

IMPACT OF MICRO-FINANCE SERVICES ON ALLEVIATION OF RURAL POVERTY: CASE STUDY ON ONE SPECIALIZED FINANCIAL AND PROMOTIONAL INSTITUTION (SFPI)

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ABSTRACT

Poverty is a harsh and undesired phenomenon in mankind. Reducing, if possible eradicating poverty is unquestionable. Thus, microfinance programs have been considered as one of the main instruments in poverty reduction in recent development agenda. It is a means to support the marginalized active poor of the society. Studying the impact of microfinance intervention is important to assess its viability on poverty reduction. The main objective of this study was to assess the impact of microfinance services of MFIs in Ethiopia and the changes it has brought on the living standards of clients. It was focused on the impact of SFPI program at household and enterprise level.

The study was conducted at the branches of the SFPI by employing the “before” and “after” method so as to evaluate the impact of the microfinance institution on reducing the poverty level of its clients.

Primary data was collected using structured interview, FGD, and observational check-list while secondary data was obtained from the records, journals, proceedings, bulletins, internet and various books. Multistage sampling method was employed to take a sample of clients from the total. Both descriptive and inferential statistics such as mean, percentages, Wilcoxon signed rank test and independent two sample t-test was employed.

In general the credit scheme has increased the mean income of respondents and had improved the ownership of different productive assets, such as, oxen, cows and others. SFPI program has made a positive impact on households' income, asset ownership, housing condition, expenditure, diet condition, access to education and medical facilities. SFPI credit delivery has also improved enterprises' production capacity and employment opportunity of the local community.

And there was no significant difference between the sexes regarding the socio-economic variables except for saving and the level of income after loan. MFIs have significantly contributed towards improving the living standard of the poor and reduce poverty at household level. Therefore, strengthening the development of MFIs in Ethiopia is an appropriate and appreciated policy instrument.

1. INTRODUCTION

Poverty and hunger instigated and exacerbated by conflict were the country's endemic social and economic problems for most of the second half of the 20th century. In the first decade of the 21st century they still remain as central policy concern to the government of Ethiopia. In spite of tremendous efforts, Ethiopia is still among the poorest countries with an annual average per capita income of \$180 in 2005 (PASDEP, 2007). The country is one of the poorest and most underdeveloped countries of the world and with a large population in the sub-Saharan Africa. Its economy is largely dominated by small scale, non-mechanized agriculture (Abadi, 2007). A number of factors are usually described as triggers of poverty. Some of these are: lack of asset, employment opportunity, income, skill, technology, education, health and environmental problems (Getahun, 1999). But one factor, which is the point of this research, is lack of financial resources for capital formation (Wolday, 2003). The majority of Ethiopians are poor and live in rural areas and are mainly engaged in subsistence peasant agriculture (Solomon, 1996).

To reduce poverty and human deprivation and in turn to achieve the targets of MGD_s, developing countries need to develop their own mix of policy which is based on national priorities and local realities (WB, 2000). Microfinance is not a panacea for poverty, but it is one important factor among the antipoverty instruments of the development programs (Harper, 2003).

The best known example on microfinance is that of Muhammad Yunus and the founding of Bangladesh's Grameen Bank (Armendariz and Morduch, 2005). Since the 1980s the development of MF programs gained a worldwide acceptance and popularity, as one method of poverty reduction (Ledgerwood, 1999).

The condition of poverty has been interpreted as one of lack of access by poor households to assets necessary for a higher standard of income or welfare, whether assets are thought of as financial, human, natural, and social (Montgomery and Weiss 2005; World Bank, 1996). And lack of access to financial asset is understandable in terms of collateral that the poor

can offer conventional financial institutions; high costs involved in dealing with large number of small amount of loan; limited education and familiarity with loan procedures; exorbitant interest rate (Bekele, 1996; Solomon, 1996; Montgomery and Weiss, 2005). And the goal of microfinance institutions as a development organization is to serve the financial needs of the poor who are engaged in the informal sector and do not completely access the services or under-served by the formal financial institutions. It serves as one means of reducing poverty through creating job opportunities and helps existing business grow or diversified (Ledgerwood, 1999).

