4.1).

However, on the brighter side, a highly significant proportion (11.58%) of SLI households take an enterprise loan when compared to their counterparts (6.03%) and are also 6.86% more likely to

take a livestock loan than the latter. Furthermore, SLI households tend to take 6.97% lesser medical loans than their counterparts. But agricultural loan seems to be of lesser demand among the SLI households when compared to their opposite equivalents (Figure 4.3.4.1). There are no significant differences between the proportion of SLI and non-SLI households taking education loans, home loans, marriage loans and loans for buying ornaments.

Figure 4.3.4.1: Impact of Program on the Purpose for Loan Utilisation



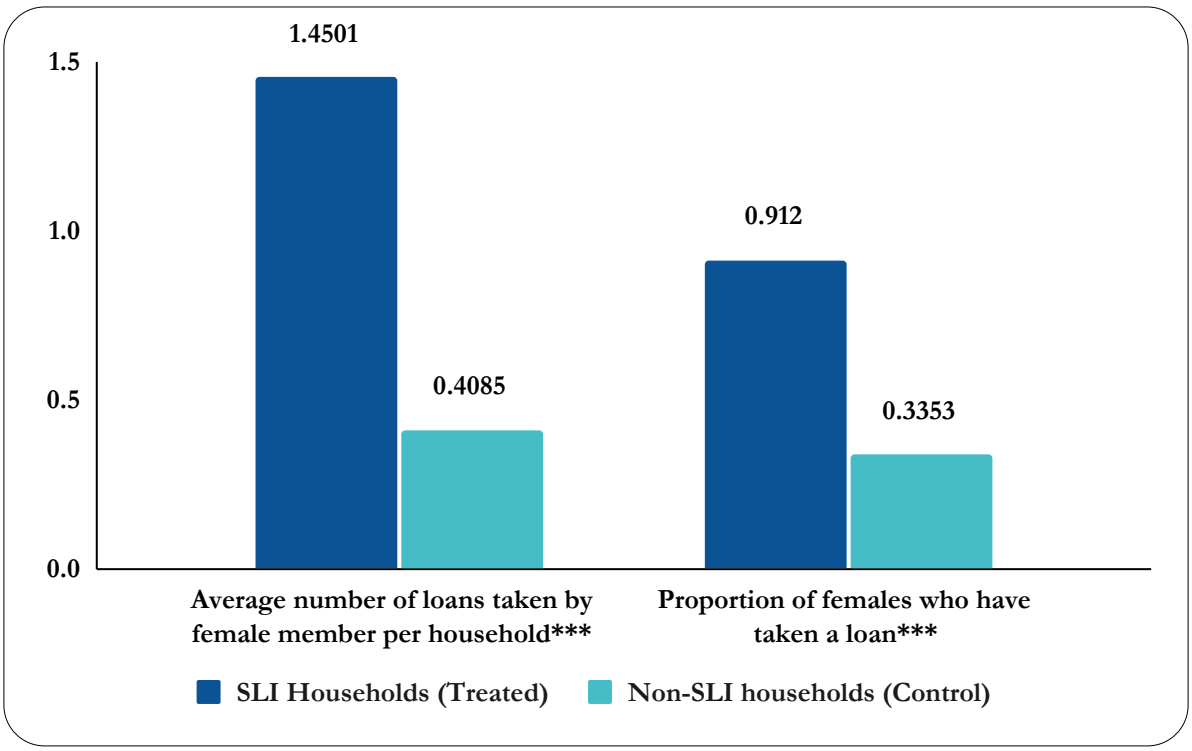
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.3.5 Impact of Program on Loan Behaviour of Female Members

The ownership of loans by female members of a household is a positive characteristic inculcated by livelihood initiatives. The findings strongly underscore this fact, where the proportion of females taking loans is significantly higher (57.67% more) for the SLI households when compared to their counterparts. Similarly, the total number of loans taken by the female members of SLI households is on average 1.04 more than non-SLI households (Figure 4.3.5.1).

Overall, the findings from the loan section show that the loan taking behaviour of the SLI households is driven mainly towards formal channels than the non-SLI households. The likelihood of female members taking a loan is also much higher for the former than the latter. SLI households are able to receive collateral free loans from formal institutions which they would have been unable to receive in the absence of the program.

Figure 4.3.5.1: Impact of Program on the Loans Taken by Females of the Household



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.4 Income

Key Highlights on Income and Livelihood Diversification

- The per capita income and monthly income of SLI households is observed to be 11.62% and 13.27% higher than their counterparts.
- Enterprise income of SLI households is 40.98% more than non-SLI households. Additionally, the wage income per member is 14.55% more for the SLI households.
- SLI households have 0.15 additional sources of income because of more SLI households being involved in enterprise and non-agri wage as a source of income.

4.4.1 Impact of Program on Income of the Household

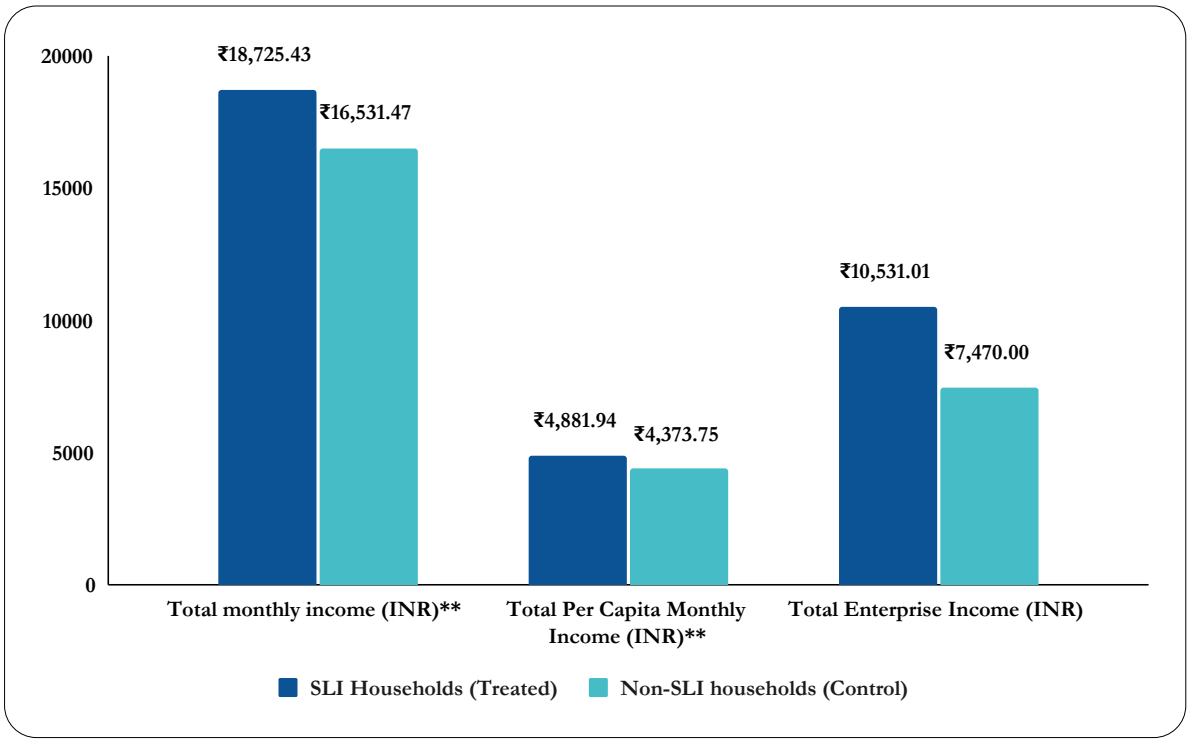
The study estimated the impact of SLI on different types of income such as wage income, agricultural income, livestock income, enterprise income and total and per capita income as a whole. Wage income is an aggregate of agri-wage income, non agri-wage income and MGNREGA[23] wage income.

The findings show that the per capita monthly income of SLI households is 11.62% higher than that of non-SLI households, and the former has a monthly income that is 13.27% higher than the latter. However, there is no significant difference in the wage income, agricultural income, livestock income and enterprise income of the SLI and non-SLI households, despite the former earning comparatively higher income than the latter in every income type. Especially, in the case of enterprise income, SLI households earn 40.98% more than their counterparts which is one of the main reasons behind the higher monthly income of the SLI households as compared to non-SLI households (Figure 4.4.1.1).

Also, the wage income per member of the SLI households is 14.55% more than the non-SLI households (Figure 4.4.1.2). With regard to the wage income, the impact of SLI is a secondary outcome. SLI activities like being a member of SHG, practising savings and taking loans might induce the behaviour or desire among the women to start earning. This might be the reason for the increase in wage income of SLI households (Pandey, V, Gupta, A & Gupta, S, 2019).

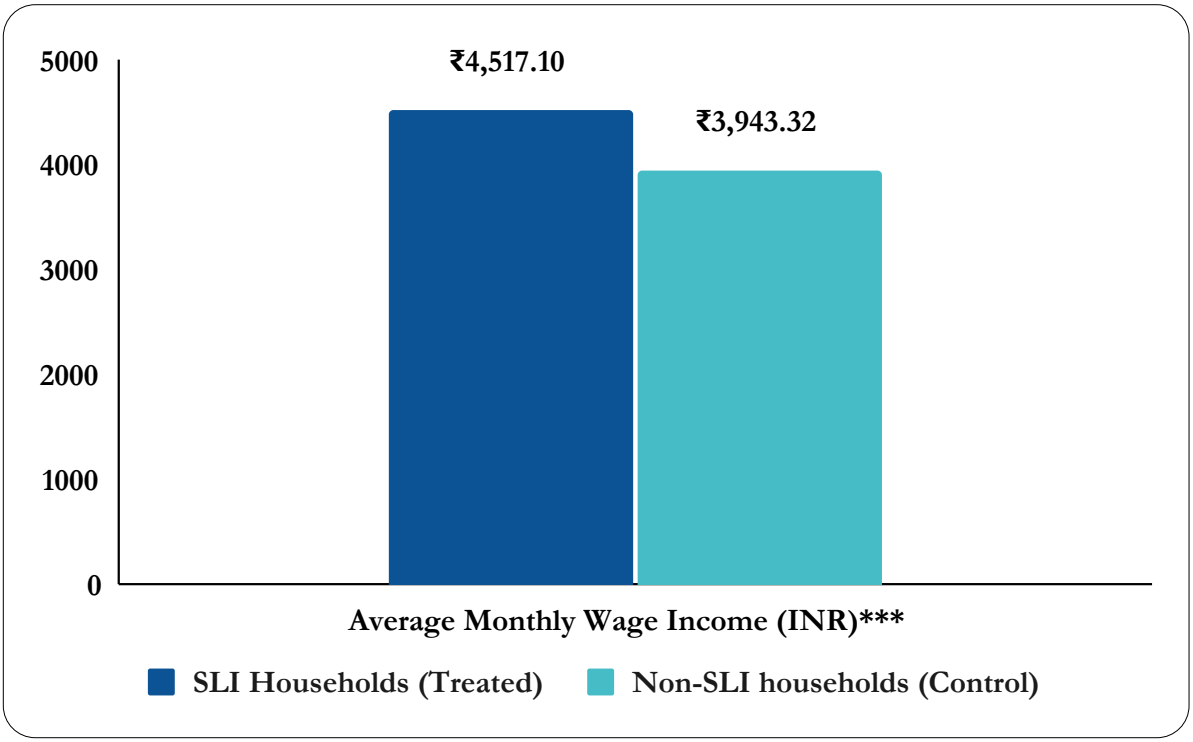
[23] Mahatma Gandhi National Rural Employment Guarantee Act.

Figure 4.4.1.1: Impact of Program on Total Monthly Income of Household



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.4.1.2: Impact of Program on Average Monthly Wage Income of Household



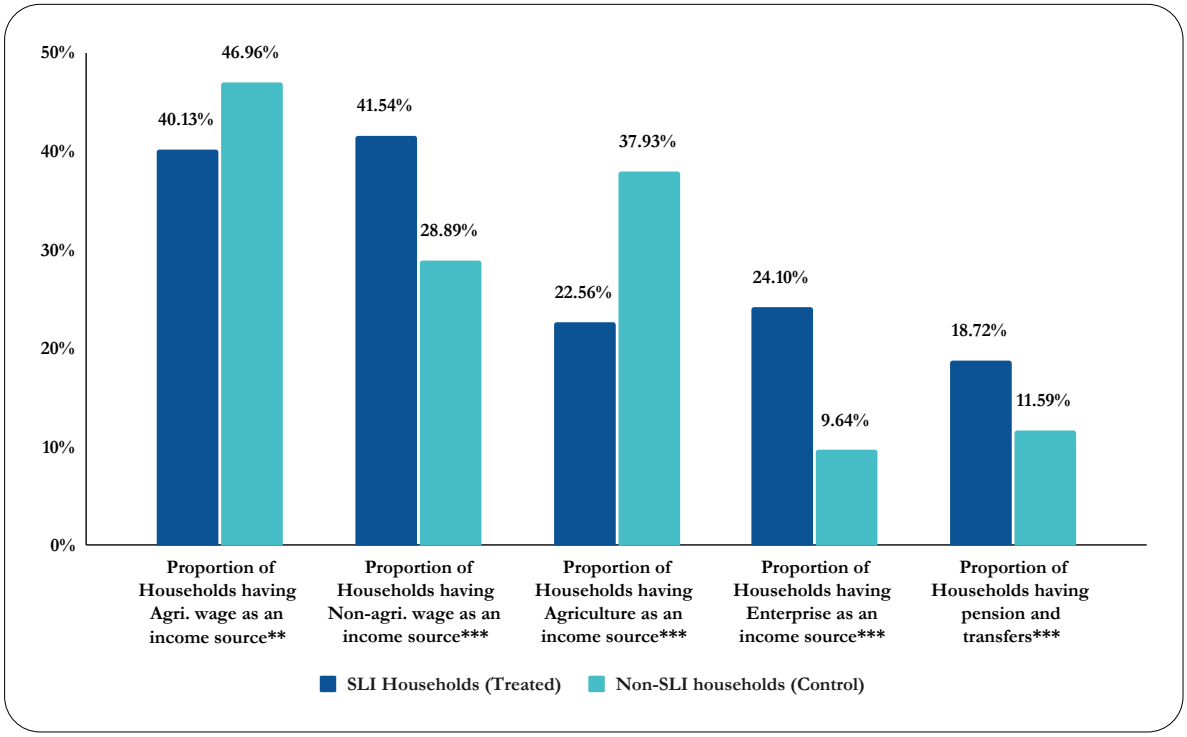
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.4.2 Impact of Program on Livelihood Diversification

Diversification of livelihood is often considered as a buffer against any uncertainties or contingencies in income. SHGs, under the aegis of the NRLM, have been working towards diversifying income as means to break the vicious circle of poverty. The findings are in line and consistent with previous studies and results in other sections. The proportion of households with both agri-wage and agriculture as a source of income are significantly less by 6.84% and 15.37% respectively, when compared to the non-SLI households. This finding is indeed upheld by the fact that less proportion of SLI households take agricultural loans when compared to non-SLI households. Furthermore, there is a high likelihood of a potential shift of women from agriculture and allied activities to enterprise and livestock, as noted across various SHGs in India (Pandey, V, Gupta, A & Gupta, S, 2019).

Moreover, about one in four (24.10%) of the households have enterprise as a source of income ,whereas it is only one in ten (9.64%) for the non-SHG households, which further reiterates the positive shift towards entrepreneurial activities among the SLI households. There is also an interestingly high proportion of SLI households reporting benefitting from pensions and transfers[24], which is 7.13% more than their counterparts. Hence, it could be attributed that SLI was targeted at the poor households. It also implies that because of their comparatively higher financial literacy than their counterparts, SLI households were able to avail such benefits (Figure 4.4.2.1). Additionally, although a comparatively greater proportion of SLI households have a diversified income profile (2% more or 0.15 extra livelihood as a source of income) than their counterparts, this difference is weakly significant (Figure 4.4.2.2). However, the proportions of households with wage income, livestock, salaried income, and other sources of income do not vary significantly between SLI and non SLI households.

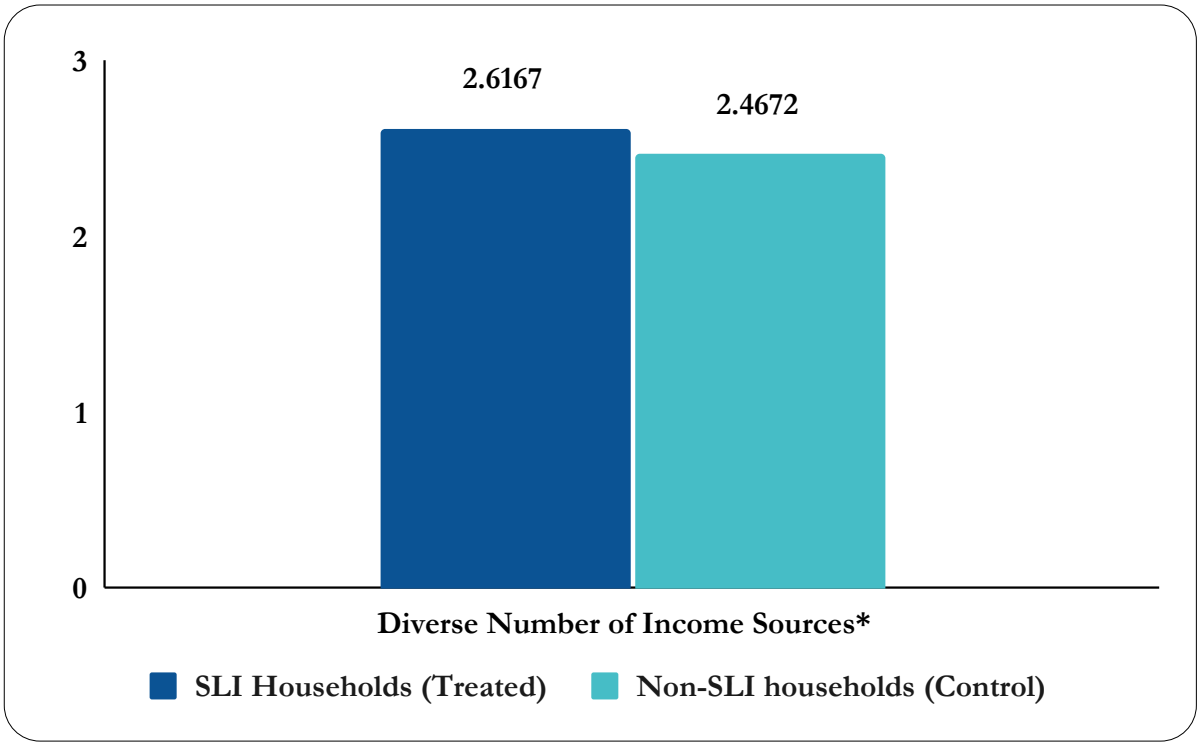
Figure 4.4.2.1: Impact of Program on the Livelihood Diversification



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

[24]Pensions include government pensions like old-age pension,destitute women pension and so on, whereas transfers include unemployment allowance, gifts and other transfers.

Figure 4.4.2.2: Impact of Program on Diverse Number of Income Sources



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.5 Entrepreneurial Behaviour

Key Highlights on Enterprise

- 15% more SLI households were likely to have an enterprise with the average number of enterprises per household being 0.17 (171.33%) higher than non-SLI households.
- SLI households with female-owned enterprises were 24% more than their counterparts.
- The home-based nature of the enterprise among the SLI households was also evident as 28.60% fewer households were found to be located outside their residence.
- Business finance and overall business management indicators were similar across the two groups except 13% more SLI women maintaining a financial diary than their counterparts.