Cognizant of the potentials of MF, the government of Ethiopia gave high priority for the proliferation of these institutions in its PASDEP strategy (MOFED, 2006). But relative to the experience of other developing countries, its development in institutionalized form is of recent phenomenon (Solomon, 1996). Thus, with the aim of poverty reduction in Ethiopia, there has been provision of financial service to the poor through MFIs (Wolday, 2003), but there has been little evaluation of its impact on farmers' livelihood (Meehan, 1999).

MF impact assessment process seeks to determine if the intervention has had the desired outcome of poverty reduction and employment creation. There were very limited research that focused on microfinance impact assessment; even these limited researches were more concentrated on institutional sustainability rather than client impact. Similarly, in general, there is no serious attempt made by Ethiopia MFIs and in particular by SPFI to evaluate whether or not the program achieved the institution's goal of poverty reduction within its operational territory. Thus, studying the impact of microfinance intervention is important to narrow this gap. The objective of conducting this research is, therefore, to undertake impact assessment of the MF service in Oromia region, especially, of SFPI in order to help the organization to improve its services, as well as to increase its impact on poverty, its efficiency, and to provide accountability to donors and other stakeholders.

2. RESEARCH METHODOLOGY

The study was conducted in rural settings of Oromia region where SFPI intervention has taken place. The impact of the SFPI was evaluated at four selected sites where MFI's branches of SFPI established, namely Holeta, Debere Zeit, Sheno, Fiche and Akaki.

The study was based directly on the impact of the loan to beneficiaries of the program. The client oriented method of impact analysis was adopted, in accepting the rationale that "If an MFI aiming at providing financial services to the poor to reduce their poverty, then the institution cannot take refuge in simply measuring how well it made services available (Ledgerwood 1999). Because, the stated end result of reducing poverty is fully measurable only in direct relationship to the lives of human being.

And the research used the "before" "after" comparison of the beneficiaries' socio-economic position. To achieve the stated objectives of the research, different variables which manifest reduction or aggravating of poverty was formulated.

These are: asset possession (both capital and household assets), income, food consumption expenditure, annual education expenditure and utilization of land assets, utilization of improved seed and fertilizers. Extensive data was collected on these variables and an attempt was made to identify the magnitude of change on the variables by evaluating conditions before and after borrowing.

Moreover, an attempt was made to test statistically the significance of the variation before and after borrowing. The research had also addressed the differences between male and female beneficiaries regarding the variables. Thus, various hypotheses were formulated and tested.

2.1 Research Design

The type of research design employed for the purpose of this study was descriptive in nature. It intended only to describe the state of affairs of factors affecting the impact of MF in poverty reduction in rural setting.

2.2 Data sources

The study employed both primary and secondary sources of data. The primary sources of data were the beneficiaries from four branches of SFPI. And secondary data has been obtained from the records of the institution, journals, proceedings, bulletins, internet and various literatures.

2.3 Sampling Techniques

Multistage sampling method was employed. To ensure that a sample represents the original population, objective sampling procedures must be adopted. The ideal case is to obtain a random sample in which all individuals in the original population had an equal chance of being chosen. Likewise, a random sample of four peasant associations (PA) from each of the five districts was selected and accordingly a total of 20 PAs were identified. Then from among the clients in the sampled PAs, those who had been participating since 2009 were purposely selected as a sampling frame. One consideration to choose a sampling technique is the objective of the research under study. As the objective of this research is to make impact assessment of the service on the livelihood of the beneficiaries, there was a need for time gap, as the time period of participation in a program can influence the impact on beneficiaries.

The sample respondents were selected from the sampling frame randomly. Regarding the sample size, five beneficiaries from some PAs or six beneficiaries from larger PAs were selected. Therefore, in total 21 beneficiaries from each district and a total of 105 beneficiaries were selected for the study.

2.4 Data Collection Methods

There were many factors to consider in choosing data collection methods, but decisions were guided primarily by the aim of the research (Laws with Harper and Marcus, 2003). It is often best to use more than one technique for the investigation in order to triangulate the evidence that has been collected. "Triangulation involves checking data collected from respondents and cross-checking with others to get different point of view of the same

phenomenon. Careful use of triangulation helps to deal with the problems of the inherently untrustworthy respondents.”

As the essence of the research is to make impact assessment of credit on the socio-economic status of the beneficiaries, extensive data were collected using questionnaires and structured interview, structured observation and focus group discussion. The structured interview used to collect data from households on various dimensions of impact. And prior to interview, the guideline used in the actual research was subjected to pilot testing, the aim of which is to increase the validity of the instrument.

Including the main researcher, four enumerators were used to conduct the interview and the three of them were trained for one day focusing on: the objectives of the study; how to approach respondents; how to record the responses and on detailed contents of the instrument.

The other method of primary data collection was structured observation. The structured observation is employed to assess on asset possession (both capital and productive assets). And it was conducted simultaneously with the interview schedule. For instance, while conducting the interview the enumerator observed whether the materials exist or not. The importance of which is for cross checking data to increase the validity of the data.

Finally, Focus Group Discussion (FGD) with the beneficiaries was made to identify the satisfaction or complaints on the services of the institution, problems they faced and any recommendation they might have. FGD was conducted at Holeta Branch, Debere Zete Branch, Akaki, Shano and Fiche branches. A total of 8 focus groups (2 at three sites and one at two site) were conducted, each focus group containing 4-6 beneficiaries. The four groups were formed based on sex of participants. This is because, if the female beneficiaries are grouped separately, they have opportunity to talk freely rather than mixed together with the male beneficiaries.

2.5 Method of data analysis

The responses of the respondents collected by using the above methods were organized, analyzed, and interpreted in scientific way.

The descriptive statistics were that of computation of the mean, percentages, and frequencies while inferential statistics of Wilcoxon sign ranks test and independent two sample t-test were employed.

The Wilcoxon sign ranks test was employed to evaluate the socio- economic impacts of the program before and after borrowing. The test was designed to evaluate the difference between two treatments, using the data from a repeated-measure experiment. The two treatments in this research were those without program participation (before borrowing) and with program participation (after borrowing). And to compare the male and female beneficiaries, two independent sample t-test was employed. The test used for evaluating whether there is significant difference between the sexes on socio-economic variables after borrowing. For all tests a significant level at alpha 5% was employed.

3. RESULTS AND DISCUSSION

According to Ledgerwood (1999), provision of micro-credit is one way of increasing income and consequently reduce poverty level of beneficiaries by encouraging them to start own micro-businesses or expand the existing ones. Khandker(1998), Webster and Fidler (1996) noted that lack of capital and savings make poor people not to be able to get the benefits of engaging in micro and small scale business activities. Despite such benefits of credit, the poor, who were engaged in the informal sector, were denied access to credit from the conventional financial institutions (Bekele, 1996; Solomon, 1996; Montgomery and Weiss, 2005).

3.1 Previous access to loan

In this study, beneficiaries were asked whether they had access to credit from other financial sources prior to participating in SFPI microfinance program. The majority (86.7%) of respondents were denied access to financial service from other sources (Table 1).

Table 1. Respondents access to loan before intervention of SFPI (n= 105)

Previous access to loan	Male		Female		Total	
	f*	%	f*	%	f*	%
Yes	9	8.6	5	4.8	14	13.3
No	31	29.5	60	57.1	91	86.7
Total	40	38.1	65	61.9	105	100

Source: field survey * = frequency

With regard to financial sources available to farmers, the majority (57.1%) of respondents obtained loans from relatives and family, others from local money lenders and from savings in Equib, i.e. the kind of revolving traditional savings. None of them had access from the conventional financial institutions (Table 2).