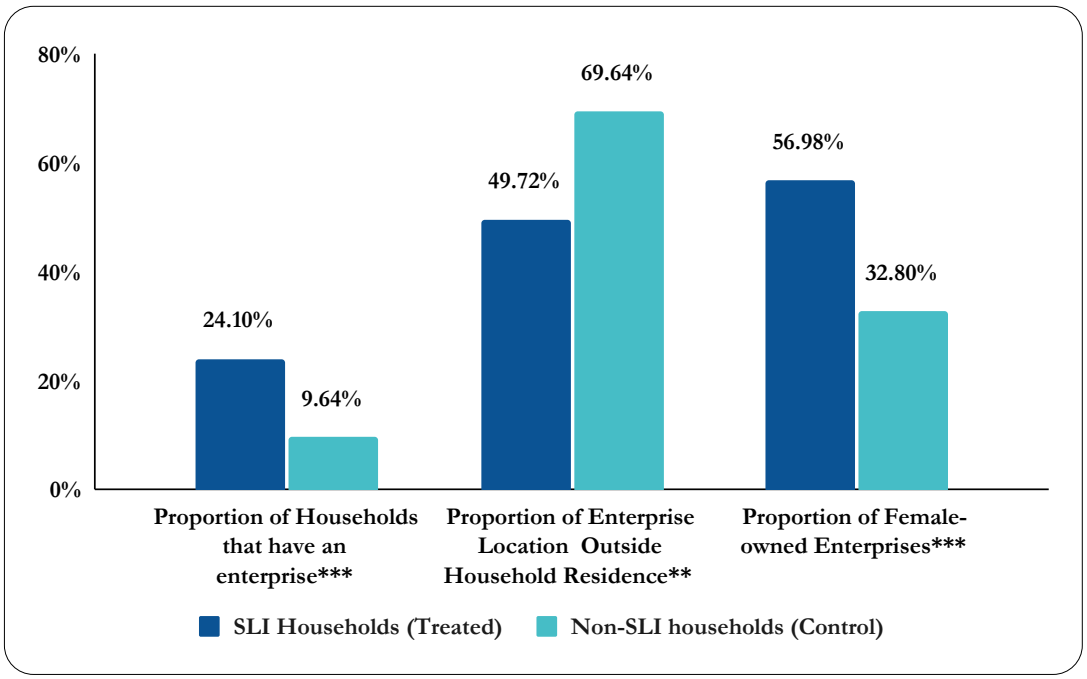
4.5.1 Impact of Program on Entrepreneurial Behaviour

Women Entrepreneurship Report (2016/2017) focuses on the obstacles women face in starting a business and highlights that in almost 40% of economies women participate in early entrepreneurial activity at a lesser rate than men.[25] It is in this context that microcredit programmes like SLI find significance as they both encourage entrepreneurial behaviour among the women as well as provide an initial hand holding through credit support and training. The SLI program has been found successful in building a positive outlook among women towards running a business. An extremely high proportion (14.49% more) of SLI households reported having an enterprise and the number of enterprises is also 171.88% more than the non-SLI households (Figure 4.5.1.1 and 4.5.1.2). Further 24% more SLI households have female-owned enterprises which is an encouraging result as it proves the positive effect of the SLI initiative. Besides, 28.60% fewer households reported having the location of the enterprise outside their residence, which throws light on the home-based nature of the enterprise among the SLI households (Figure 4.5.1.1).

However, SLI households were not significantly different from non-SLI households in terms of registration status, number of hired workers, number of household workers, total capital borrowed, total hours spent in a week by the household on enterprise, whether enterprise possesses a bank account or not, total sales and total expenses of the enterprise.

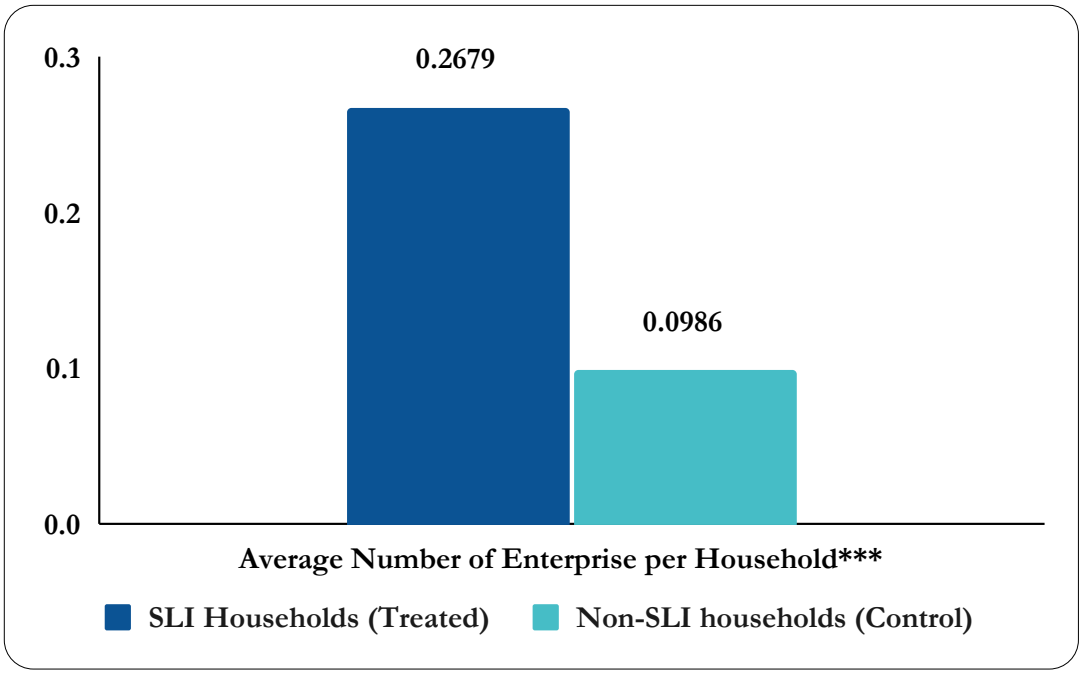
[25] Global Entrepreneurship Monitor (2017). GEM 2016/2017 Women's Entrepreneurship Report. Women's Entrepreneurship Report. https://www.gemconsortium.org/report/49860

Figure 4.5.1.1: Impact of Program on Enterprise



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.5.1.2: Impact of Program on Average Number of Enterprise per Household



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.5.2 Enterprise Management

Managing their own enterprise considerably increases the business management and financial management skills of women. The study measured these skills through Business Management Score and Business Finances Management Score. Business Management Skills were scored on a 5-point scale for each of the 8 entrepreneurial behaviours, making the total score to 40. For Business Finances Management Score, women choosing the appropriate behaviour with regard to three business financial management practices were each scored 1, else were marked 0, bringing the total score to 3. Both the scores- Business Management Score and Business Finances Management Score were then normalised to 100 to form a Business Management Index and Business Finances Management Index respectively.

Business Management Index quantified entrepreneurial behaviour like running their own business, managing financial accounts, saving for future investment, obtaining credit to expand business, collecting money for the services or product rendered by them and practising coping mechanisms to protect business at times of uncertainties. However, in the case of Business Management Index, SLI women entrepreneurs scored slightly more than non-SLI women entrepreneurs, but the difference is insignificant.

When it comes to Business Financial Management Index, we measure the financial management behaviours like documenting transactions, maintaining financial diary and calculating profit. Here, the proportion of SLI woman entrepreneurs who maintain a financial diary is 13% more than their counterparts. Though SLI women scored more than (2%) non SLI women entrepreneurs in the Business Financial Management Index, the difference is not significant.

4.6 Assets

Key Highlights on Assets Portfolio

There is not much difference in the ownership of livestock between SLI and non-SLI households. SLI households, however, possess 0.23 more poultry on an average, along with slightly more buffaloes and goats.

Looking at consumptive assets, SLI households have on an average, 1 additional asset in comparison with non-SLI households, comprising a two-third of normal assets and one-third of superior assets.

The proportion of households possessing at least one productive assets is 7% lesser than the non-SLI households.

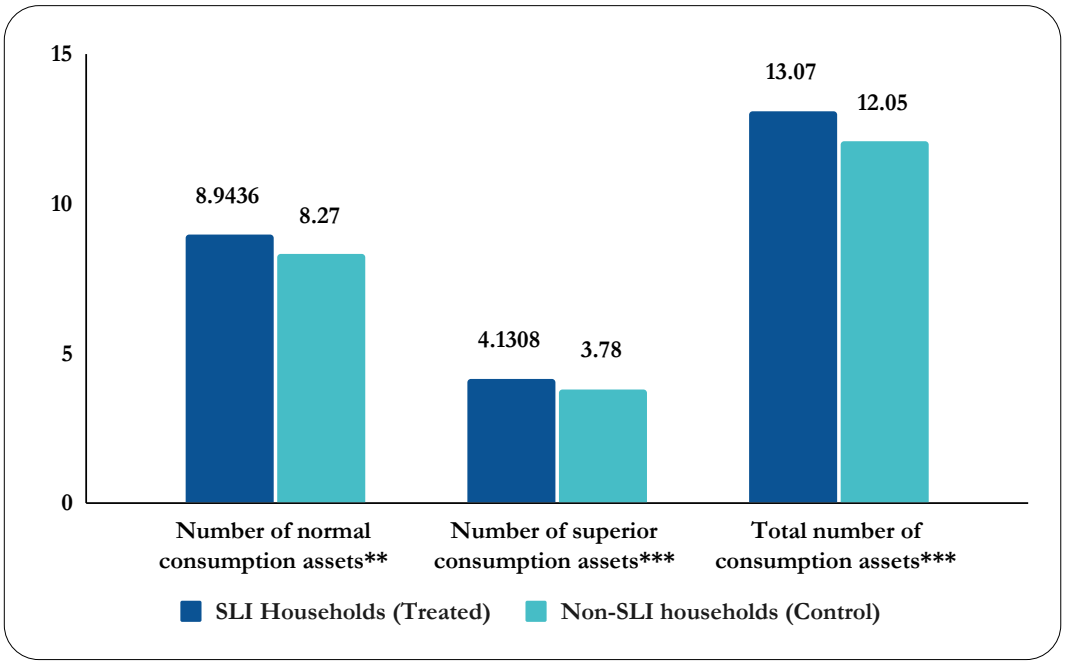
4.6.1 Impact of Program on Livestock Assets

Despite the SLI households availing a significantly higher percentage of the loan than their counterparts for the purpose of livestock, there seem to be lesser takers for it as a livelihood among the SLI households. This is evident from the fact that the proportion of households having livestock and total number of livestock possessed by both SLI and non SLI households are not significantly different. Although program households have slightly more buffaloes and goats, the difference is not big enough to make a substantial difference. However, SLI households own poultry in higher numbers when compared to non-SLI households, as evidenced by the fact that they possess on an average 0.23 more poultry than their counterparts. The findings imply that the SLI program does not have a substantial impact on livestock assets of the SLI households.

4.6.2 Impact of Program on Consumer and Productive Assets

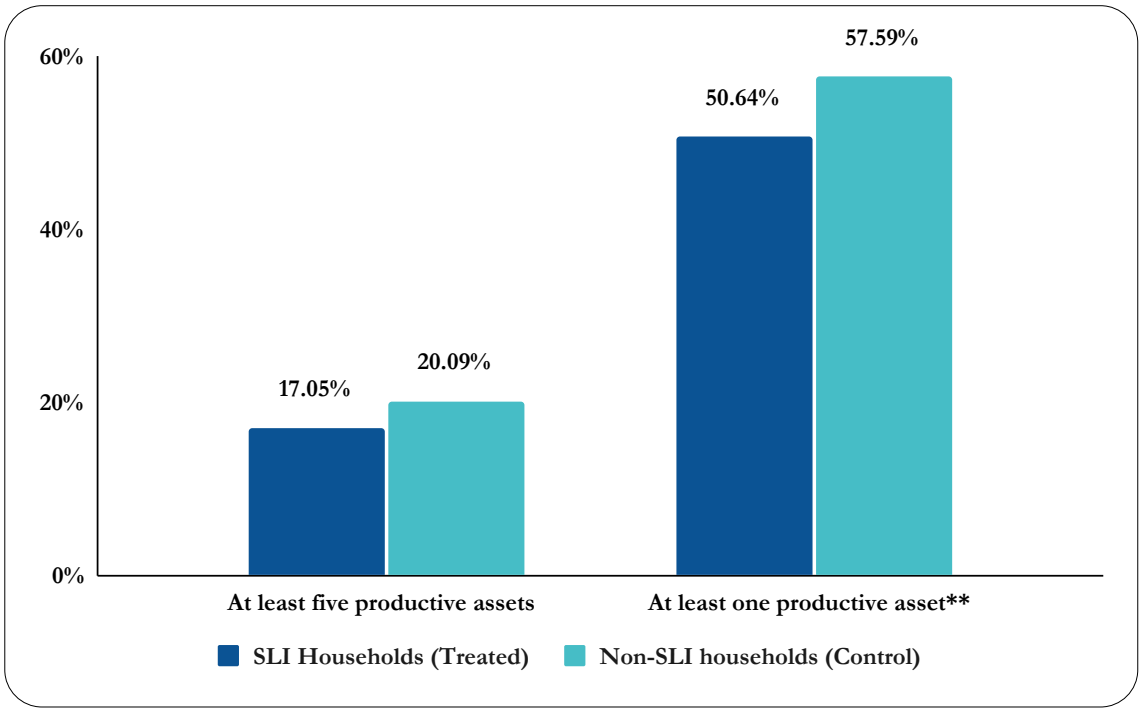
Evaluation studies by NABARD have found close linkages between SHG membership and asset creation (Puhazendhi and Badataya study, 2002). Assets, both consumption and productive, make people less susceptible to short and medium-term shocks (Hulme and McKay, 2005). Results in Figure 4.6.2.1, show the SLI households to have on average 1 additional consumption asset and of that, they possess 0.67 more normal consumption assets and 0.35 more superior consumption assets than the non-SLI households. However, when it comes to productive assets, SLI households seem to be owning comparatively less than their counterparts, which is contradictory to some pieces of literature but the difference is not significant. Also, the effect size of SLI households having less productive assets is also small. Further, the magnitude of the creation of the productive asset could be further analysed when we compare both groups in terms of those possessing at least one productive asset and at least five productive assets. The findings are in line with the above individual analysis, showing SLI households to possess 7% lesser productive assets than their counterparts when it comes to possessing at least one such kind of assets (Figure 4.6.2.2). However, there is no significant difference in the case of households possessing at least five productive assets.

Figure 4.6.2.1: Impact of Program on the Number of Consumption Assets



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.6.2.2: Impact of Program on the Number of Productive Assets Owned by a Household



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

There are possible reasons behind this insignificant treatment effect regarding productive assets. Firstly, the productive assets that we have included in our analysis are in some or the other way related to agriculture and livestock. Besides, the loan utilisation pattern of SLI households shows that less proportion of SLI households take agricultural loans when compared to non-SLI households and more proportion of SLI households take livestock loan. Similarly, the possible reason behind the positive treatment effect on consumption assets can be corroborated by the fact that more proportion of SLI households take consumption (expenditure and durables) related loans which is highly reflected on the normal consumption assets.

4.7 Women Empowerment

Key Highlights on Women empowerment

A highly significant positive effect of SLI can be seen in the Decision-making of SLI women (scoring 10.25 index points more). This can be in view of their diligent involvement as a primary decision maker in household's decisions like expenditures on food, healthcare, education of child and financial activities like lending, investing and savings.

There is no significant difference in the confidence in communicating with outsiders between the two groups. Although, 4.61% higher proportion of SLI women felt they were more confident in approaching formal financial institutions.

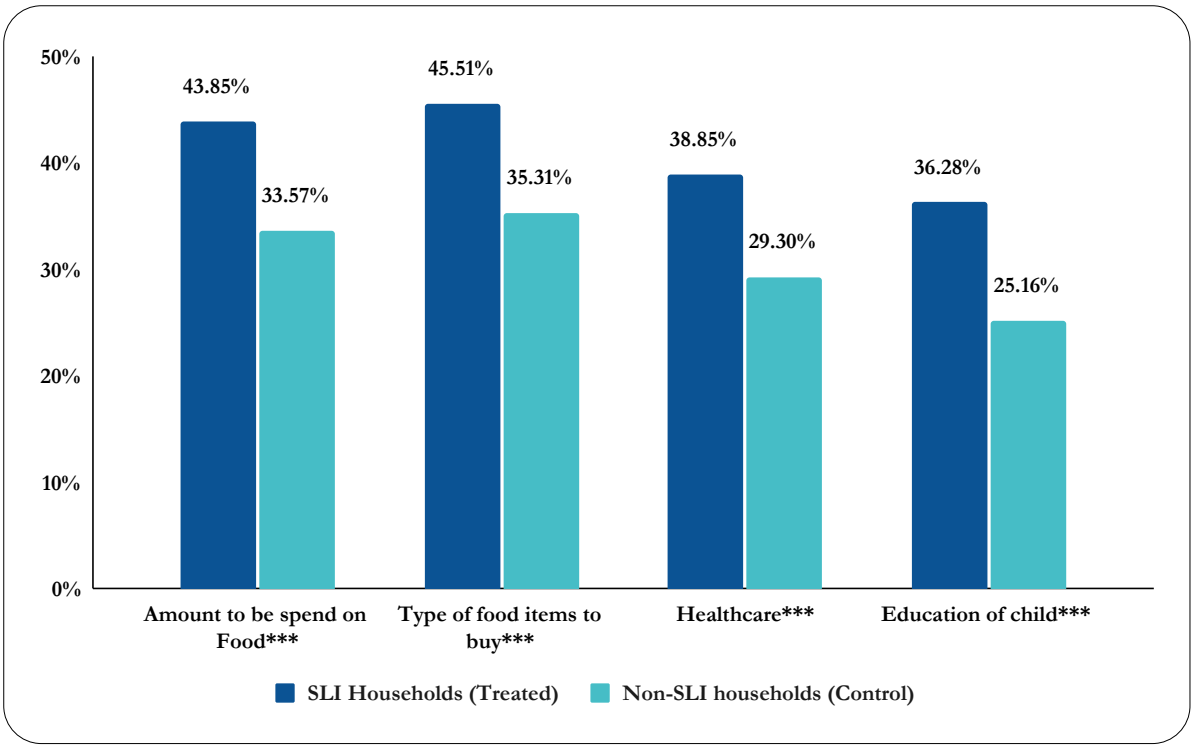
4.7.1 Impact of program on women's decision-making for household activities

Women's economic empowerment is central for achieving empowerment in all fields, at all levels from households to society. When they are given the thrust to generate their own income through various microcredit programmes, empowerment begins and gradually it advances to all levels. In this study, intra-household decision-making involves decisions related to food, cloth, expensive goods, children's education, healthcare, loans, savings, and investment. The findings highlight a highly significant positive effect of SLI on women's decision-making among the SLI households.

The impact of SLI on women's intra-household decision making is quantified in the form of a Decision-Making Score, where if her level of input on a particular decision related to household was either entirely or mostly her input (women is primary decision maker in the household) then the score given is 1 else a score of 0 is given. A total of 14 different indicators related to decision making in a household are included. Hence, the Decision-Making Score is out of 14. The decision-making score is converted to a scale of 100 to create a Decision-Making Index. The Index is further subdivided into Financial Product-Related Decision-Making Index and General Household-related Decision-Making Index, whose scores are out of 5 and 9 respectively and are also converted to a scale of 100. Financial Product related decisions index quantifies the women's involvement in decision making regarding matters related to taking and giving loans, making savings and investments, whereas, General Household-related Decision-Making Index gauge their engagement in daily household matters like food, clothing, child's education, healthcare, festival, jewellery and marriage expenses and expenditure on additions in house and expensive goods.