Table 2. Respondents source of loan before SFPI

Source of loan	Male		Female		Total	
	f*	%	f*	%	f*	%
Relatives and friends	5	35.7	3	21.4	8	57.1
Local money lenders	4	28.6		0.0	4	28.6
Equib		0.0	2	14.3	2	14.3
Others		0.0		0.0		0.0
Total	9	64.3	5	35.7	14	100.0

Source: field survey *f = frequency

3.2 Access of loan from SFPI

One of the reasons for the deny of access to credit from the conventional financial institutions is lack of collateral required by those institution (Bekele, 1996; Montgomery and Weiss, 2005). Microfinance service institutions have come to serve the financial needs of the poor with easy, affordable and diversified options for collateral (property) (Khandker, 1998). These innovative approaches of securing loan were group or social collateral. SFPI is one among the MFIs in Ethiopia which make use of this new innovative approach. In this study, respondents were asked on the guarantee/ collateral type they offered to access the loan from SFPI.

All of the beneficiaries of SFPI (100%) were using the innovative approach of securing loan. Thus, it can be said that SFPI is serving the financial needs of those who cannot provide collateral (property) to a bank.

On focus group discussion held with a range of people, many had affirmed on the importance of this innovative approach of securing loan, as 95% of the focus group discussants asserted that they were denied access from the conventional financial institutions due to lack of collateral (property).

The majority of the focus group discussants stated that they would have not been able to get the benefits from businesses they were engaged in had it not been due to SFPI loan. Thus, most of those in focus group had claimed that SFPI has created easy access to loan. In general, SFPI had met Ledgerwood's (1999) objective, in that "MFIs need to supply services that fill the gaps and integrate the un-served groups into the market".

Next to guarantee, the beneficiaries were asked about the number of times they were able to access loan from SFPI. According to them, it varies from individual to individual. So far, the majority (41%) of the beneficiaries had access to loan from SFPI for three times (Table 3). The assumption is that, the more the number of rounds of loan the more would be the benefits obtained in terms of increased income to the beneficiaries. For instance, pursuant to a study made by Development Bank of Ethiopia (DBE) (1999), by assessing formal and successive rounds of loan, beneficiaries were able to build capital assets and were directly benefiting from increased employment opportunity and increased income.

Table 3. Loan cycle of respondents (n= 105)

Loan cycle	Male		Female		Total	
	f	%	f	%	f	%
Third	18	17.1	25	23.8	43	41.0
Fourth	13	12.4	20	19.0	33	31.4
Fifth	9	8.6	14	13.3	23	21.9
Sixth			6	5.8	6	5.7
Above sixth	none		none		none	
Total	40	38.1	65	61.9	105	100

Source: own survey *f = frequency

3.3 Amount, trend and sufficiency of SFPI Loan

The average loan size obtained by beneficiaries had shown great variation. During the first cycle, the average amount of loan received was ETB 1184.15, but during the fifth loan cycle the average amount of loan had grown to ETB 4216.25 (Table 4.9). The implication of this is that with successive loan, beneficiaries tend to get engaged in more business activities which require more capital than the prior situation. The institution's policy also ensures to raise the loan amount for those clients who repay the previously taken loan on time.

In general, when the loan size granted to women was compared with that of males, the average loan taken by female clients was less than the male counterpart. This implies that women were engaged in business activities which require fewer capitals, which in turn will have an impact on the level of profit earned from the business (Table 4).

Table 4. Mean loan amount in each cycle

Loan cycle	Male *(ETB)	Female (ETB)	Total mean (ETB)
First	1414.3	954	1184.15
Second	2416	1574	1995
Third	3304	1926	2615
Fourth	4267	2453	3360
Fifth	4937.5	3495	4216.25
Above fifth		4216	4216

Source: field survey *ETB = Ethiopian Birr

The beneficiaries were asked about the sufficiency of the loan disbursed to run their activities. The majority, 77.1%, had considered that the loan amount was sufficient to run their businesses (Table 5).

Table 5. Respondents' view on sufficiency of loan disbursed (n = 105)

Loan size is sufficient	Male		Female		Total	
	f	%	f	%	f	%
Yes	27	25.7	54	51.4	81	77.14
No	13	12.4	11	10.5	24	22.86
Total	40	38.1	65	61.9	105	100.00

Source: field survey. f = frequency

The same question was raised during FGD to 8 focus groups. More than 50 percent had agreed that, it was sufficient to run their business activities. Hurley (1990) argued that even small loan can have dramatic and transforming influence on the lives of the poor people.

3.4. Utilization of the loan

The beneficiaries need the loan for different purposes. The major portion of the loan was utilized for purchasing fertilizer and improved seed, as all beneficiaries were engaged in agricultural production, to help them promote productivity and thereby lead to increase their income. Next to fertilizer and improved seed, 23.4% of the loan was utilized for cattle fattening purposes (Table 6).

Table 6. Respondents view on utilization of loan*

Purpose of the loan	Male		Female		Total	
	f	%	f	%	f	%
To purchase fertilizer and seed	25	12.2	29	14.1	54	26.3
To buy farm oxen	18	8.8	17	8.3	35	17.1
For fattening and dairy cows	13	6.3	35	17.1	48	23.4
To lease land	23	11.2	16	7.8	39	19.0
To take back leased land	8	3.9	15	7.3	23	11.2
To buying and selling grain		0	6	2.9	6	2.9
For consumption		0	0	0	0	0
For Others purposes		0	0	0	0	0
Total	87	42.4	118	57.5	205	99.9

Source: field survey f = frequency *multiple responses

3.5 Loan repayment status

Financial self-sufficiency and institutional sustainability of MFI could only be reached through insuring high percentage of loan collection (Degefe, 2009). In this study, the beneficiaries who had not been repaying the loan according to the schedule were only 10.5% from the total sampled beneficiaries (Table 7). It can be said that SFPI is on the way of building sustainable institution through insuring high rate of loan collection.

Table 7. Respondents' loan repayment status (n=105)

Loan repayment status	Male		Female		Total	
	f	%	f	%	F	%
Fully repaid as schedule	35	33.3	59	56.2	94	89.5
Full repaid late, sometimes	5	4.8	6	5.7	11	10.5
Not repaying	0	0	0	0	0	0
Total	40	38.1	65	61.9	105	100.0

Source: field survey f = frequency

The reason for not repaying according to the schedule was mainly due to illness and death of family member (63.6%). The remaining 27.2% and 9.1% had reported due to market fluctuation, such as fall in price of products and poor sales, and due to being less productive of the asset they were utilizing to generate income, respectively; for instance, death of cows for those who earn income by selling milk (Table 8).

Table 8. Respondents' reasons for late repayment (n=11)

Reason for late repayment	Male		Female		Total	
	F	%	f	%	F	%
Illness	1	9.1	2	18.2	3	27.2
Death of family member	2	18.2	2	18.2	4	36.4
Loss of asset			1	9.1	1	9.1
Market related problem	2	18.2	1	9.1	3	27.2
Bad weather condition	0		0		0	
Inconvenience of repayment period	0		0		0	
Other	0		0		0	
Total	5	45.5	6	54.6	11	99.9

Source: field survey. f = frequency

3.6 Views of beneficiaries on: timing of loan repayment, interest rate and promptness of loan issuance.

3.6.1 Time of repayment

Rural beneficiaries of the SFPI credit scheme are expected to make loan repayment on term basis once a year. In this regard, 64.8% of respondents claimed that the period set for loan repayment was suitable, as it coincides with harvesting period of agricultural products.

3.6.2 Interest rate of lending by SFPI

As per the directive No MFI 11/98, each MFI in Ethiopia can set its interest rate. A Board of Directors of each micro-financing institution is the concerned body to set the interest rate, which reads, “the interest rate to be charged on loans and advance extended by a micro-financing institution shall be determined by the Board of Directors of each micro financing institution” and also the recent directive No /20/2010) approve the same. The lending interest rate on loan of Ethiopian MFIs varies between 12.5% to 25% (Wolday, 2002). Moreover, he argued that the lending interest rate of MFIs in Ethiopia has been low and were unable to cover the operational and financial cost of the of the microfinance institutions. With regard to SFPI, they charge two types of interest rate on loan. In the rural settings, they charge 24% and in urban areas it was 16% of interest. The reason is that in the rural loan, as it was discussed above, the payment method is on term basis but the urban loan payment method is on installment basis. In evaluating the views of clients towards the interest rate of SFPI on lending, 31.4% of respondents had reported that the lending interest rate as moderate, while only 19% had noted that the rate was high. But, a large majority, 46.7%, of respondents had stated that they did not have information on lending interest rate of the institution (Table 9).