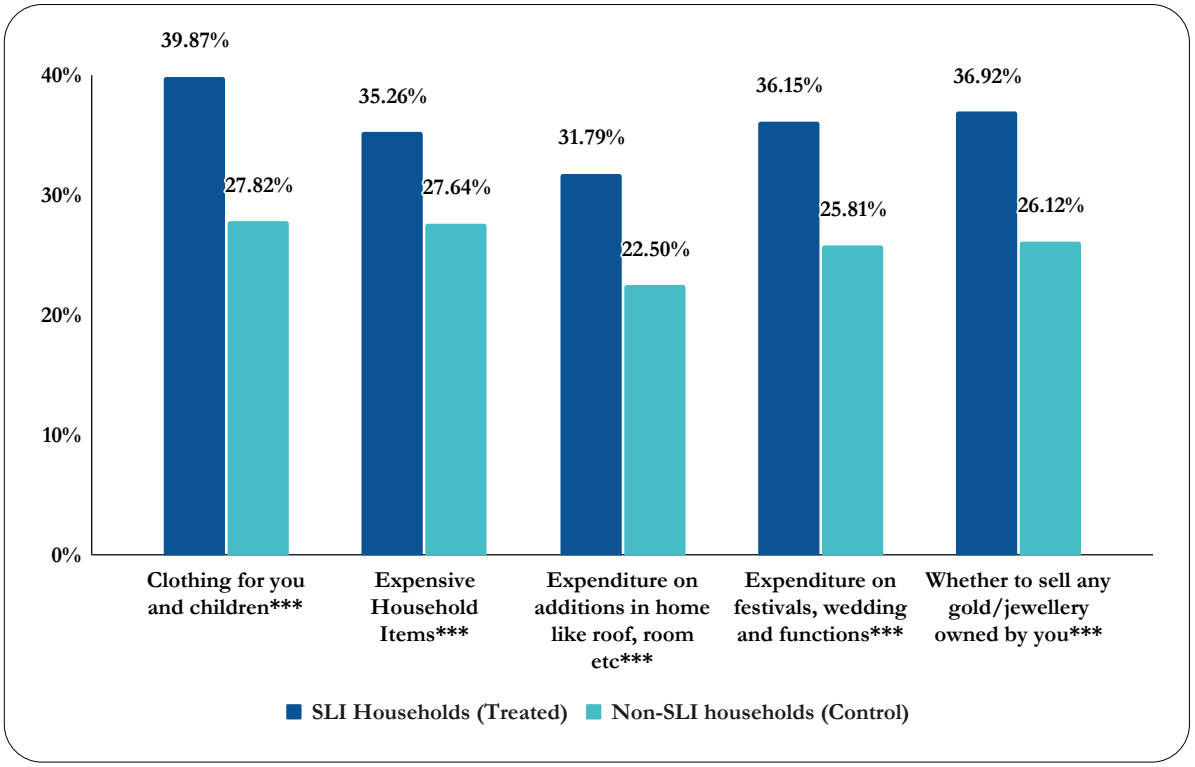
A positive program impact on SLI women on almost all the indicators related to intra-household decision making can be seen (Figures 4.7.1.1, 4.7.1.2 and 4.7.1.3). On average, 10% more SLI women reported feeling diligently involved in decision-making regarding the amount to be spent on food, the type of food items to be bought, healthcare, and expenditure on festivals. A higher proportion of SLI women were found to be primary decision makers related to expensive goods (7.61% more) and expenditure on home renovation (9.30% more) than non-SLI women. When it comes to decisions related to clothes and loans, there is a positive difference of about 12% between the proportion of SLI women and non- SLI women. Moreover, the proportion of SLI women reporting their active involvement in decision-making regarding educational decisions, borrowing money from family or friends (if needed), and selling gold is about 11% greater than that of non-SLI women. Similarly, a significantly higher proportion of SLI women were found to be primary decision makers in decision-making regarding lending to friends or relatives, savings, and investment.

Figure 4.7.1.1: Impact of Program on General Household-Related Decision Making(A)



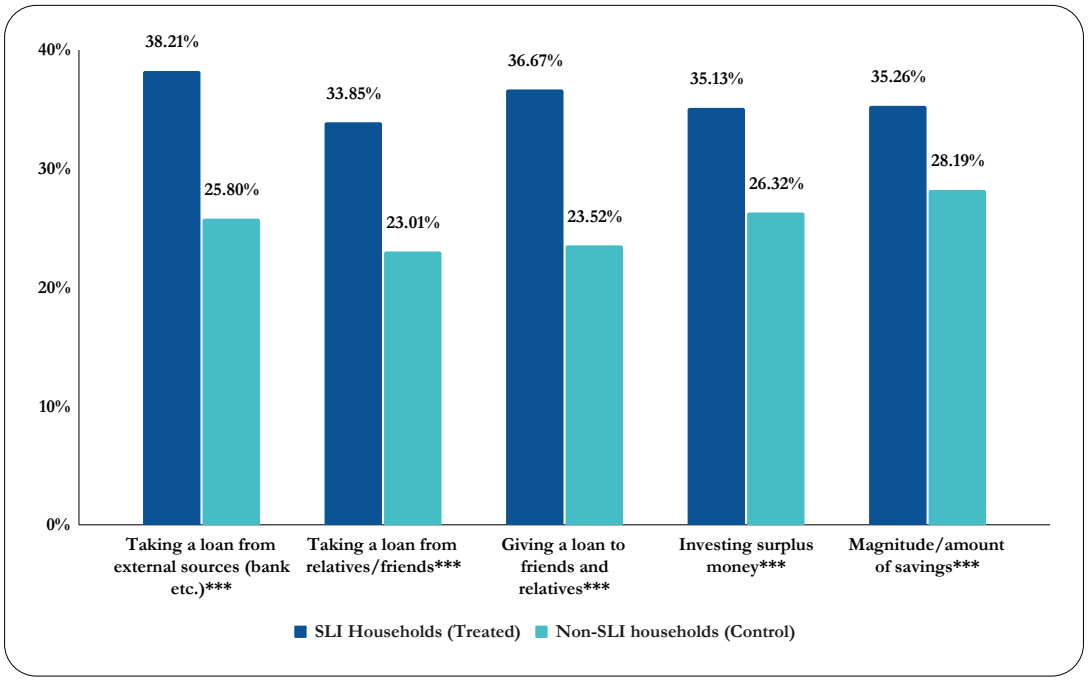
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.7.1.2: Impact of Program on General Household-Related Decision Making(B)



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

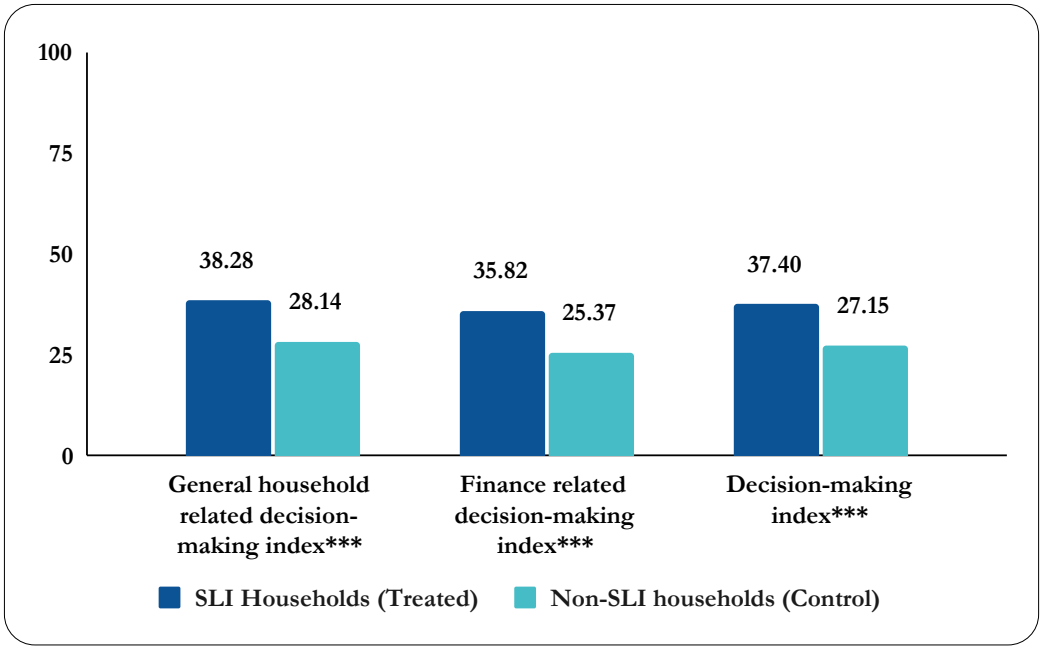
Figure 4.7.1.3: Impact of Program on Financial Product-Related Decision making



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Overall, the decision-making index for the SLI women is 10.25 index points higher than the non-SLI women. A further subdivision of the index to Financial Product-Related Decision-Making Index and General Household-related Decision-Making Index also points to a positive difference of 10.45 and 10.14 index points respectively between the indices of SLI and non SLI women (Figure 4.7.1.4). These results show that the active involvement of SLI women in household related decision-making is significantly on a higher side when compared to the non-SLI women.

Figure 4.7.1.4: Impact of Program on Decision-Making Index (out of 100)



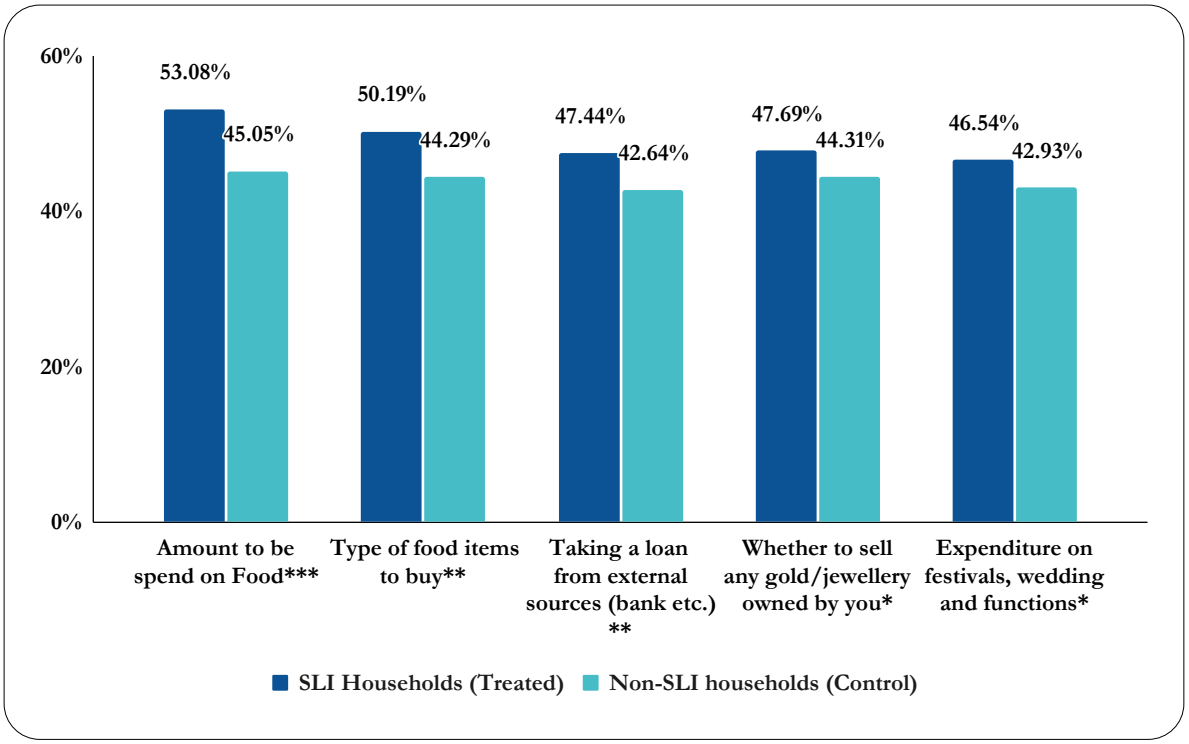
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.7.2 Impact of program on women's involvement in transactions (purchase and sale) related to household activities

The impact of SLI on women's involvement in transactions in household activities has been determined through the Transactions Index. Similar to, the decision-making index, here also the score is out of 14 which is converted to a scale of 100 to create the Transactions Index. It is further subdivided into Financial Product related Transactions Index and General household related Transactions Index. While their respective scores are out of 5 and 9, indices are converted to a scale of 100. The most appropriate transaction (purchase or sale) involvement behaviour is for the woman to herself purchase and sell the household items (given a score of 1), followed by joint involvement between the women and husband (given a score of 0.5). In case someone else is involved in the transaction, the score given is 0.

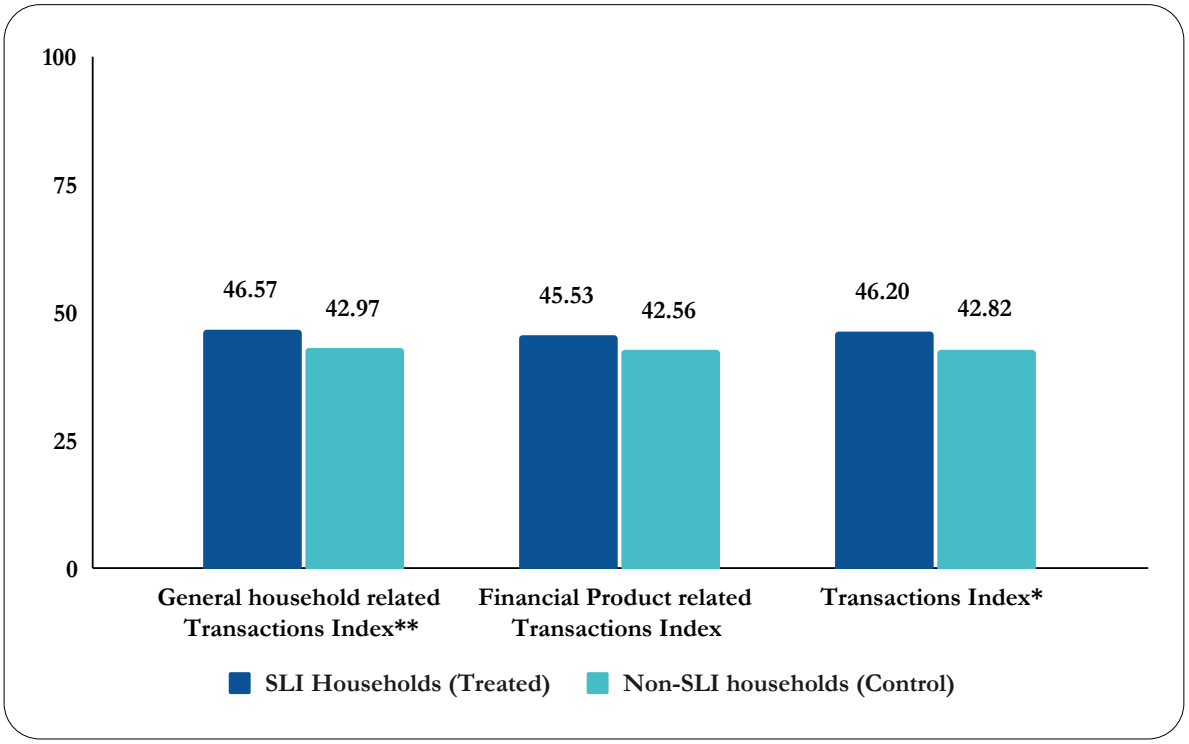
The proportion of SLI women involved in making purchases and sales related to the amount spent on food and the type of food is 8% and 6% respectively higher than the non-SLI households. In addition, 5% more SLI women were involved in transactions relating to taking a loan from external sources. About 3% more SLI women were involved in transactions related to jewellery and festival spending than their counterparts, but this difference is weakly significant (Figure 4.7.2.1). Nevertheless, there is no significant difference between SLI and non SLI women involved in transactions (purchase or sale) regarding expensive goods, clothing, children's education, healthcare, additions in house, taking loan from and giving loans to relatives or friends and decisions regarding investment and savings.

Figure 4.7.2.1: Impact of Program on Transactions (Purchase and Sale) Decisions



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure 4.7.2.2: Impact of Program on Transactions (Purchase and Sale) Index (out of 100)



Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Specifically, the General household related Transactions Index shows that the involvement of the women of SLI households in the purchase and sale of household items is 3.60 index points higher than that of their counterparts, which is also aligned with the General Household Related Decision-Making Index. This implies a considerable involvement of women in decisions related to purchasing or sale of general household-related things like food, cloth, and so on. However, SLI and non-SLI households are not significantly different in terms of their involvement in the purchase or sale of financial products, represented by the Financial Product related Transactions Index, despite the former scoring higher in the index than the latter. The Transactions Index is also significantly higher for the SLI households than their counterparts, but it is weakly significant (Figure 4.7.2.2).

4.7.3 Impact of program on confidence of the women

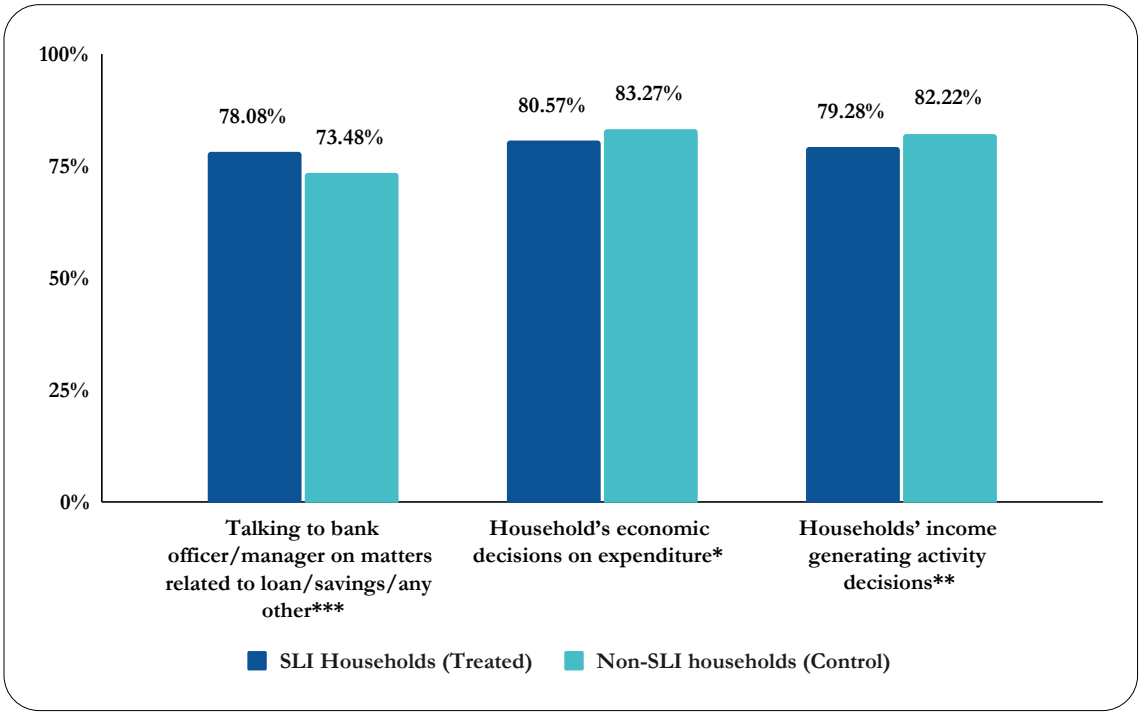
Confidence in communicating freely to people around and making decisions related to the household's economic and income generating activity is essential for both social and economic empowerment of women. In this study, respondents' confidence in communicating with the bank manager, Sarpanch/ Pradhan, healthcare staff, and children's teacher was surveyed.

Women's confidence levels were assessed using 8 different indicators which created a score out of 8 and was then converted to a scale of 100. In the study, women who found themselves to be "very confident" (given a score of 1) were considered to be the most appropriate response, while those who felt "somewhat confident" (given a score of 0.5) were rated in second place, and the rest were scored as 0.

It was found that the proportion of SLI women who found themselves to be confident in communicating with the Bank Manager or any officer in matters related to loans or savings was 4.61% more than the non-SLI women. This highly significant result implies that SLI programs have built confidence in women in approaching formal financial institutions, which is a positive inducement (Figure 4.7.3.1). However, in the case of confidence in communicating with Sarpanch/ Pradhan, healthcare staff, and children's teachers, there were no significant differences between the two groups.

Likewise, we observed a lesser proportion of SLI women considering themselves confident in household's economic decisions on expenditure and income-generating activity, when compared to non-SLI women, but the difference though significant is minimal (Figure 4.7.3.1). No significant difference was found between the SLI and non-SLI households in the confidence index.

Figure 4.7.3.1: Impact of Program on Confidence of Women of the Household

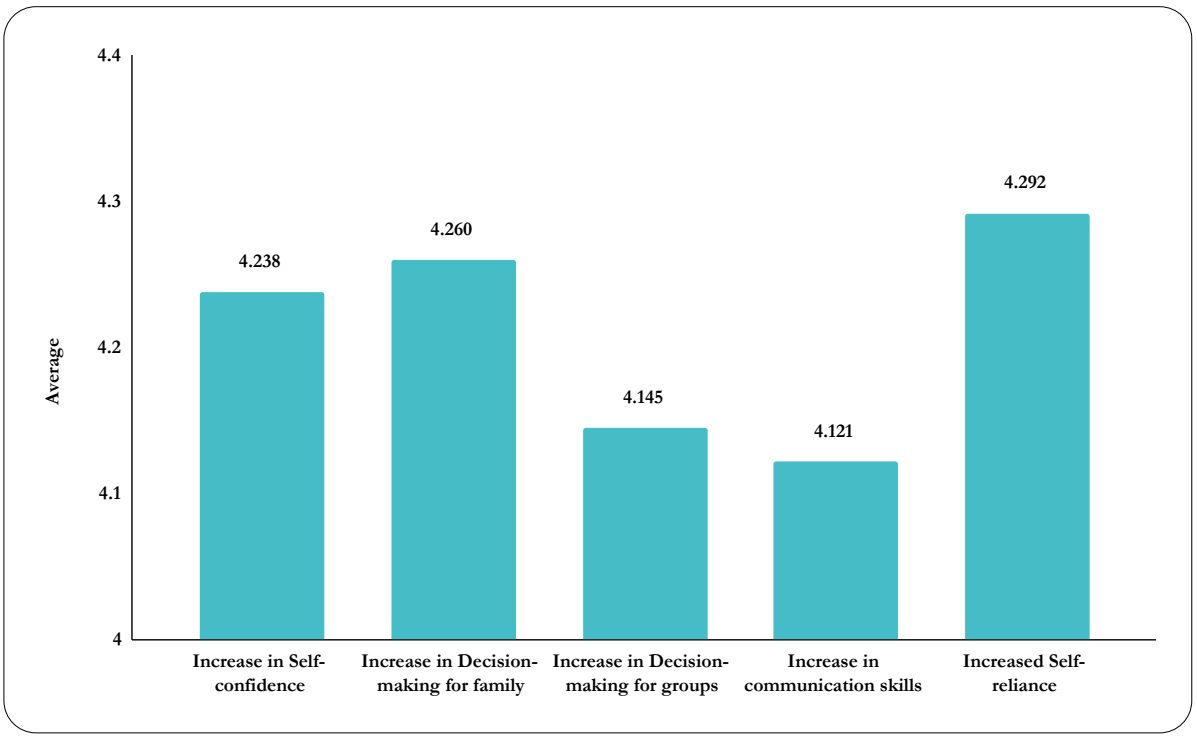


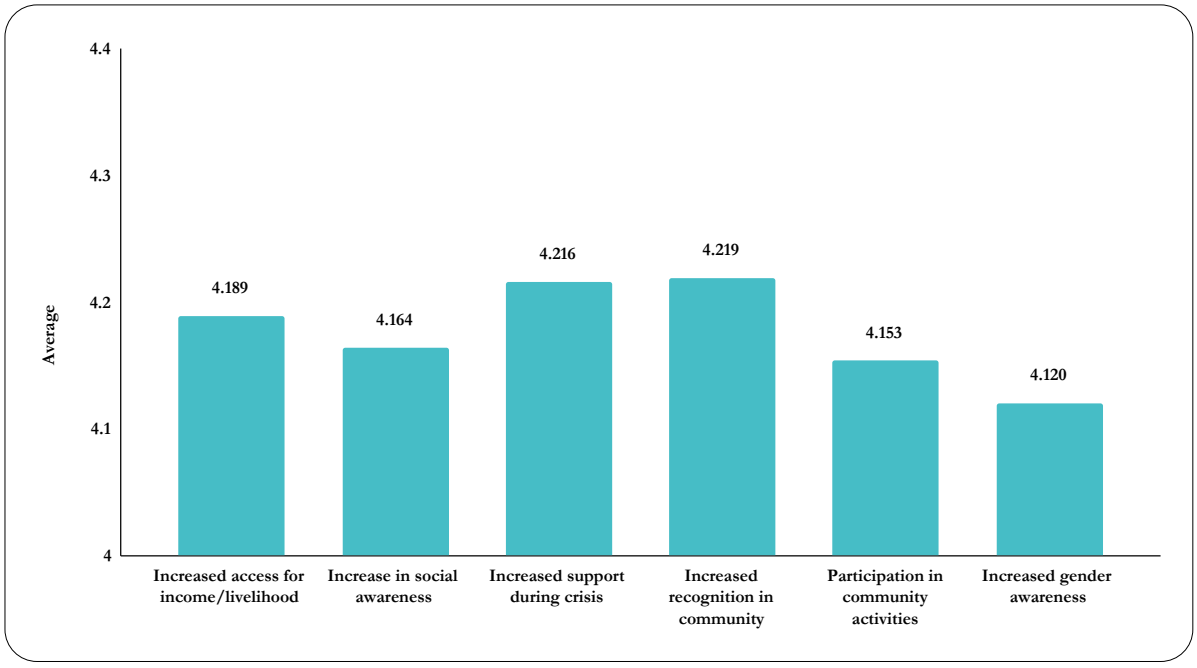
Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

4.7.4 Benefits perceived by women from SLI

The benefits of the SLI intervention as perceived by the beneficiaries constituted a primary part of the study. The benefits were quantified in the form of a score using the 5-point Likert scale. Each of the five responses 'strongly agree', 'agree', 'neutral', 'disagree' and 'strongly disagree' were allotted a numerical value: 5, 4, 3, 2 and 1 respectively. The average score for each of the benefits was then used to measure the impact. The highest impact can be seen in the 'Increased self-reliance' of the beneficiaries, which can be seen in the score, i.e., 4.292. Considerable benefits of the intervention are also observed in the 'Increase in self-confidence' and 'Increase in decision-making for family' with scores being 4.238 and 4.260 respectively. Additionally, all the other benefits have acquired a score of more than 4, which shows a positive impact of the intervention (Figure 4.7.4.1).

Figure 4.7.4.1: Impact of Program on Benefits perceived by women from SLI





4.8 Distributional Effects of SLI

Key Highlights on Distributional effect

The distributional effect of SLI on income, savings and total outstanding borrowing is positive and more pronounced for SLI households in the bottom percentile (25th) than their counterparts.

However, in top percentiles, savings remain positively affected, but there is an insignificant effect on income.

Impact of the program on outstanding borrowing is negative on higher percentiles.

We estimated the impact of the program on bottom and top percentiles in order to understand the distributional effects of the program. We used Quantile Regression estimates to account for the distributional effects, specifically on total monthly income, total monthly savings and total outstanding borrowing of the households (Figure 4.8.1).

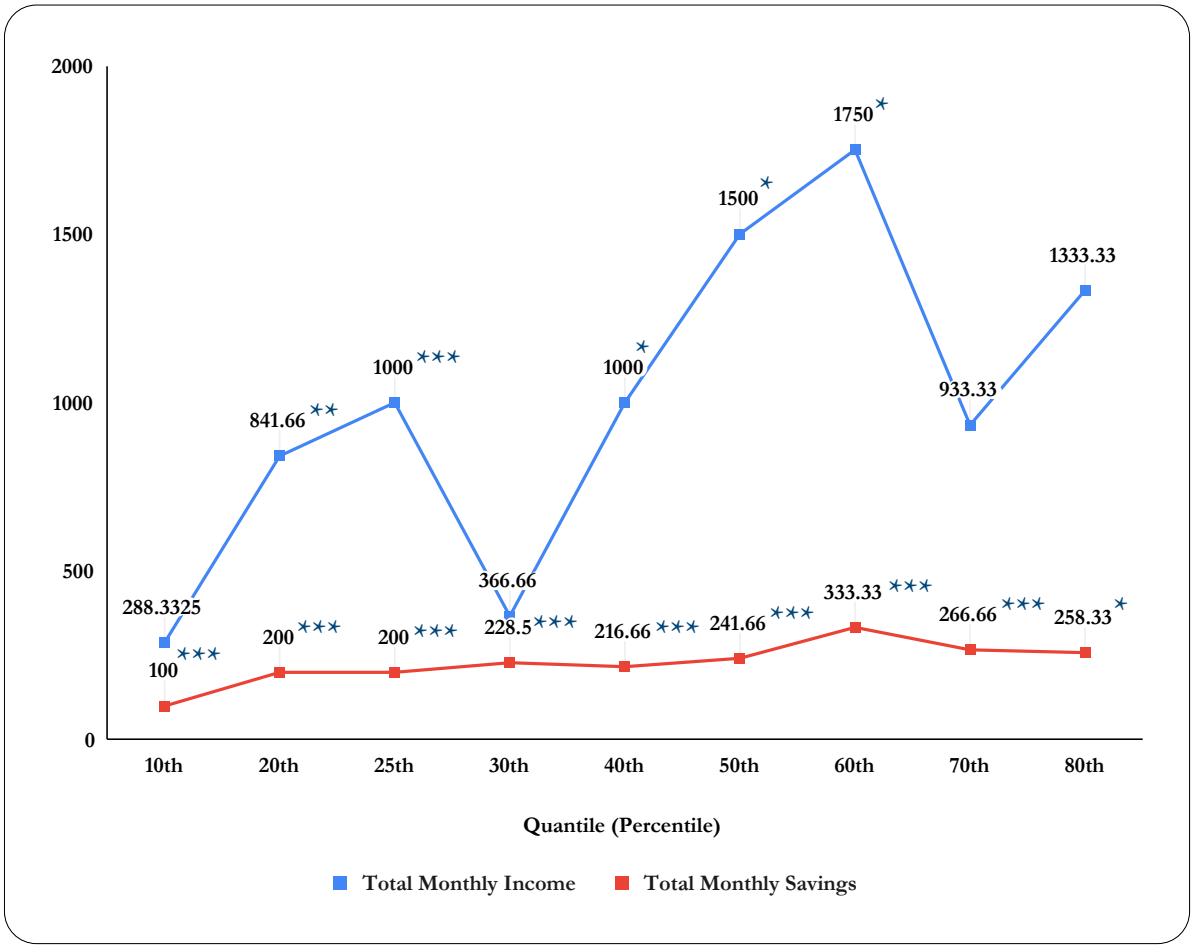
The impact of the program varies significantly across quantiles (percentile) for monthly savings, income and outstanding borrowings. Highly significant positive results on monthly income can be seen for 20th (841.66 INR higher) and 25th (1000 INR higher) percentile for the SLI households than the non-SLI households. Results also show that the increase is almost twice from 20th percentile to 60th percentile from INR 841 to INR 1750. No significant differences on monthly income can be observed on the top percentiles (70th and 80th) between the two groups. The estimates show that the major significant impact of the program on income can be seen in the bottom percentiles than the higher ones.

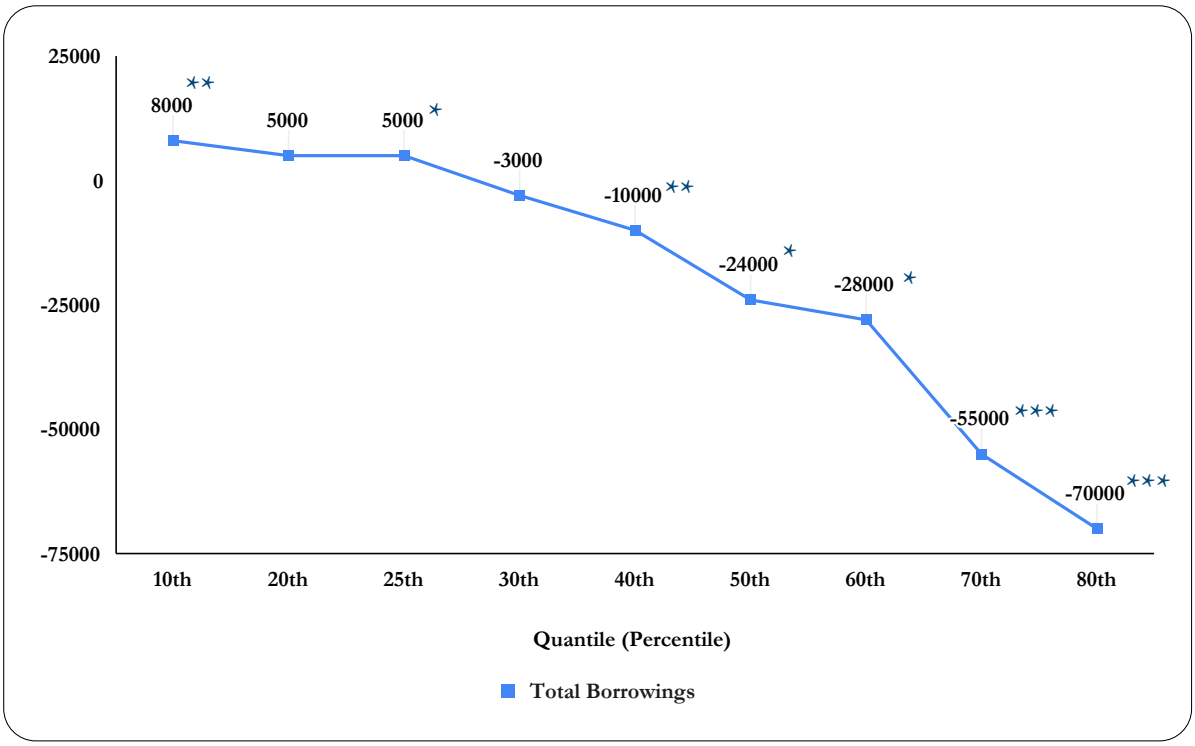
Monthly savings for the SLI households is significantly higher than the non-SLI households across percentiles except on the highest percentile (80th) where the result is positive but weakly significant. From the 10th to 60th percentile the savings increase significantly more than three times from INR 100 to INR 333.33. Across percentiles, the impact of the program on savings is positive and increases from bottom to 60th percentile and drops marginally from INR 333 in 60th percentile to INR 258 in the 80th percentile.

Outstanding borrowings of the SLI households are higher than the non-SLI households in the bottom percentiles i.e., 10th and 25th. But, the amount of borrowings falls significantly from 30th to higher percentiles for the SLI households than the non-SLI households.

Overall, these results show that monthly income, savings and total outstanding borrowing is positively affected for the SLI households at the bottom percentiles (25th) due to the SLI program and the same continues in the case of savings for top percentiles as well. But the outstanding borrowing falls and income results although positive are insignificant.

Figure 4.8.1 Quantile Regression Estimates of SLI Participation on Income, Savings and Borrowings





Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

05 State Wise Descriptive Statistics

Key Highlights on State-level

Financial literacy of SLI women in all the three states are on a higher side than their non-SLI counterparts. In financial literacy, not much differences can be seen among the SLI women across three states.

SLI households in Tamil Nadu are found to be positively inclined towards formal saving sources with higher amount of per capita formal savings and share of formal savings when compared to other two states.

In loan behaviour, Tamil Nadu outperformed the other two states, with a significant number of the loans being taken by the SLI households, especially female-owned.

SLI households in Madhya Pradesh have the highest monthly income among the three states.

Maharashtra has the highest number of SLI households owning enterprises, while this number is the lowest for Madhya Pradesh.

Madhya Pradesh has the poorest performance on the female empowerment indicators among the three states.

The present section shows the state level descriptive analysis of the key indicators between SLI and non-SLI households. However, one thing to be noted here is that these findings are descriptive in nature and cannot be interpreted as casual. The major objective of descriptive analysis here is to show the state level performance among the SLI households as well as their differences with the non-SLI households within the state.

5.1 Financial Literacy

The mean Financial Behaviour Index for the SLI households is 19.08 index points more than the non-SLI households. In all the three states - Maharashtra, Madhya Pradesh and Tamil Nadu- we could see a positive effect of SLI program on financial behaviour of women, as the financial behaviour index of the SLI households is higher than those of non-SLI women in these states (Table 5.1). While SLI women's index scores are more than 50 in all three states, the financial behaviour index of SLI women in Madhya Pradesh is higher than that of their peers in the other two states. On the contrary, the difference in Financial Behaviour Index between SLI and non- SLI women is higher in Maharashtra than those in Tamil Nadu and Madhya Pradesh. In Madhya Pradesh, however, this difference is greatly reduced.

SLI women in Maharashtra scored the highest on the Financial Attitude Index, 3.56 index points higher than the average Attitude Index scores. Similar in line with financial behaviour, SLI women in all the

three states scored better than their non-SLI counterparts. However, this positive difference between the SLI and non-SLI is highest in Madhya Pradesh, while it is almost similar for both Maharashtra and Tamil Nadu (Table 5.1).

With regard to the Financial Knowledge Index, SLI women in Maharashtra scored the highest among the three states in terms of both differences in SLI and non-SLI women's Financial Knowledge Index scores and also with Financial Knowledge Index Scores of SLI women in particular. However, the financial knowledge of women (both SLI and non-SLI) in all the three states is almost similar.

SLI women in Maharashtra scored the highest for Analytical Literacy Index compared to their counterparts in other states, which is 8.19 index points higher than the mean for the SLI Analytical Literacy Index. However, when we take the difference of the Analytical Literacy Index scores of SLI and non SLI women, it is on a higher side in Madhya Pradesh.

In the Financial Literacy Index, SLI women in Maharashtra (66.47) performed better than their peers in Madhya Pradesh (63.24) and Tamil Nadu (60.69). Though the difference between SLI and non-SLI women remains positive in all the three states, the disparity is comparatively higher in Madhya Pradesh than their counterparts in the two other states.

With regard to both Financial Awareness (Products/Services) Index and Financial Product/Services Usage Index, SLI women in Tamil Nadu scored higher than those in Maharashtra and Madhya Pradesh. Despite this, there is a relatively high difference between SLI and non- SLI women in Madhya Pradesh in terms of product or service awareness and usage, as compared to their counterparts in Tamil Nadu and Maharashtra.

Overall, there seems to be a positive behaviour in the financial literacy of the SLI women when compared to non-SLI women in all the three states. However, not much differences can be seen in the financial literacy among the SLI women in the three states.

5.2 Savings

The vast majority of SLI households save in some or another way in all three states when compared to non-SLI households. Moreover, Madhya Pradesh has the highest per capita savings among SLI households (442.87 INR) than Tamil Nadu (247.88 INR) and Maharashtra (192.34 INR). However, close to 70% of the per capita savings of SLI households in Madhya Pradesh is in informal sources. Further, the difference in per capita savings between SLI and Non-SLI is greater in Tamil Nadu than in Maharashtra and Madhya Pradesh (Table 5.2).