Table 9. Respondents' view on interest rate of loans

Rank	Male		Female		Total	
	f	Percent	f	Percent	f	Percent
High	9	8.6	14	13.3	23	21.9
Moderate	14	13.3	19	18.1	33	31.4
Low		0.0		0.0	0	0.0
Don' know	17	16.2	32	30.5	49	46.7
Total	40	38.1	65	61.9	105	100.0

Source: filed survey f = frequency

3.6.3 Promptness of loan issuance

The timing of issuing a loan is an important factor in considering the purchase of agricultural inputs and productive assets for the seasonal

farming operation. Respondents' views were assessed on loan issuance process of MFIs, especially on the time it takes to get the loan.

Table 10. Respondents' view on promptness of issuance of loan (n=105)

MFIs Prompt in issuance of loan	Male		Female		Total	
	f	%	f	%	f	%
Yes	37	35.2	63	60	100	95.2%
No	3	2.8	2	2	5	4.8%
Total	40	38.0	65	62	105	100%

Source: filed survey f = frequency

Almost all of the respondents (95.2%) stated that the process takes a short time (Table 10). During the FGD discussion and in interview with the focus groups they had agreed with responds on loan issuing process for being short and satisfactory.

3.7 Respondents' saving culture

Micro-finance institutions have significant contribution in promoting saving culture in rural Ethiopia. Regarding money saving, respondents view was assessed on their culture of saving prior to SFPI intervention. The majority of the respondents (90.5%) did not have a culture of saving before being clients of SFPI, though few respondents were saving in other ways, such as *equb*, or by purchasing an asset, or hoard liquid cash in their home (Table 11).

Table 11. Respondents' saving culture before being client of SFPI (n=105)

Did you save before being a client of SFPI	Male		Female		Total	
	f	%	f	%	f	%
Yes	6	5.7	4	3.8	10	9.5
No	34	32.4	61	58.1	95	90.5
Total	40	38.1	65	61.9	95	100

Source: filed survey f = frequency

An institutional saving service provides security, convenience, liquidity and returns, and represents a crucial financial service for low income people (Marguerite Robinson, 1995). Low income group could substantially

increase their voluntary savings if provided with a safe and convenient place to deposit their savings (www.Woccu.org).

Reasons for not saving in an institution (banks, MFIs, etc.) vary from client to client.

Table 12. Respondents reasons for not saving before being a client of SFPI (n=95)

Reason for not saving	Male		Female		Total	
	f	%	f	%	f	%
Lack of access	13	13.7	25	26.3	38	40
Low income	9	9.5	13	13.7	22	23
Lack of awareness	14	14.7	21	22.1	35	37
Other		0.0		0.0		0
Total	36	37.9	59	62.1	95	100

Source: filed survey f = frequency

A large number (40%) of the respondents were unable to save due to lack of accessibility to financial institutions, due to lack of awareness and due to low income (Table 12). Thus, low income was not the major factor for not saving in an institution; rather, accessibility and awareness were the major factors for low/no savings.

Microfinance institutions are designed not only to extend loan but also to serve as means for saving. In order to bring about an impact on poverty reduction, there is a need for increasing the capacity and awareness of the poor towards saving. There are two approaches for saving. One is compulsory, in that clients are forced to save after the loan on monthly basis, and the other type of saving is on voluntary basis, which depends on clients' willingness to save.

All respondents were required to save at SFPI compulsorily in order to be entitled to credit service. The purpose for compulsory saving is to ensure repayment of the loan rather than to change the saving culture of the individual. If it is seen from the point of the poor, saving services enable them to accumulate very small surplus to be used at a later date in case of emergencies (Webster and fiddler, 1996). As poverty can be understood as vulnerability to downward fluctuations in income, interventions can reduce such vulnerability and protect livelihoods (Johnson and Rogaly, 1997). Such interventions like MFI reduce the risk faced by the poor through, among

other things, provision of saving services. According to Wolday (2008), the proliferation of those microfinance institutions which can mobilize or pool small sums of saving from the poor are a recent phenomenon, which is followed with the issuance of the first MF legislation in 1996 (Proclamation 40/96). In order to have the desired impact on poverty, MFI should work in a way that can increase the saving capacity of the poor to a higher level.