Per capita formal savings of SLI households tend to be comparatively higher in Tamil Nadu than in Maharashtra and Madhya Pradesh. While accounting for the differences between the per capita formal savings of SLI and non-SLI households, Tamil Nadu has a greater disparity when compared to that of the other two states. Likewise, the share of formal savings of SLI households is the highest

in Tamil Nadu (80.92%). Maharashtra, however, has a relatively higher proportion of SLI households that save through formal sources than its counterparts in the other two states.

On the other hand, with regard to per capita informal savings, SLI households in Madhya Pradesh save 215.48 (INR) more than their mean SLI per capita informal savings. Similarly for per capita informal savings, the differences between the SLI and Non-SLI households' per capita informal savings is positive and the difference is relatively on the higher side in Madhya Pradesh as compared to Maharashtra and Tamil Nadu. Further, in Maharashtra and Tamil Nadu, we could observe comparatively lesser per capita informal savings among SLI households than their counterparts, as the difference between their per capita informal savings turns out to be negative. This points to a possible shift of savings from informal to formal sources among the SLI women in these two states. Likewise, the share of informal savings of SLI households is the highest in Tamil Nadu (61.88%) and on a brighter side, the difference in share of informal savings of SLI and non- SLI households becomes negative in all the states, hinting at an increasing preference for formal savings among the SLI households in all the three states.

In general, the descriptive results indicate that the SLI households save considerably more, and that they prefer formal savings over informal savings when compared to their non-SLI counterparts in all three states.

5.3 Loan Behaviour

SLI households in Tamil Nadu tend to dominate the SLI households in Madhya Pradesh and Maharashtra with regard to mostly all the aspects related to loan behaviour. Almost each SLI household takes a loan in Tamil Nadu and of those loans majority are female owned when compared to that of Maharashtra and Madhya Pradesh. The difference in the proportion of SLI households and non-SLI households who have taken a loan remains positive in all states and the difference is highest in Tamil Nadu when compared to other two states. Likewise, the difference in the proportions of SLI and non-SLI households where the loan is female owned is comparatively higher in Tamil Nadu than other two states (Table 5.3).

Higher proportion of SLI households in Tamil Nadu prefer loans from formal sources like banks, MFIs and SHGs when compared to Madhya Pradesh and Maharashtra. On the contrary, we could see a higher demand for informal loans from SLI households in Tamil Nadu compared to Maharashtra and Madhya Pradesh. However, the proportion of SLI households in Tamil Nadu who took informal loans is much smaller than the proportion of SLI households who took formal loans. In the case of households who have taken formal loans, the difference remains positive for all three states; however, it moves into negative territory for all three regarding households who have taken informal loans. This might be due to the decrease in preference towards informal loan sources among SLI households when compared to the non-SLI one in all the three states.

Number of loans taken by SLI households and the total number of loans taken by female members per household in Tamil Nadu is relatively more than those taken by SLI households in Madhya Pradesh

and Maharashtra. In addition, the number of loans taken by SLI households outnumber those taken by non-SLI households in all three states. Similarly, this holds true even in the case of the number of loans held by women except Madhya Pradesh the difference is less. The average amount of formal loans of a household is highest in Tamil Nadu among three states. However, the difference between SLI and non- SLI households in case of the amount of formal loans turns out to be negative in all states. This might be due to the smaller loan amount being disbursed to SLI households, as HDFC loans occupy the majority of the SLI loan basket, which are primarily microcredits, followed by SHG internal loans, which are also smaller, whereas non-SLI households primarily rely on bank loans, which are comparatively of higher value.

Overall, a positive trend is evident among SLI households in favour of formal loan sources over informal sources in all three states, and the loans owned by females are also on the higher side.

5.4 Income

The differences in the average wage income of SLI and non-SLI households in all the states is on a lower side. However, the average wage income (per person involved in the households) is highest for Maharashtra among the SLI households along with the highest positive difference for the SLI households when compared with their counterparts. SLI households in Madhya Pradesh earn slightly less than the non-SLI households (Table 5.4).

Income from enterprise, monthly income and per capita income earned is highest in Madhya Pradesh for the SLI households. However, the high income could be due to the lesser number of households (n= 81) surveyed in Madhya Pradesh as compared with other states. Also, we do see the per capita income of SLI households being more than the non-SLI households for all the states. Contrary to the above findings, enterprise income of SLI households in Maharashtra is 24% lesser than the non-SLI households and the difference in the monthly income of SLI and non-SLI households is negligible in Tamil Nadu.

Overall, the results do show higher wage, enterprise, monthly and per capita income of SLI households than their counterparts.

5.5 Women Empowerment

The involvement of SLI females in Madhya Pradesh as a primary decision maker at the intra-household level is lowest among all the states whereas women in Maharashtra outperform other states. The non-SLI women in all the states are less involved as a primary decision maker in the household. Only Tamil Nadu non-SLI women have a higher decision-making index compared to other non-SLI states but their index score is also on a lower side (Table 5.5).

SLI women in Maharashtra outperform other states in decision making related to finance products as well as general household related things. Whereas, women in Madhya Pradesh are low performing in general household and finance product related decision making in the household. The differences in the mean overall decision making, general household related and finance product related decision-

making index score is highest for the SLI women than the non-SLI women in Maharashtra when compared to the other two states.

Overall, the intra-household decision making by SLI females in Maharashtra is substantially higher than the other two states, especially Madhya Pradesh where women hold lesser decision-making power.

5.6 Enterprise and Ownership of Assets

SLI households in Maharashtra possess comparatively higher number of enterprises than those in Madhya Pradesh and Tamil Nadu. However, the differences between the number of enterprises owned by SLI and non- SLI women is more in Madhya Pradesh when compared to Tamil Nadu and Maharashtra because of less enterprise holdings by non-SLI households in Madhya Pradesh. Moreover, Maharashtra has a higher proportion of SLI households that own an enterprise when compared to other two states and of that the majority of such enterprises are owned by women. However, Maharashtra tends to have a greater disparity in terms of number of female owned enterprises between SLI and non- SLI households than Tamil Nadu and Madhya Pradesh (Table 5.6).

Furthermore, when it comes to Business Management Index, SLI women in Maharashtra scored relatively higher than those in Tamil Nadu and Madhya Pradesh; however, the difference between the mean Business Management Index for SLI women and non-SLI women is almost negligible.

Likewise, in the case of the number of normal and superior consumption assets and total consumption assets, SLI households have more assets compared to non-SLI households. SLI households on average have more than two consumption assets than the non-SLI households in Maharashtra and Madhya Pradesh. When it comes to the number of productive assets, both low-value productive assets and high-value productive assets, SLI households in Maharashtra have lesser assets compared to non-SLI households. The differences in the ownership of productive assets in Madhya Pradesh and Tamil Nadu is minimal.

Overall, we could observe an improvement of entrepreneurial behaviour among the SLI households, especially among the SLI women when compared to the non- SLI counterparts.

Table 5.1 State-level Descriptive Analysis of Financial Literacy

Variable	Madhya Pradesh		Maharashtra		Tamil Nadu		Overall	
	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households
Financial behaviour index	59.34	51.22	54.85	30.60	54.46	34.65	55.08	35.21
Financial attitude index	51.76	28.94	58.65	42.75	54.10	39.34	55.09	39.21
Basic Financial knowledge index	87.15	83.74	90.50	85.97	83.78	87.93	85.97	86.97
Analytical literacy index	66.67	47.56	73.91	67.80	61.96	49.02	65.72	53.98
Financial Literacy Index	63.24	48.46	66.47	52.61	60.69	47.70	62.54	49.11
Financial Awareness Index (Product/Services)	75.60	62.80	65.25	55.88	79.72	81.59	75.31	72.68
Financial Product/Services Usage Index	33.28	18.90	26.23	14.08	38.99	29.50	34.89	24.22

Table 5.2 State-level Descriptive Analysis of Savings

Variable	Madhya Pradesh		Maharashtra		Tamil Nadu		Overall	
	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households
Per capita Formal Savings (INR)	140.78	57.50	154.99	85.99	176.39	84.32	166.75	82.06
Per capita Informal Savings (INR)	302.10	281.89	37.35	40.95	71.49	84.95	86.62	92.87
Per capita Savings (INR)	442.87	339.39	192.34	126.94	247.88	169.27	253.37	174.93
Share in formal savings (%)	38.12	19.83	74.70	45.20	80.92	42.82	74.51	39.99
Share in informal savings (%)	61.88	80.17	25.30	54.80	19.08	57.18	25.48	60.01
Whether saved or not (%)	100.00	96.34	98.13	58.82	95.88	63.98	96.93	65.84
Whether saved in formal source (%)	85.54	52.44	95.79	30.77	91.96	31.10	92.32	33.16

Table 5.3 State-level Descriptive Analysis of Loans

Variable	Madhya Pradesh		Maharashtra		Tamil Nadu		Overall	
	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households
Proportion of household who took a loan	91.57	58.54	71.03	17.65	96.70	58.46	89.13	47.34
Proportion household where female took a loan	35.53	25.00	96.71	33.33	98.29	28.62	91.10	28.64
Proportion of household who took formal loans	87.95	51.22	70.09	14.03	96.29	43.90	88.23	36.49
Proportion of household who took informal loans	9.64	17.07	1.87	4.07	19.59	24.02	13.68	17.87
Share of formal loans taken by a household (%)	92.82	78.96	98.03	78.21	91.13	67.24	92.81	69.81
Share of informal loans taken by a household (%)	7.18	21.04	1.97	21.79	8.87	32.76	7.18	30.18
Number of loans	1.23	0.90	0.73	0.18	1.95	0.77	1.54	0.62
Total number of loans taken by female member per household	0.39	0.42	0.98	0.33	1.76	0.33	1.44	0.33
Average amount of formal loans of a household (INR)	83394	204929	48453	112533	106319	200052	91377	191818

Table 5.4 State-level Descriptive Analysis of Income

Variable	Madhya Pradesh		Maharashtra		Tamil Nadu		Overall	
	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households
Wage Income (INR)	9308.68	8796.71	9105.80	8828.87	8856.33	8535.49	8962.00	8615.00
Wage Income per person (INR)	3970.19	4227.76	5667.39	4714.18	4289.57	3922.51	4521.00	4090.00
Enterprise Income (INR)	14703.33	6583.33	9043.08	12067.74	10615.54	8834.96	10507.00	9946.00
Monthly income (INR)	25925.63	19207.42	18138.82	14752.45	17771.76	18205.43	18737.00	17365.00
Per Capita Monthly Income (INR)	5285.42	3806.54	4485.45	3808.69	4991.94	4825.61	4884.00	4445.00

Table 5.5 State-level Descriptive Analysis of Women Empowerment

Variable	Madhya Pradesh		Maharashtra		Tamil Nadu		Overall	
	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households
Decision-making index (out of 100)	17.47	17.42	44.06	21.07	37.82	24.28	37.36	22.71
General household related decision-making index (out of 100)	16.06	16.67	45.48	21.37	38.85	26.36	38.24	24.01
Finance product related decision-making index (out of 100)	20.00	18.78	41.50	20.54	35.96	20.55	35.78	20.36

Table 5.6 State-level Descriptive Analysis of Enterprise Behaviour and Ownership of Assets

Variable	Madhya Pradesh		Maharashtra		Tamil Nadu		Overall	
	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households	SLI Households	Non-SLI Households
Number of Enterprise	0.29	0.07	0.32	0.14	0.24	0.08	0.27	0.10
Whether enterprise is present (%)	24.09	7.31	30.37	14.02	21.44	8.07	24.16	9.61
Whether enterprise is female owned (%)	40	33.33	70.76	22.58	51.92	46.34	57.14	35.89
Business Management Index (out of 100)	59.5	57.5	77.07	85.35	74.76	69.75	29.74	29.06
Number of normal consumption assets	7.48	5.57	7.08	5.16	10.01	9.53	8.94	7.93
Number of superior consumption assets	3.88	3.49	3.86	3.53	4.30	4.19	4.13	3.94
Total number of consumption assets	11.36	9.06	10.94	8.69	14.31	13.72	13.07	11.87
Number of low value-productive assets	3.05	2.13	0.32	1.51	1.56	1.78	1.37	1.74
Number of high value productive assets	1.75	2.09	0.39	1.09	1.05	1.19	0.94	1.25
Total number of productive assets	4.80	4.22	0.71	2.60	2.61	2.97	2.31	2.99

Overview of Descriptive Statistics

Overall, the descriptive statistics comparison of Madhya Pradesh, Maharashtra and Tamil Nadu yields insightful results. Financial literacy of SLI women in all the three states are on a higher side than their non-SLI counterparts. Except for certain outliers in the financial inclusion measures, the scores of SLI women in all component indices of financial literacy are more than 50, implying a better financial literacy among them compared to non-SLI households.

With regard to savings, we could observe a positive inclination towards formal sources among the SLI households in all the three states, when compared to their non-SLI counterparts. The higher share of formal savings among the SLI households when compared to non-SLI households, corroborates this fact. Moreover, in loan behaviour as well, there is a higher preference for formal loan sources like Banks, MFIs and SHGs among the SLI households than their counterparts.

Among the states, Tamil Nadu outperformed other peers, in loan behaviour among SLI households with majority of such loans being female owned. Moving on to income, SLI households in Madhya Pradesh earn income than those in Tamil Nadu and Maharashtra and the higher per capita income among SLI households in Madhya Pradesh validates this. However, when it comes to entrepreneurial behaviour, SLI households in Maharashtra tend to have a higher number of enterprises and of that majority are female owned, when compared to their SLI peers in other states. Further, while SLI households in Tamil Nadu possess comparatively more consumption assets than other two states, those in Madhya Pradesh exhibit a relatively greater inclination towards productive assets in comparison to its SLI counterparts in Tamil Nadu and Maharashtra. On the other hand, Madhya Pradesh's performance on the female empowerment indicators is the lowest among the three states, hinting at poor intra-household bargaining and decision-making powers for women among the SLI households. Also, the enterprise ownership and loans taken by the female SLI households in Madhya Pradesh are on a lower side.

06 Conclusion and Way Forward

6.1 Conclusion

The report presents the findings of an impact evaluation study of the Sustainable Livelihood Initiative (SLI), a CSR initiative of HDFC bank. The study was conducted in the state of Madhya Pradesh, Maharashtra and Tamil Nadu. The study measured the impact of the program on women's financial literacy, intra-household decision making, and her household's economic welfare (savings habit, loan taking behaviour, enterprise ownership, assets portfolio, income etc.).

The analysis is based on an extensive household survey conducted in the three states and is divided into two parts. First, an empirical analysis of the causal effects of the program on the women and her household and second, state level descriptive analysis of key indicators among SLI households and between SLI and non-SLI households. Both the analysis should be seen as complementary to each other. The descriptive analysis focuses on the performance of the states which is suggestive and cannot be interpreted as causal effects of the program.

Overall, the study findings show strong effects of the program on women's financial literacy and her involvement as a primary decision maker in intra-household decision making. SLI women are more financially literate than non-SLI women, which is mainly due to their better financial behaviour, attitude and analytical skills. The positive impact on financial literacy corroborates the effect of financial literacy training sessions provided by the SLI team to the rural women. The differences in terms of awareness regarding financial products or services is relatively lesser between SLI and non-SLI women but SLI women who have used/using these products or services are much higher than the non-SLI women. This shows the effect of financial literacy on financial inclusion of women.

Higher proportion of SLI Women are involved as primary decision makers in the household than the non-SLI households with regard to decision making related to education of child, healthcare, food, clothing, expenditure on home items and so on along with the decision making related to financial products like giving and taking loans, savings and investments decision.

The program has positive effects on the inclination of the SLI households towards formal sources of savings. The proportion of households who save in formal sources, along with higher share of savings to the total savings is more in SLI households than non-SLI households. The amount of formal savings and total savings (including per capita savings) of the SLI households is also more than the non-SLI households. However, savings as a proportion to income is same across the two groups.

Significant impact of the program on the borrowing behaviour of the SLI households is evident, which is mainly driven towards formal channels than the non-SLI households. Proportion of households who take loan, especially from formal sources are more in SLI households. Share of formal loans out of the total loans taken is also higher for SLI households than their counterparts. The likelihood of female member taking a loan is much higher in the SLI households than non-SLI household. SLI households are able to receive collateral free loans from both HDFC bank and SHGs/JLGs. However, the cost of debt (interest rate) is similar across the groups.

The program had limited impact on the asset ownership of SLI households. No significant differences can be observed in the livestock and productive assets ownership between the SLI and non-SLI households. However, SLI households have an extra consumption asset than the non-SLI households. The effect of the program on income of the SLI households is positive. SLI households earn higher income than non-SLI households which is mainly attributed to higher enterprise and wage income. The higher wage income is an indirect effect of the program. Livelihood diversification of SLI household is more than their counterparts but the result is weakly significant.

The program had a positive effect on the enterprise ownership of the SLI households. A significantly high proportion of SLI households reported having an enterprise and the number of enterprises is also more than the non-SLI households. The proportion of female owned enterprises is much higher in SLI households than the non-SLI households. On the other hand, there is no significant difference in the enterprise's financial management behaviour like proportion of women documenting transactions and calculating profit of their sales and expenses. However, the proportion of SLI woman entrepreneurs who maintain a financial diary is more than their counterparts.

The results of distributional effects of the program shows that monthly income, savings and total outstanding borrowing is positively affected for the SLI households at the bottom percentiles (10th and 25th). However, on the top percentiles, savings is still higher for the SLI households but the outstanding borrowing falls and income results are insignificant.

Descriptive analysis of the three states shows some insightful results. Financial literacy of SLI women in all the three states is more than their non-SLI counterparts and the differences among the states is not much. Tamil Nadu outperformed other peers, in loan behaviour among SLI households with majority of such loans being female owned. Moving on to income, SLI households in Madhya Pradesh earn more than those in Tamil Nadu and Maharashtra. However, when it comes to entrepreneurial behaviour, SLI households in Maharashtra tend to have a higher number of enterprises and of that majority are female owned, when compared to their SLI peers in other states. On the other hand, Madhya Pradesh's performance on the female empowerment indicators is the lowest among the three states, hinting at poor intra-household bargaining and decision-making powers for women among the SLI households.

6.2 Way Forward

Linking SHG/JLG networks within districts - SLI program team could promote linkages among SLI networks in each state within districts so that they could feed from each other or synergize. That would help them to network, exchange ideas, look for opportunities, and cooperate with each other. SHGs under one SLI network could form a kind of producer organisation if needed, which would help them in having more bargaining power.

Promoting cashless modes of transaction to increase digital literacy – SLI program team could encourage cashless transactions among the SLI-women-run enterprises, which would eventually improve their ability to perceive better opportunities and gain access to the digital markets. This can be promoted not only for enterprises but overall economic transactions of women and their household in general.

Right Blend of training and microfinance - Identifying the right blend of training that caters to the local needs is necessary for the success of any microfinance program. Hence, after doing an in-depth analysis of the program locally, the training module should be designed, taking into consideration capacity constraints. Further, the bank could think of diversifying its micro-credit products after analysing the loan utilisation patterns of the household.

Entrepreneurship Scheme for encouraging better enterprise management - The program has a positive impact on entrepreneurial activity of SLI women but it has limited effects on how women manage their enterprise and its financial activity. Hence, HDFC Bank's CSR policy on SLI can include an entrepreneurship scheme for the groups, giving them enhanced training on enterprise opportunities and management. Enhancing efficient entrepreneurial management is a next level challenge and hence will require targeted initiatives to achieve the results.

Increased Focus on Madhya Pradesh on the targeted population - The performance of Madhya Pradesh in women empowerment indicators is relatively weaker than the other states. The SLI program team could revamp their training sessions in Madhya Pradesh by making them more skill-oriented, so that it will make them more capable of pursuing diverse livelihoods, as economic empowerment is the key to women empowerment. Further, the bank could collaborate with local community-based non-governmental organisations, for increasing the financial activity and entrepreneurial behaviour in the targeted population.

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08 Annexures

Annexure 1

Various evaluation studies on microfinance programs were carried out all over India. Majority of them studied various variants of NRLM in each state. Pandey, V, Gupta, A & Gupta, S (2019) studied the impact of NRLM and its variants in the states of Jharkhand, Madhya Pradesh, Maharashtra; Kochar et al. (2021) conducted a wider study on the impact of NRLM in 9 states , which includes Bihar, West Bengal, Odisha, Jharkhand, Madhya Pradesh, Chhattisgarh, Maharashtra, Rajasthan and Uttar Pradesh ; Singh & Pandey (2019) focussed on the NRLM in Jammu and Kashmir; and Panda, D. K (2009) studied the impact of microfinance programs in general on the rural households in the coastal districts of Orissa. Numerous studies have been conducted across India, however, here we provide a review of the findings of some of the above studies on savings, loan behaviour, income and enterprise.

Evidences on savings

Pandey, V, Gupta, A & Gupta, S (2019) observed a positive impact of NRLM on savings where overall savings of the program households had risen by 18%, which was mainly contributed by a 45.3% higher savings in formal sources, when compared to the non-program households. Moreover, they found a 5.2% increase in the share of formal savings to informal savings in the same group. Similarly, Kochar et al., 2021 found the gain in savings due to NRLM to be 28% higher for the program households than their counterparts. Further, Singh & Pandey, 2019 reported favourable effects in the size of savings of the program households.

Evidences on Loan Behaviour

When it comes to loan behaviour, all microfinance programs, irrespective of its nature, were successful in inculcating a positive loan behaviour among the program households. 24% more program households are likely to obtain a loan than non-program households (Pandey, V, Gupta, A & Gupta, S, 2019). Furthermore, Singh & Pandey (2019) reports program households of receiving 1.32 more loans than their counterparts. Additionally, the average loan amount received by the program household is 59.06% lesser than the non-program households and the percentage of loan that required collateral was 12.6% lesser for the program households. Further, Kochar et al. (2021) notices a fall in preference for informal loans among the program households, as the share of informal loans gets reduced by 20% in the same group.

Evidences on Income

Impact of microfinance programs on income mostly mirrored in the form of higher and diverse sources of income. Average monthly income of the program households was found to be 16% more than their counterparts (Singh & Pandey, 2019); furthermore, Panda, D. K (2009) finds an increase of 12% in the monthly income of the program households. With regard to diversity in income sources, Kochar et al. (2021) reports the programs households to possess 0.2 additional sources of income than their counterparts.

Evidences on Enterprise

With regard to managing and owning enterprises, Singh & Pandey (2019) , found significantly higher proportion of program households(8.12%) to possess enterprises when compared to their counterparts (4%) and further, 21.3% of enterprises owned by the program households were female-owned , whereas it is 2.93% for the non-program households. Similarly, Pandey, V, Gupta, A & Gupta, S (2019) found no significant difference in the revenue or the number of people employed in such enterprises.

Annexure 2

Data Collection and Analysis

Data was collected digitally through CDFI's data collection software SANGRAH. The data collectors were selected carefully along with 3 days of training in all the states prior to deployment in the field. Data monitoring and review was done every alternate day to identify problems and to do the corrections in a timely manner. The data collected was monitored on a real time basis in excel and live action dashboards were made on CDFI's in house data analytics platform SANKALP. Data was cleaned post the data collection process and after that analysis of the data was done. Analysis of the study was done using data analytics platform STATA.

Ethical Consideration

To protect the rights of the survey participants, data collection was stopped if any participant was reluctant to share any further information. Access to the data sets was only given to the research team to maintain confidentiality. The enumerators obtained informed consent from the study participants, in order to ensure confidentiality, security, and anonymity, upholding research ideals and fostering accountability, integrity, mutual respect, and impartiality.

Annexure 3

The Probit model (Table A3.2) shows the probability that the household belongs to SLI as a function of a comprehensive set of characteristics of the women of the households, household, and pre-program. The variables selected are in line with the existing literature. These variables include women of household characteristics (age, the square of age, married or not, education), household characteristics (Christian household, Muslim household, SC/ST/other caste households, number of household members, type of house), and pre-program status (small livestock, bovine livestock, dry land owned, normal and superior consumption assets, low-value agricultural assets in 2010).

The probability of a household participating in SLI increases with the age of the women of the households, the number of normal consumption assets, and the number of household members. Further SLI participants are more likely to be from Muslim households. However, women who are participating in SLI are less likely to be married, illiterate, from a ST household, and also live in semi-pucca houses. With regard to assets owned, the propensity of participation significantly reduces if the household possesses a greater number of drylands, bovine livestock, and superior consumption assets.

The balance property in the matched sample is presented in Table A3.3. The results show that the balancing property is satisfied and that differences in the matched sample have been reduced. Further, propensity scores for the treated and control groups show a significant overlap (common support), as illustrated in Figure A3.1.

Table A3.1 List of Covariates (Matching Variables)

Covariates	Definition
Age of the woman	Age of the woman of the household (in years)
Square of age of the woman	Square of the age of the woman of the household (in years)
Woman of household is married	Whether the woman of the household is married?
Women of household has primary education	Whether woman of the household has primary education?
Women of household has secondary education	Whether woman of the household has secondary education?
Woman of household is illiterate	Whether woman of the household is illiterate?
Type of house is mud	Whether the type of house of the household is mud?
Type of house is semi-pucca	Whether the type of house of the household is semi-pucca?
Household is SC	Whether the household is SC?
Household is ST	Whether the household is ST?
Household is other caste	Whether the household is of other caste?
Household is Muslim	Whether household is Muslim?
Household is Christian	Whether the household is Christian?
Number of household members	Total number of members of the household
Dry land owned by household	Total dry land owned by the household (in acres)
No. of small livestock (2010)	Number of small livestock (goat, sheep and pig) owned by the household in 2010
No. of bovine livestock (2010)	Number of bovine livestock (cow and buffalo) owned by the household in 2010
No. of normal consumption assets (2010)	Number of normal consumption assets (almirah, bicycle, etc.) owned by the household in 2010
No. of superior consumption assets (2010)	Number of superior consumption assets (refrigerator, television, etc.) owned by the household in 2010
No. of low-value agricultural assets (2010)	Number of low-value agricultural assets (plougher, chaff-cutter, etc.) owned by the household in 2010

Table A3.2 Selection Model

Covariates	Probability of being an SHG household
Age of the woman of the household	0.149***
	(-0.0255)
Square of age of the woman of the household	-0.00137***
	(-0.000306)
Woman of household is married	-0.282**
	(-0.114)
Women of household has primary education	0.033
	(-0.1)
Women of household has secondary education	-0.0398
	(-0.0936)
Woman of household is illiterate	-0.190*
	(-0.101)
Type of house is mud	0.161
	(-0.306)
Type of house is semi-pucca	-0.124*
	(-0.0688)
Household is SC	-0.377
	(-0.305)
Household is ST	-0.621*
	(-0.319)
Household is other caste	-0.14
	(-0.298)
Household is Muslim	0.351*
	(-0.204)
Household is Christian	0.0363
	(-0.243)
Number of household members	0.0422*
	(-0.0232)
Dry land owned by household	-0.187***
	(-0.0571)
No. of small livestock (2010)	-0.0107
	(-0.014)

Note: Standard errors in parentheses. ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Covariates	Probability of being an SHG household
No. of bovine livestock (2010)	-0.0438** (-0.0222)
No. of normal consumptive assets (2010)	0.0244** (-0.0105)
No. of superior consumptive assets (2010)	-0.125*** (-0.0246)
No. of low-value agricultural assets (2010)	-0.0473 (-0.0384)
Constant	-3.047*** (-0.619)

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Table A3.3 Balancing Test

Variable	Unmatched(U) Matched (M)	Mean		
		Treated	Control	Difference in Mean
Age of the woman of the household	U	41.73	36.344	14.82%***
	M	41.708	41.63	0.19%
Square of age of th woman of the household	U	1823.1	1410.9	29.22%***
	M	1821.3	1808.7	0.70%
Woman of household is married	U	0.84271	0.93218	-9.60%***
	M	0.84487	0.84807	-0.38%
Women of household has primary education	U	0.50895	0.60912	-16.45%***
	M	0.51026	0.51225	-0.39%
Women of household has secondary education	U	0.27238	0.39088	-30.32%***
	M	0.27308	0.27138	0.63%
Woman of household is illiterate	U	0.22379	0.19729	13.43%
	M	0.22308	0.2399	-7.01%
Type of house is mud	U	0.01535	0.01233	24.49%
	M	0.01538	0.00998	54.11%

Variable	Unmatched(U) Matched (M)	Mean		Difference in Mean
		Treated	Control	
Type of house is semi-pucca	U	0.4399	0.48829	-9.91%*
	M	0.43974	0.43919	0.13%
Household is SC	U	0.21995	0.30086	-26.89%***
	M	0.22051	0.22177	-0.57%
Household is ST	U	0.06138	0.13687	-55.15%***
	M	0.06154	0.06635	-7.25%
Household is other caste	U	0.69437	0.55364	25.42%***
	M	0.69487	0.69352	0.19%
Household is Muslim	U	0.04987	0.02096	137.93%***
	M	0.04744	0.04114	15.31%
Household is Christian	U	0.02046	0.01726	18.54%
	M	0.02051	0.02025	1.28%
Number of household members	U	4.1164	4.217	-2.39%
	M	4.1167	4.0974	0.47%
Dry land owned by household	U	0.07711	0.26443	-70.84%***
	M	0.07731	0.0877	-11.85%
No. of small livestock (2010)	U	0.27621	0.48582	-43.15%*
	M	0.27692	0.33887	-18.28%
No. of bovine livestock (2010)	U	0.4156	0.62885	-33.91%***
	M	0.41667	0.39502	5.48%
No. of normal consumptive assets (2010)	U	5.4335	5.1899	4.69%
	M	5.4282	5.4635	-0.65%
No. of superior consumptive assets (2010)	U	1.7928	2.1295	-15.81%***
	M	1.7962	1.8044	-0.45%
No. of low-value agricultural assets (2010)	U	0.37468	0.50185	-25.34%***
	M	0.37564	0.39795	-5.61%

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Figure A3.1 Common Support Graph

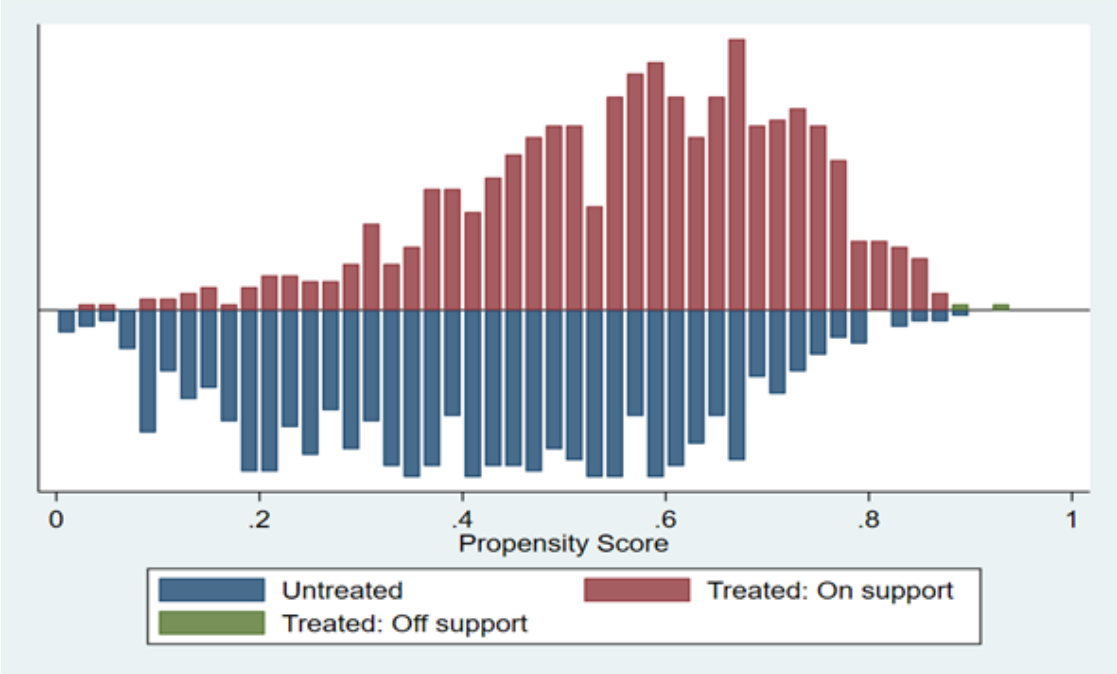
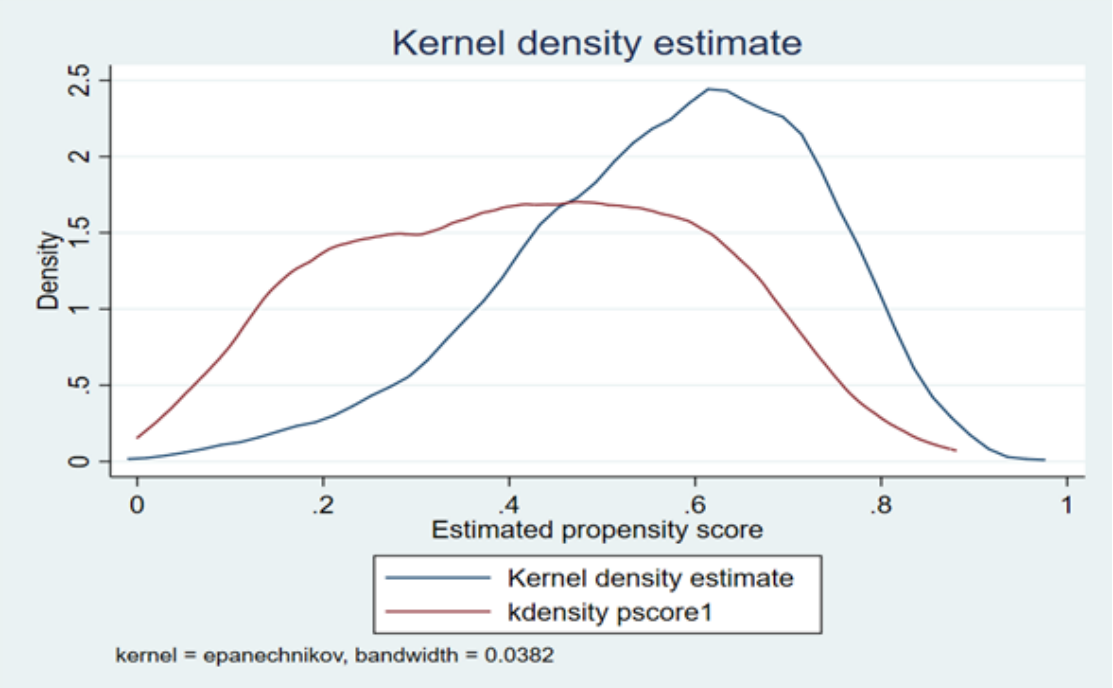


Figure A3.2 Kernel Density Estimate



Annexure 4 - Description of Outcome Variables used in Analysis

Table A4.1 Description of Outcome Variables used in Analysis

Outcome variable	Description
Financial Literacy	
Financial Behaviour Index (out of 100)	The Financial Behaviour Index quantifies women's approach towards prudent financial behaviour like savings, investment and budgeting. Firstly, a Financial Behaviour Score (out of 4) is calculated as follows: those who answered 'Yes' to prioritising a) saving, b) investment is given 1 score each and 'No' was given a score of 0. In case of maintaining a budget, those who responded either a) having a budget and strictly sticking to it and b) having a flexible budget but with restrictions on extravagant expenses, was given a score of 1, whereas those answered either a) having no budget b) maintaining flexible budget with no restrictions on expenses. C) don't' know, was given a score of 0. With regard to the question on frequency of savings, those who answered either a) "Regularly" was scored 1, b) "Sometimes" was scored 0.5, c) "Never" or "Rarely" was scored 0. Lastly, The Financial Behaviour Score on 4 is then scaled to 100 to form the Financial Behaviour Index.
Financial Attitude Index (out of 100)	Financial Attitude Index measures women's approach towards money management and planning for the future. At first, a Financial Attitude Score (Out of 7), is calculated based on 7 statements depicting financial attitude related to: a) considered purchase based on affordability b) perceiving saving as more useful than spending c) taking lesser risks while investing money d) Having financial goals e) Lesser indebtedness f) Settling the amount at the same time rather than making arrears. g) considering money as a component of long-term planning. (The statements were either positively or negatively toned in the original questionnaire, but for the consistency in scoring, they were converted to a positive tone.)

Outcome variable	Description
Financial Literacy	
	The responses are marked based on the degree of positive and negative responses (Likert scale of 5) Respondents who “completely agree” to a statement were given a score of 1; “agree” is given 0.66; “neutral” is scored 0.33, whereas “Disagree” and “Completely Disagree” were scored 0. At last, the Financial Attitude Score on 7 is scaled to 100 to form the Financial Attitude Index.
Basic Financial knowledge Index (out of 100)	Basic Financial Knowledge Index measures women’s level of knowledge on basic financial concepts. First, a Basic Financial Knowledge Score (out of 3), is computed based on answers on the following concepts: a) Cost of living increase with price rise b) Losing money is more likely when the probability of making money increases c)Diversification of saving reduces risk Those who answered ‘Yes’ for the above statements were given 1 score, while, “No” or “Don’t Know” were given 0 scores. Then, Basic Financial Knowledge Score on 3 is scaled to 100 to form the index.
Analytical Literacy Index (out of 100)	Analytical Literacy Index quantifies women’s analytical literacy on basic financial concepts. First of all, the Analytical Literacy Score (out of 6) is calculated based on the answers regarding the calculation of the following: a) division of money, b) inflation, c) simple interest, d) compound interest, e) the interest rate on loan and f) discount. Here, each correct answer was scored as 1 and the incorrect answers and “Don’t Know” were scored as 0. Finally, the Analytical Literacy Score of 6 is scaled to 100 to form the Analytical Literacy Index.
Financial Literacy Index (Out of 100)	Financial literacy Index is the sum of the Financial Behaviour Index, Financial Attitude Index and Financial Knowledge Index (Basic Financial Knowledge and Analytical Skills) converted to the scale of 100.