And saving is also important from the point of the MFI itself, as savings are the key to MFIs success for achieving full financial self-sufficiency and in turn insure institutional sustainability because they provide a sustainable local and cheap source of loan. The finding of the research had revealed that the mean total voluntary saving was ETB 619.10, which is considered to be very low as compared to compulsory savings. And the institution was also able to mobilize saving (voluntary) from 36 beneficiaries or 34.3% out of the total respondents. Voluntary saving mobilized by female beneficiaries was only ETB 145.50 while for the male, it was ETB 473.6. Based on this data, males tend to save more than women clients (Table 13).

Table 13. Level of saving through compulsory and voluntary approaches

Saving type	Female (mean)	Male (mean)	Total
Voluntary saving(ETB),(valid n=36)	145.5	473.6	619.1
Compulsory savings(ETB) valid n=91)	1435.85	1478.95	2914.8
Total mean (ETB)	1581.35	1952.55	3533.9

Source: field survey.

3.8. Respondents' view on the trend and interest rate on saving

The minimum interest rate charged on deposit was set by the National Bank of Ethiopia. According to the directive No /20/2010), “the minimum interest rate that shall be paid per annum by microfinance intuitions on savings shall be 5%.” Based on this directive, SFPI pays 5% interest on saving.

As stated above, SFPI charges two types of interest rates on loan. Interest rate paid by SFPI on savings was 5%, which is very low as compared to interest rate they charge on loans, particularly to rural clients. The gap between interest rate on loan and saving is very wide in the rural context.

Beneficiaries were asked for their views on the interest rate paid by the institution on their saving account. The majority (78.1%) of the beneficiaries expressed that they did not have the information on interest rate for their savings. The remaining 21.9% stated that the interest rate on saving was high. In spite of the training and client orientation programs given by the institution, 78.1% of the beneficiaries were unable to state the interest rate on their savings. The implication of this finding is that there is a gap in communication with regard to this issue (Table 14).

Table 14. Respondents' view on the interest rate paid on savings (n=105)

Description	Indicators	Male		Female		Total	
		f	%	f	%	f	%
Interest rate on saving	High	13	12.4	10	9.5	23	21.9
	Less		0.0		0.0		0.0
	Has no information	27	25.7	55	52.4	82	78.1
Total		40		65		105	100.0
Trend of saving	Significantly increased	7	6.7	21	20.0	28	26.7
	Increased	33	31.4	44	41.9	77	73.3
	Decreased	-	-	-	-	-	-
	Stayed the same	-	-	-	-	-	-

Source: filed survey f = frequency

Beneficiaries were asked on the trend of saving after the loan as compared to the capacity of saving before program participation. Almost all had stated that their saving culture and ability to save had increased as compared to the period prior to participation in the program (Table 14).

Table 15. Respondents' source of money for saving after joining SFPI*

Source of saving	Male		female		Total	
	f	Percent	f	Percent	F	Percent
Selling milk product	17	10.6	26	16.3	43	26.9
Selling grain	22	13.8	18	11.3	40	25.0
Selling local beer		0.0	13	8.1	13	8.1
Selling eggs	12	7.5	21	13.1	33	20.6
Selling dung cake	8	5.0	15	9.4	23	14.4
From others	5	3.1	3	1.9	8	5.0
Total	64	40.0	96	60.1	160	100.0

Source: filed survey * = multiple responses f = frequency

For all respondents their sources of saving were petty businesses financed by the loan (Table 15) as the result from interview schedule and FGD had substantiated the above findings.

3.9. Purposes for saving

Based on the data gathered, respondents save money to utilize for different purposes; out of which, the majority (58.3%) were saving for business expansion (Table 16).