Outcome variable	Description
Financial Literacy	
Financial Product Usage Index (Out of 100)	Financial Product Usage Index quantifies whether the females use the financial products or services which they are aware of. Here, women who responded "Yes" were given a score of 1, and 0 if they answered "No". Lastly, the Financial Product Usage Score of 8, is then scaled to 100 to form the Financial Product Usage Index.
Savings Behaviour	
Amount of Formal Savings (INR)	Amount of formal savings, defined as savings of household in formal sources like commercial bank, cooperative bank, SHGs, Micro Finance Institutions (MFIs), post office, chit fund and insurance.
Amount of Informal Savings (INR)	Amount of informal savings, defined as savings of household in informal sources like
Per capita Formal Savings (INR)	Relatives. or friends. Landlord and saving at home. Formal Savings per individual member (Total formal savings of the household divided by the total number of household members).
Per capita Informal Savings (INR)	Informal Savings per individual member (Total informal savings of the household divided by a total number of household members).
Total Savings (INR)	Total savings of the household (both formal and informal savings).
Per capita Savings (INR)	Total savings of the household divided by the total number of household members. The proportion of households who have saved in informal sources.
Whether saved in informal source	The proportion of households who have saved in formal sources.
Whether saved in formal source	The proportion of households who have savings has a habit.
Whether saved or not	The proportion of savings in formal sources (Total formal savings of the household divided by the total savings of the household)
Share in formal savings (%)	The proportion of savings in informal sources (Total informal savings of the household divided by the total savings of the household)

Outcome variable	Description
Savings Behaviour	
Share in informal savings (%	Saving as a proportion of income (Total savings of the household divided by the total income of the household)
Average Propensity to Save	Total Savings of household in formal sources excluding SHGs.
Formal Savings (INR) (excluding SHG savings) Per capita Formal Savings (INR) (excluding SHG savings)	Total formal savings of the household (excluding SHG savings) divided by the total number of household members.
Whether saved in the formal source (excluding SHG savings)	The proportion of households who have saved in formal sources, other than SHGs.
Loan Behaviour	
Proportion of household who took a loan	The proportion of households who have taken a loan.
Proportion of households who took formal loans	The proportion of households who have taken a formal loan .
Proportion of households who took informal loans	The proportion of households who have taken an informal loan.
Number of loans	Total number of loans taken by the household.
Number of formal loans	Total number of formal loans taken by the household. The formal loan sources include SHG/JLG internal loans, HDFC bank, MFIs, Agricultural Input Trader, Private bank, Nationalized bank, Rural development bank, Govt. Schemes (such as P.F., etc.), Kisan credit, and Life insurance corporation.
Number of informal loans	Total number of informal loans taken by the household. The informal loan sources include Parents, Relatives/friends, Private money lender, Landlord, Employer, Co-operative Societies and Shopkeeper.
Share of formal loans taken by a household (%)	The proportion of borrowings from formal sources (total amount of loans taken from formal sources divided by the total amount of loans taken by household)
Share of informal loans taken by a household (%) Average amount of informal loans of a household (INR)	The proportion of borrowings from informal sources (total amount of loans taken from informal sources divided by the total amount of loans taken by household)
Average amount of formal loans of a household (INR)	Average loan amount for loans taken by the household from informal sources.

Outcome variable	Description
Loan Behaviour	
Average moratorium period of outstanding loans	Average loan amount for loans taken by the household from formal sources.
Average number of years surpassed for the outstanding loan	Moratorium period of outstanding loans.
Average interest rate of loans in a household	Duration of the outstanding loans.
Percentage of loans in which collateral was needed for a household	Average Interest paid by the household on loans.
Percentage of loans for which co-signer was needed for a household	It shows the percentage of loans where collateral was required. The collateral might include land, livestock, house, gold/silver jewellery and so on It shows the percentage of loans where a cos-signer from the SHG group or any other guarantee was needed.
Total number of loans taken by female member Proportion of females who have taken a loan	Total number of loans availed by a female member of the household from either formal or infor indicator variable, defined as 1 if the female member of the household has taken the loan and 0 otherwise.
Income	
Wage Income (INR)	Total wage income of the household earned in the past 3 months. It is the sum of Agri-wage income, non-Agri wage income and MGNREGS income.
Wage Income per person (INR)	Wage income earned per person (Total wage income earned by households divided by the total number of members in the households)
Agriculture Income (INR)	Total income of the household from agriculture, in the past 3 months .
Livestock Income (INR)	Total income of the household from livestock, in past 12 months. It is the sum of income received from selling livestock and its products(like milk, meat and so on) minus livestock maintenance cost and market value of meat or other products of livestock consumed at home.
Enterprise Income (INR)	Total income of the household from Enterprises, in the past 3 months. It is calculated as the sum of total sales of product and by-product minus the cost of raw material from inventory or own production and expenses incurred in operating enterprises.

Outcome variable	Description
Income	
Monthly income (INR)	Total income earned by households, in the past 3 months.
Per Capita Monthly Income (INR)	Income earned per individual in the household (Total income earned by the household divided by the total number of members in the household)
Proportion of Households having wage income as an income source	indicator variable, defined as 1 if the household has wage labour as an income source and 0 otherwise.
Proportion of Households having Agriculture as an income source	indicator variable, defined as 1 if the household has agriculture as an income source and 0 otherwise.
Proportion of Households having Livestock as an income source	indicator variable, defined as 1 if the household has livestock as an income source and 0 otherwise.
Proportion of Households having Enterprise as an income source	indicator variable, defined as 1 if the household has enterprise as an income source and 0 otherwise.
Proportion of Households having salaried income	indicator variable, defined as 1 if the household has salaried income and 0 otherwise.
Proportion of Households having pension and transfers	indicator variable, defined as 1 if the household reives pension and transfers and 0 otherwise.
Proportion of Households having other income sources	indicator variable, defined as 1 if the household has other income sources and 0 otherwise.
Diversity Number of Income Sources	Number of different income sources the household possess.
Diversity Prop. of Income Sources	Proportion of households having diverse income sources.
Entrepreneurial Behaviour	
Whether enterprise is present	Proportion of households with enterprises.
Number of Enterprise	Total number of enterprises the household possess.
Whether Registered Enterprise	Proportion of households with enterprises registered.
Enterprise Location (Outside Household Residence)	Proportion of households with enterprises located outside the residence.
Number of Hired Workers	Total number of hired workers in the enterprise.
Number of Household Workers	Total number of household workers.
Total Capital Borrowed (INR)	Total amount of capital borrowed in the enterprise.
Total Hours Spent in Enterprise in a Week	Total hours spent by the individual in enterprise in a week.

Outcome variable	Description
Entrepreneurial Behaviour	
Enterprise having Separate Bank Account	Proportion of households with enterprise having a separate bank account.
Total Sales of the Enterprise (INR)	The total amount of sales done by enterprise.
Total Expenses (INR)	Total expenses of the enterprise (It is the sum of the cost of raw material from inventory or own production and expenses incurred in operating enterprises.
Whether enterprise is female-owned	Proportion of households with female-owned loans.
Business Management Index (out of 100)	Business Management Index measures women's ability to manage the business in various aspects. At first, a Business Management score (out of 40) is calculated based on a 5-point scale for each of the 8 entrepreneurial behaviours regarding: a) running their own business, b) identifying opportunities to expand the business, c) obtaining credit for expanding business, d) saving for future investment, e) managing the financial accounts of the business, f) bargaining for buying products for business, g) collecting money for the products /services availed, h) practising coping mechanisms to protect a business during unavoidable shocks. At last, the Business Management score is scaled to 100 to form the Business Management Index.
Business Finances Management Index (out of 100)	Business Finances Management Index quantifies Women's financial management behaviours. At first, a Business Finances Management score (out of 40) is calculated based on the following 3 business financial management practices: a) documenting transactions, Here, women who responded "Yes" are given a score of 1, and 0 if they answered "No". b) maintaining a financial diary Here, women who responded keeping a financial diary or ledger for documenting transactions were given a score of 1, and 0 if they either answered not maintaining a financial diary or only keeping the bills of purchases and expenses or documenting transactions roughly. c) Calculating profit Here, women who defined profits as income minus expense were given 1 score and 0, for those who either incorrectly defined profits as the total income earned in business or those who do not care about calculating profit or those who do not know to calculate profit. At last, Business Finances Management score calculated is scaled to 100 to form the Business Finances Management Index.

Outcome variable	Description
Assets	
Total number of livestock owned by household	It is the sum of all livestock owned.
Proportion of household with a livestock	indicator variable, defined as 1 if the household has livestock and 0 otherwise.
Number of normal consumption assets	Total number of normal consumption assets possessed by the household. Normal consumption assets include Almirah, bicycle, Kerosene stove, LPG, major utensils, Cooler, Electric fan and Radio.
Number of superior consumption assets	Total number of superior consumption assets possessed by the household. It includes Refrigerators, Television, Car/Jeep, Computer, Motorcycle and Mobile phone.
Total number of consumption assets	Total number of consumption assets possessed by the household. It is the sum total of normal consumption assets and superior consumption assets.
Number of high-value productive assets	Total number of high-value productive assets possessed by the household. It includes agricultural equipment (high value- harvester, seed drill etc).
Number of low value-productive assets	Total number of low-value productive assets possessed by the household. It includes agricultural equipment (plougher, cultivator, chaff cutter etc), Fishing equipment and so on.
Total number of productive assets	Total number of productive assets possessed by the household. It is the sum total of high-value productive assets and low value-productive assets.
Women Empowerment	
General Household-Related Decision-Making Index (out of 100)	General Household-Related Decision-Making Index quantifies the engagement of women in daily household matters, which includes 14 indicators like food, clothing, child's education, healthcare, festival, jewellery and marriage expenses and expenditure on additions in house and expensive goods. Firstly, the General Household-Related Decision Score (out of 9) is computed based on the degree of involvement. If the woman's level of input on a daily household-related decision related to the household was either entirely or mostly her input (women is primary decision-maker in the household) then the score given is 1, whereas if her involvement is either "Little to no input" or "Some input" or "Equal Input" 0 is given. Lastly, the General Household-Related Decision Score is scaled to 100 to form the General Household-Related Decision-Making Index.

Outcome variable	Description
Women Empowerment	
Finance Product-Related Decision-Making Index (out of 100)	Financial Product Related Decisions Index quantifies the women's involvement in decision making regarding matters related to taking and giving loans, making savings and investments. Firstly, the Finance Product-Related Decision-Making Score (out of 5) is computed based on the degree of involvement. If woman's level of input on a financial product-related decision related to the household was either entirely or mostly her input (women is primary decision-maker in the household) then the score given is 1, whereas if her involvement is either "Little to no input" or "Some input" or "Equal Input" 0 is given. Lastly, the Finance Product-Related Decision-Making Score is scaled to 100 to form the Financial Product related decisions index.
Decision-making index (out of 100)	The Decision-Making Index quantifies the engagement of women in both daily household matters and financial product-related decisions. It is the combined form of Financial Product-Related Decision-Making Index and General Household-related Decision-Making Index., which accounts for all the 14 indicators like food, clothing, child's education, healthcare, savings, festival, and so forth Firstly, the Decision-Making Score (out of 14) is calculated based on the degree of involvement. If the woman's level of input on a particular decision related to the household was either entirely or mostly her input (women is primary decision-maker in the household) then the score given is 1, whereas if her involvement is either "Little to no input" or "Some input" or "Equal Input" 0 is given. Lastly, the Decision-Making Score is scaled to 100 to form the Decision-Making Index.
General Household-Related Transaction Index (out of 100)	General Household-Related Transaction Index quantifies women's involvement in purchase or sale decisions in household activities like food, clothing, child's education, healthcare, festival, jewellery and marriage expenses and expenditure on additions in house and expensive goods. Firstly, the General Household-Related Transaction Score (out of 9) is computed based on the degree of involvement in transactions. The most appropriate transaction (purchase or sale) involvement behaviour is for the woman to herself purchase and sell the household items (given a score of 1), followed by joint involvement between the women and husband

Outcome variable	
Women Empowerment	
	(given a score of 0.5) and purchase of sale decision fully taken by either "Father-in-law", "Husband" and "Mother-in-law" were given a score of 0. Lastly, the General Household-Related Transaction Score is scaled to 100 to form the General Household-Related Transaction Index.
Financial Product Related Transactions Index (out of 100)	Financial Product Related Transaction's Index quantifies the women's involvement in purchase or sale decisions regarding matters related to taking and giving loans, making savings and investments. Firstly, the Financial Product Related Transactions Score (out of 5) is computed based on the degree of involvement in transactions. The most appropriate transaction (purchase or sale) involvement behaviour is for the woman to herself purchase and sell the household items (given a score of 1), followed by joint involvement between the women and husband (given a score of 0.5) and purchase of sale decision fully taken by either "Father-in-law", "Husband" and "Mother-in-law" were given a score of 0. Lastly, the Financial Product-Related Transactions Score is scaled to 100 to form the Financial Product related Transactions Index.
Transactions Index (out of 100)	Transactions Index quantifies women's involvement in transactions in household activities. It is the combined form of Financial Product-Related Transactions Index and General Household-related Transactions Index., which accounts for all the 14 indicators like food, clothing, child's education, healthcare, savings, festival, and so forth Firstly, the Transactions Score (out of 14) is calculated based on the degree of involvement in the transaction. The most appropriate transaction (purchase or sale) involvement behaviour is for the woman to herself purchase and sells the household items (given a score of 1), followed by joint involvement between the women and husband (given a score of 0.5) and and purchase of sale decision fully taken by either "Father-in-law", "Husband" and "Mother-in-law" were given a score of 0. Lastly, the Transactions Score is scaled to 100 to form the Transactions Index Confidence Index measures women's confidence in

Outcome variable	
Women Empowerment	
Confidence index (out of 100)	communicating with the bank manager, Sarpanch/ Pradhan, healthcare staff, and children's teacher as well as confidence in going to shop, household's economic decisions on expenditure and income-generating activity. At first, a Confidence Score (Out of 8) is calculated based on the responses. women who found themselves to be "very confident" (given a score of 1) were considered to be the most appropriate response, while those who felt "somewhat confident" (given a score of 0.5) were rated in second place, and those who responded either "Not at all" and "Not applicable" were scored as 0. Then Confidence Score is scaled to 100 to form a Confidence Index.
Communication With Outsiders' Confidence Index (out of 100)	Communication With Outsiders' Confidence Index quantifies women's confidence in communicating with the bank manager, Sarpanch/ Pradhan, healthcare staff, and children's teacher. At first, a Communication with Outsiders' Confidence Score (Out of 5) is calculated based on the responses. Women who found themselves to be "very confident" (given a score of 1) were considered to be the most appropriate response, while those who felt "somewhat confident" (given a score of 0.5) were rated in second place, and those who responded either "Not at all" and "Not applicable" were scored as 0. Then Communication with Outsiders' Confidence Score is scaled to 100 to form a Communication with Outsiders' Confidence Index.
Household Finance Management Confidence Index (out of 100)	The Household Finance Management Confidence Index quantifies the women's confidence in savings management and economic decisions on expenditure and income-generating activity. At first, the Household Finance Management Confidence Score (Out of 3) is calculated based on the responses. women who found themselves to be "very confident" (given a score of 1) were considered to be the most appropriate response, while those who felt "somewhat confident" (given a score of 0.5) were rated in second place, and those who responded either "Not at all" and "Not applicable" were scored as 0. Then Household Finance Management Confidence Score is scaled to 100 to form a Confidence Household Finance Management Index.

Annexure 5 - Impact Estimates

Financial Literacy

Table A5.1: Impact of the Program on Financial Behaviour

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Saving as a priority	0.8756	0.4271	0.4486***	0.0256	17.51
Investment as a priority	0.3103	0.2265	0.0838***	0.0254	3.29
Maintain a budget	0.4346	0.3340	0.1006***	0.0282	3.57
Frequency of Saving / investment	0.5840	0.3272	0.2568***	0.0213	12.07
Financial behaviour score (out of 4)	2.2045	1.3147	0.8898***	0.0696	12.78
Financial behaviour index (out of 100)	55.11	32.87	22.24***	1.74	12.78

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T=780, N_C= 811

Table A5.2: Impact of the Program on Financial Attitude

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Carefully considered before purchase based on affordability	0.6333	0.5983	0.0350**	0.0153	2.28
Saving more useful than spending	0.6206	0.4195	0.2011***	0.0221	9.11
Take Lesser risk while investing money	0.3106	0.1854	0.1252***	0.0208	6.03
Having financial goals	0.6340	0.5663	0.0677***	0.0158	4.27
Have less debt (perception of female)	0.3813	0.4996	-0.1182***	0.0205	-5.78
Not taking small things on rent but settling the amount at same time	0.6415	0.2136	0.4279***	0.0207	20.70
Money needs to be taken care of for long-term planning	0.6341	0.3612	0.2729***	0.0224	12.18
Financial attitude score (out of 7)	3.86	2.84	1.02***	0.0650	15.56
Financial attitude index (out of 100)	55.08	40.63	14.45***	0.9288	15.56

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T=780, N_C= 811

Table A5.3: Impact of the Program on Financial Knowledge (Basic Literacy and Analytical Literacy)

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Increase in price increases cost of living	0.9654	0.9262	0.0392***	0.0134	2.93
Higher the chance to make a lot of money, there is a higher likelihood of losing money	0.8013	0.8089	-0.0077	0.0226	-0.34
Diversification of saving reduces the risk	0.8115	0.8495	-0.0380*	0.0212	-1.80
Division of money	0.9603	0.8947	0.0656***	0.0150	4.37
Inflation	0.2808	0.1830	0.0978***	0.0235	4.16
Simple interest calculation	0.6846	0.4824	0.2022***	0.0282	7.17
Compound interest calculation	0.3526	0.1943	0.1583***	0.0250	6.33
Interest calculation on loan	0.8705	0.7376	0.1329***	0.0228	5.82
Identification of better discount	0.7949	0.7266	0.0683***	0.0249	2.75
Basic Financial knowledge score (out of 3)	2.58	2.58	-0.0065	0.0402	-0.16
Analytical literacy score (out of 6)	3.94	3.22	0.7251***	0.0732	9.90
Basic Financial knowledge index (out of 100)	85.94	86.16	-0.2161	1.34	-0.16
Analytical literacy index (out of 100)	65.73	53.64	12.08***	1.22	9.90

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 780, N_C= 811

Table A5.4: Impact of the Program on Financial Literacy (Financial Behaviour + Financial Attitude + Financial Knowledge (Basic + Analytical)

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Financial Literacy Index (Out of 100)	62.54	48.63	13.91***	0.7274	19.12

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 780, N_C= 811

Table A5.5: Impact of the Program on Awareness of Financial Products / Services

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Proportion of females who are aware of Bank Account (savings)	0.9654	0.9774	-0.0120	0.0091	-1.32
Proportion of females who are aware of Bank deposits like FD	0.6205	0.5324	0.0881***	0.0285	3.09
Proportion of females who are aware of Loan from a bank / MFI or any other formal source	0.9526	0.7503	0.2023***	0.0200	10.12
Proportion of females who are aware of Insurance (Life, Health, Vehicle etc.)	0.7051	0.6771	0.0280	0.0264	1.06
Proportion of females who are aware of Debit Card	0.8667	0.7579	0.1088***	0.0220	4.94
Proportion of females who are aware of Mobile / Internet Banking	0.5333	0.5099	0.0234	0.0287	0.82
Proportion of females who are aware of Pension fund	0.7013	0.7020	-0.0007	0.0261	-0.03
Proportion of females who are aware of Deposits through post office	0.6833	0.6133	0.0700**	0.0273	2.56
Females aware of at least five financial products/services	0.7679	0.6747	0.0932***	0.0254	3.67
Financial Awareness Score (Out of 8)	6.0282	5.5203	0.5079***	0.1234	4.12
Financial Awareness Index (Out of 100)	75.35	69.00	6.35***	1.54	4.12

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 780, N_C= 811

Table A5.6: Impact of the Program on Usage of Financial Products / Services

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat	N_T	N_C
Proportion of females who have used Bank Account (savings)	0.8234	0.8420	-0.0186	0.0209	-0.89	753	795
Proportion of females who have used Bank deposits like FD	0.1983	0.0300	0.1684***	0.0207	8.14	484	459
Proportion of females who have used Loan from a bank / MFI	0.8937	0.4163	0.4775***	0.0286	16.71	734	643
Proportion of females who have used Insurance (Life, Health, Vehicle etc.)	0.3248	0.1639	0.1608***	0.0294	5.47	545	551
Proportion of females who have used Debit Card	0.4101	0.3460	0.0641**	0.0318	2.01	673	646
Proportion of females who have used Mobile / Internet Banking	0.2476	0.1018	0.1457***	0.0321	4.55	412	480
Proportion of females who have used Pension fund	0.2018	0.1454	0.0564**	0.0240	2.35	545	590
Proportion of females who have used Deposits through post office	0.2439	0.1081	0.1358***	0.0272	5.00	533	531
Proportion of females who have used at least five financial products/services	0.1013	0.0248	0.0765***	0.0137	5.57	780	811
Proportion of females who have used at least three financial products/services	0.5436	0.2280	0.3156***	0.0274	11.54	780	811
Financial Product Usage Score (Out of 8)	2.79	1.75	1.04***	0.0751	13.86	780	811
Financial Product Usage Index (Out of 100)	34.92	21.90	13.01***	0.9393	13.86	780	811

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Saving Habit

Table A5.7: Impact of the Program on Usage of Financial Products / Services

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	Percentage Change	S.E	T-stat
Amount of Formal Savings (INR)	636.35	289.08	347.27***	120.13***	64.37	5.40
Amount of Informal Savings (INR)	348.01	284.66	63.35	22.25	72.45	0.87
Per capita Formal Savings (INR)	167.05	76.32	90.74***	118.89***	16.84	5.39
Per capita Informal Savings (INR)	86.74	75.85	10.89	14.36	20.02	0.54
Total Savings (INR)	984.36	573.74	410.62***	71.57***	96.35	4.26
Per capita Savings (INR)	253.79	152.16	101.63***	66.79***	25.1	3.91

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Table A5.8: Impact of Program on Savings as a Habit

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat	N_T	N_C
Whether saved in informal source	0.5936	0.4866	0.1070***	0.0288	3.72	780	811
Whether saved in formal source	0.9231	0.3111	0.612***	0.0235	26.05	780	811
Whether saved or not	0.9692	0.6341	0.3351***	0.0225	14.90	780	811
Share in formal savings (%)	74.56	39.24	35.32***	2.87	12.32	758	534
Share in informal savings (%)	25.44	60.76	-35.32***	2.87	-12.32	758	534
Average Propensity to Save (Savings as a proportion to income)	0.0677	0.0549	0.0128	0.0091	1.39	780	811

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Table A5.9: Impact of Program on Formal Savings (excluding SHG savings)

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	Percentage Change	S.E	T-stat	N_T	N_C
Formal Savings (INR)	455.24	279.52	175.72***	62.86***	64.01	2.75	780	811
Per Capita Formal Savings (INR)	115.3	73.83	41.47 **	56.17	16.69	2.48	780	811
Share in Formal Savings (%)	42.78	37.02	5.76*	NA	3.15	1.82	594	525
Whether saved in Formal Source	0.3961	0.2793	0.1168***	NA	0.0273	4.28	780	811

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Loan Behaviour

Table A5.10: Impact of Program on Households Borrowing Behaviour

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat	N_T	N_C
Proportion of household who took a loan	0.8910	0.4397	0.4513***	0.0253	17.80	780	811
Proportion of household who took formal loans	0.8821	0.3298	0.5523***	0.0248	22.27	780	811
Proportion of household who took informal loans	0.1372	0.1668	-0.0297	0.0214	-1.39	780	811
Number of loans	1.54	0.5670	0.9765***	0.0542	18.01	780	811
Number of formal loans	1.36	0.3722	0.9867***	0.0431	22.86	780	811
Number of informal loans	0.1846	0.1948	-0.0102	0.0289	-0.35	780	811
Share of formal loans taken by a household (%)	92.66	68.29	24.37***	2.9843	8.17	682	384
Share of informal loans taken by a household (%)	7.34	31.71	-24.37***	2.9843	-8.17	682	384

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Table A5.11: Impact of Program on Size and Duration of Loan

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	Percentage Change	S.E	T-stat	N_T	N_C
Average amount of informal loans of a household (INR)	112594.34	162317.56	-49723.22**	-30.63**	23584.39	-2.11	106	148
Average amount of formal loans of a household (INR)	91992.57	167295.55	-75302.98*	-45.01*	44011.24	-1.71	673	294
Average moratorium period of outstanding loans	0.1913	0.2041	-0.0127	-6.24	0.0459	-0.28	682	384
Average number of years surpassed for the outstanding loan	1.98	2.0581	0.0777	-3.77	0.0916	-0.85	682	384

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Table A5.12: Impact of Program on Interest Rate, Collateral and co-signer Requirement

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Average interest rate of loans in a household	14.90	14.84	0.0609	0.6823	0.09
Percentage of loans in which collateral was needed for a household	8.34	46.98	-38.65***	3.2589	-11.86
Percentage of loans for which co-signer was needed for a household	48.13	25.10	23.03***	3.3878	6.80
Percentage of loans received less than demanded	0.2932	0.1265	0.1667***	0.0268	6.21
Amount (INR) received less than demanded	6914.96	3879.87	3035.09	7152.30	0.42

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 682, N_C=384

Table A5.13 : Impact of Program on Purpose of Loan Utilisation

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
At least one consumption loan for durables in a household	0.1906	0.1172	0.0735**	0.0289	2.55
At least one consumption expenditure loan in a household	0.2170	0.1511	0.0659**	0.0294	2.24
At least one education loan was taken in a household	0.1525	0.1457	0.0068	0.0238	0.28
At least one agriculture loan was taken in a household	0.0792	0.1856	-0.1064***	0.0284	-3.75
At least one enterprise loan was taken in a household	0.1158	0.0603	0.0555***	0.0213	2.61
At least one home loan was taken in a household	0.2757	0.2765	-0.0008	0.0362	-0.02
At least one loan for marriage purposes	0.1305	0.1687	-0.0382	0.0276	-1.38
At least one medical loan in a household	0.0762	0.1459	-0.0697***	0.0251	-2.78
At least one loan for buying ornaments	0.0176	0.0084	0.0092	0.0093	0.99
At least one loan was taken to clear prior mortgage or to free mortgaged land	0.2097	0.1204	0.0893***	0.0284	3.15
At least one livestock loan in a household	0.1114	0.0438	0.0676***	0.0209	3.23
At least one productive loan was taken in a household	0.4296	0.4121	0.0175	0.0384	0.46
Share of productive loans of a household	0.2951	0.3239	-0.0289	0.0323	2.00

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. . N_T= 682, N_C= 384

Table A5.14 : Impact of Program on Loan Behaviour of Female Members

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Total number of loans taken by female member	1.4501	0.4085	1.04***	0.0549	18.98
Proportion of females who have taken a loan	0.9120	0.3353	0.5767***	0.0331	17.41

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 682, N_C= 384

Household Income

Table A5.15: Impact of Program on Monthly Income

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	Percentage Change	S.E	T-stat	N_T	N_C
Wage Income (INR)	8965.55	8354.79	610.76	7.31	405.76	1.51	582	586
Wage Income per person (INR)	4517.10	3943.32	573.78***	14.55***	170.59	3.36	582	586
Agriculture Income (INR)	8411.74	7802.77	608.97	7.80	946.65	0.64	176	334
Livestock Income (INR)	1618.12	1306.16	311.96	23.88	400.91	0.78	236	308
Enterprise Income (INR)	10531.01	7470.00	3061.01	40.98	2280.46	1.34	179	78
Monthly income (INR)	18725.43	16531.47	2193.96**	13.27**	856.18	2.56	780	811
Per Capita Monthly Income (INR)	4881.94	4373.75	508.20**	11.62**	226.96	2.24	780	811

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Table A5.16: Impact of Program on Livelihood Diversification

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Proportion of Households having wage income as an income source	0.7462	0.7363	0.0098	0.0257	0.38
Proportion of Households having Agriculture as an income source	0.2256	0.3793	-0.1537***	0.0270	-5.70
Proportion of Households having Livestock as an income source	0.3154	0.3315	-0.0161	0.0277	-0.58
Proportion of Households having Enterprise as an income source	0.2410	0.0964	0.1446***	0.0204	7.09
Proportion of Households having salaried income	0.4141	0.3714	0.0427	0.0281	1.52
Proportion of Households having pension and transfers	0.1872	0.1159	0.0713***	0.0193	3.70
Proportion of Households having other income sources	0.0321	0.0184	0.0137	0.0093	1.46
Diversity Number of Income Sources	2.6167	2.4672	0.1494*	0.0773	1.93
Diversity Prop. of Income Sources	0.2907	0.2741	0.0166*	0.0086	1.93

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 780, N_C= 811

Entrepreneurial Behaviour

Table A5.17: Impact of Program on Enterprise

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	Percentage Change	S.E	T-stat	N_T	N_C
Whether enterprise is present	0.2410	0.0964	0.1446***	149.94***	0.0204	7.09	780	811
Number of Enterprise	0.2679	0.0986	0.1694***	171.88***	0.0226	7.49	780	811
Whether Registered Enterprise	0.1890	0.2604	-0.0713	-27.40	0.0754	-0.95	179	78
Enterprise Location (Outside Household Residence)	0.4972	0.6964	-0.1992**	-28.60**	0.0841	-2.37	179	78
Number of Hired Workers	0.3184	0.2517	0.0667	26.52	0.1565	0.43	179	78
Number of Household Workers	0.3855	0.4910	-0.1055	-21.49	0.1228	-0.86	179	78
Total Capital Borrowed (INR)	28804.47	49831.70	-21027.23	-42.20	18684.21	-1.13	179	78
Total Hours Spent in Enterprise in a Week	54.37	48.75	5.61	11.52	3.72	1.51	179	78
Enterprise having Separate Bank Account	0.1890	0.2604	-0.0713	-27.40	0.0754	-0.95	179	78
Total Sales of the Enterprise (INR)	24127.93	19462.29	4665.64	23.97	9469.89	0.49	179	78
Total Expenses (INR)	13596.93	11992.29	1604.63	13.38	7546.97	0.21	179	78
Whether enterprise is female owned	0.5698	0.3280	0.2419***	73.76***	0.0831	2.91	179	78

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively.

Table A5.18: Impact on Business Management

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Run their own business	3.7019	4.0165	-0.3146*	0.3105	-1.01
Identify opportunities in scaling up the business	3.7788	3.7685	0.0104	0.2754	0.04
Obtaining credit to expand the existing business	3.6731	3.8002	-0.1271	0.2786	-0.46
Savings in the business for future investment opportunities	3.6538	3.2411	0.4127	0.2778	1.49
Managing the financial accounts of the business	3.6250	3.2543	0.3707	0.3072	1.21
Bargaining to get cheap price products for the use of the business	3.8365	3.7267	0.1098	0.2832	0.39
Collecting money someone owes for the products purchased / services availed from you	3.7692	3.5741	0.1951	0.2828	0.69
Protect your business (coping mechanism) from unavoidable shock	3.7019	3.8774	-0.1755	0.2810	-0.62
Business Management Score (out of 40)	29.7429	29.2502	0.4927	1.1549	0.43
Business Management Index (out of 100)	74.36	73.13	0.0123	0.0289	0.43

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 104, N_C= 29

Table A5.19: Impact on Business Financial Management

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Whether document of transactions done or not	0.3048	0.2740	0.0308	0.1236	0.25
Whether financial diary used for documenting transactions of the business	0.1619	0.0361	0.1258	0.0867	1.45
Whether they know how to calculate profit or not	0.6000	0.6954	-0.0954	0.1203	-0.79
Business Finances Management Score (out of 3)	1.0991	1.0664	0.0327	0.0813	0.40
Business Finances Management Index (out of 100)	35.56	33.52	2.04	0.0772	0.26

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 104, N_C= 29

Assets

Table A5.20: Impact of Program on Livestock Assets

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	Percentage Change	S.E	T-stat
No. of Cows	0.5410	0.5825	-0.0415	-7.12	0.0810	-0.51
No. of Buffalo	0.0692	0.0633	0.0059	9.30	0.0325	0.18
No. of Pig	0.0026	0.0223	-0.0197	-88.49	-0.0197	-1.14
No. of Goat	0.4577	0.4101	0.0476	11.61	0.1225	0.39
No. of Sheep	0.0256	0.0682	-0.0425	-62.38	0.0658	-0.65
No. of Poultry	0.4090	0.1781	0.2309**	129.60**	0.1124	2.05
Total number of livestock owned by household	1.5077	1.3291	0.1786	13.44	0.2188	0.82
Proportion of household with a livestock	0.4295	0.3919	0.0376	NA	0.0419	0.90

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. . N_T= 780, N_C= 811

Table A5.21: Impact of Program on Consumer and Productive Assets

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	Percentage Change	S.E	T-stat
Number of normal consumption assets	8.9436	8.27	0.6719**	-7.12	0.2620	2.56
Number of superior consumption assets	4.1308	3.78	0.3514***	9.30	0.0962	3.65
Total number of consumption assets	13.07	12.05	1.0233***	-88.49	0.3053	3.35
Number of high value productive assets	0.9436	1.0946	-0.1510	11.61	0.1076	-1.40
Number of low value-productive assets	1.3821	1.5131	-0.1309	-62.38	0.2025	-0.65
Total number of productive assets	2.3256	2.6076	-0.2820 -	129.60**	0.2491	-1.13
At least one productive asset	0.5064	0.5759	0.0696**	13.44	0.0285	-2.44
At least five productive assets	0.1705	0.2009	-0.0304	NA	0.0237	-1.29

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 780, N_C= 811

Women Empowerment

Table A5.22: Impact of program on Decision-making within the household

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Amount to be spend on Food	0.4385	0.3357	0.1028***	0.0276	3.73
Type of food items to buy	0.4551	0.3531	0.1020***	0.0276	3.69
Expensive Household	0.3526	0.2764	0.0761***	0.0254	2.99
Clothing for you and children	0.3987	0.2782	0.1206***	0.0263	4.58
Decisions regarding education of child	0.3628	0.2516	0.1112***	0.0254	4.38
Decision regarding healthcare if someone falls ill	0.3885	0.2930	0.0954***	0.0265	3.60
Expenditure on additions in home like roof, room etc	0.3179	0.2250	0.0930***	0.0239	3.89
Taking a loan from external sources (bank etc.)	0.3821	0.2580	0.1240***	0.0254	4.89
Taking a loan from relatives/friends	0.3385	0.2301	0.1084***	0.0241	4.49
Giving a loan to friends and relatives	0.3667	0.2352	0.1315***	0.0245	5.38
Whether to sell any gold/jewellery owned by you	0.3692	0.2612	0.1081***	0.0257	4.21
Expenditure on festivals, wedding and functions	0.3615	0.2581	0.1034***	0.0253	4.08
Decision on where to invest surplus money	0.3513	0.2632	0.0881***	0.0253	3.48
Decision on the magnitude/amount of savings	0.3526	0.2819	0.0707***	0.0262	2.70
General household related decision-making score (out of 9)	3.4449	2.5323	0.9126***	0.1950	4.68
Financial product related decision-making score (out of 5)	1.7910	1.2684	0.5227***	0.1133	4.61
Decision-making score (out of 14)	5.2359	3.8006	1.4353***	0.2994	4.79
General household related decision-making index (out of 100)	38.2764	28.1361	10.1402***	2.1669	4.68
Finance product related decision-making index (out of 100)	35.8205	25.3670	10.4535***	2.2655	4.61
Decision-making index (out of 100)	37.3993	27.1472	10.2521***	2.1383	4.79

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 780, N_C= 811

Table A5.23: Impact of program on women's involvement in Transactions (Purchase and sale of Items)

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Amount to be spend on Food	0.5308	0.5308	0.0803***	0.0233	3.45
Type of food items to buy	0.5019	0.5019	0.0591**	0.0233	2.54
Expensive Household	0.4135	0.4135	-0.0005	0.0211	-0.03
Clothing for you and children	0.4833	0.4833	0.0318	0.0208	1.53
Decisions regarding education of child	0.4538	0.4538	0.0272	0.0210	1.29
Decision regarding healthcare if someone falls ill	0.4679	0.4679	0.0347	0.0219	1.58
Expenditure on additions in home like roof, room etc	0.3981	0.3981	0.0219	0.0208	1.05
Taking a loan from external sources (bank etc.)	0.4744	0.4744	0.0479**	0.0218	2.20
Taking a loan from relatives/friends Giving a loan to friends and relatives	0.4423	0.4423	0.0307	0.0214	1.43
Giving a loan to friends and relatives	0.4494	0.4494	0.0284	0.0214	1.33
Whether to sell any gold/jewellery owned by you	0.4769	0.4769	0.0338*	0.0202	1.67
Expenditure on festivals, wedding and functions	0.4654	0.4654	0.0360*	0.0197	1.83
Decision on where to invest surplus money	0.4365	0.4365	0.0157	0.0211	0.74
Decision on the magnitude/amount of savings	0.4737	0.4737	0.0258	0.0216	1.19
General household related Transaction score (out of 9)	4.1917	4.1917	0.3242**	0.1568	2.07
Financial Product related Transaction's score (out of 5)	2.2763	2.2763	0.1485	0.0947	1.57
Transactions Score (Out of 14)	6.4679	6.4679	0.4727*	0.2426	1.95
General household related Transaction Index (out of 100)	46.5741	46.5741	3.6024**	1.7424	2.07
Financial Product related Transactions Index (out of 100)	45.5256	45.5256	2.9702	1.8940	1.57
Transactions Index (out of 100)	46.1996	46.1996	3.3766*	1.7330	1.95

Table A5.24: Impact of program on confidence of women of the household

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat	N_T	N_C
Communicating to bank officer/manager on matters related to loan/savings/etc. (Only if she has a bank account)	0.7808	0.7348	0.0461***	0.0168	2.74	778	808
Communicating to Sarpanch/Pradhan	0.7597	0.7511	0.0086	0.0172	0.50	776	809
Communicating to health care staff (Doctors/ASHA/AWW) about your own health	0.8147	0.8248	-0.0101	0.0153	-0.66	780	811
Going to shop (grocery, PDS etc.) to take home stuff	0.7995	0.8046	-0.0051	0.0150	-0.34	778	809
Communicating to children's teacher regarding his well being	0.8134	0.8238	-0.0104	0.0154	-0.68	686	705
Managing savings of the households	0.8301	0.8230	0.0071	0.0144	0.49	774	806
Household's economic decisions on expenditure	0.8057	0.8327	-0.0271*	0.0144	-1.88	777	810
Households' income generating activity decisions	0.7928	0.8222	-0.0294**	0.0147	-2.00	777	810
Confidence score (out of 8)	6.2782	6.2622	0.0160	0.0882	0.18	780	811
Confidence index (out of 100)	78.4776	78.2781	0.1995	1.1026	0.18	780	811

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 779, N_C= 810

Table A5.25: Impact of program on confidence in communicating with outsiders

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Communication with outsiders' confidence score (out of 5)	3.8622	3.7995	0.0626	0.0592	1.06
Communication with outsiders' confidence index (out of 100)	77.2436	75.9902	1.2534	1.1830	1.06

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 780, N_C= 811

Table A5.26: Impact of program on confidence in managing household finances

Outcome variable	SLI Households (Treated)	Non-SLI households (Control)	Differences	S.E	T-stat
Household finance management confidence score (out of 3)	2.4191	2.4726	-0.0535	0.0394	-1.36
Household finance management confidence index (out of 100)	80.6376	82.4196	-1.7820	1.3122	-1.36

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively. N_T= 779, N_C= 810

Table A5.27: Quantile Regression Estimates of SLI Participation on Income, Savings and Borrowings

Quantile (Percentile)	Difference in Total Monthly Income (INR) (SLI households - non SLI households)	Total Monthly Savings (INR)	Total Outstanding Borrowings (INR)
10th	288.3325 (493.65)	100*** (6.04)	8000** (3617.48)
20th	841.66** (399.89)	200*** (2.41)	5000 (3425.52)
25th	1000*** (357.00)	200*** (2.56)	5000* (2735.729)
30th	366.66 (365.85)	228.5*** (12.89)	-3000 (3672.08)
40th	1000* (532.25)	216.66*** (11.76)	-10000** (4055.86)
50th	1500* (772.96)	241.66*** (18.94)	-24000* (12943)
60th	1750* (964.71)	333.33*** (30.17)	-28000* (11268.38)
70th	933.33 (1304.82)	266.66*** (85.48)	-55000*** (13461)
80th	1333.33 (1257.00)	258.33* (150.70)	-70000*** (19698)

Note: ***, ** and * represent significance at 1%, 5% and 10% level, respectively N_T= 780, N_C= 811

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