Table 16. Purposes of saving (n=105)

Reason for saving	Male		Female		Total	
	f	%	f	%	f	%
For expansion of businesses	7	19.4	14	38.9	21	58.3
For emergency purposes	4	11.1	4	11.1	8	22.2
For loan repayment	4	11.1	3	8.3	7	19.4
For getting interest						0
Others						
Total	15	41.6	1	58.3	36	99.9

Source: Filed survey f = frequency

None of the respondents had expressed for collecting interest on their savings as a reason for deposit. The implication of this finding is that the beneficiaries desire to save in order to engage in income generating activities.

3.10. Socio-economic impact of microfinance

3.10.1 Impact of SFPI on income of beneficiaries

According to Khadker(1998), Webster and Filder (1996), lack of capital and savings had led poor people not to get engaged in micro and small scale enterprises. The benefit, according to Ledgerwood (1999), of micro-credit is to enable entrepreneurs to startup their own businesses, and as a result, to increase their income and consequently reduce the level of poverty. Similarly, the prime objective of the program is to improve income level through provision of credit and other financial services in order to alleviate poverty and unemployment prevailing in a country.

In this study, all respondents (100%) of the beneficiaries of the program had benefited by increasing their income, but to a varying degree. All had reported that their income has increased as compared to their income prior to participating in the program (Table 17).

Table 17. Impact of SFPI's intervention on income generation (n= 105.)

Indicators	Male		Female		Total	
	f	%	f	%	f	%
Significantly increased	18	17.1	41	39.0	59	56.2
Increased	22	21.0	24	22.9	46	43.8
Stayed the same		0.0		0.0		0
Decreased		0.0		0.0		0
Total	40	38.1	65	61.9	105	100

Source: field survey f = frequency

After observing this positive impact of credit on the beneficiaries' income, respondents were asked the reason for positive changes in income. The majority (35.8%) of respondents claim the increment of income was due to the loan, which had enabled them to apply new technology (such as fertilizer, improved seed), while 28.9% of the respondents stated that the loan had created an opportunity to expand the existing businesses (Table 18).

Table 18. Respondents' reasons for income increment

Reason*	Male		Female		Total	
	f	%	f	%	f	%
Started new business	2	1.1	18	9.5	20	10.5
Expanded existing activities	20	10.5	27	14.2	47	24.7
Engaged in additional business	18	9.5	37	19.5	55	28.9
Applied new technology (fertilizer, improved seed, etc.)	21	11.1	48	25.3	69	35.8
Total	61	32.2	130	67.9	191	100.1

Source: Field Survey *multiple responses f = frequency

The increment of the income in this study was solely as a result of interventions by SFPI. Similarly, case studies conducted by Solomon (1996) at Debre Berhan had shown that almost half (49%) of them experienced an increase in income level out of a randomly selected 65 borrowers. Other studies conducted by Borchgrevink, Helle-valle, Woldehanna (2003) on the impact of DECSI on poverty reduction in the case of central Tigray had shown that 57% of the clients had obtained improved income. Thus, as compared to their findings, the impact of SFPI in raising income of its clients is by far greater in this study.

As an illustration, a case study of one successful borrower in Holeta will be presented. He is 41 years old and a father of two children. He had leased his plot of land due to lack of plough oxen and became a daily labourer. His income then was from hand to mouth, barely enough for daily survival. In 2008, he obtained a loan amounting to ETB 2000 from SFPI for the first time for the purpose of purchasing a farm ox. He bought an ox and he had retrieved the land leased. He then shared one additional ox with his friend for use in rotation. That way, he had generated income from the sale of products and able to pay the first loan. Following repayment of the first loan, he was able to borrow ETB 3,500 during the second round of loan. With this loan, he had bought another ox, fertilizer and improved seed. After having two oxen, he was fully employed on his farm. As a result, his income had significantly increased and was able to pay the second loan. In addition, he was able to buy a cow to provide milk to his children. For the third time he took a loan to get engaged in fattening. In so doing his yearly income grew to more than ETB 15,000. Currently, he is in a better position to meet not only basic material needs of his family, but also bought more household assets.

Prior to the loan, a large number of beneficiaries income was less than or equal to 6000 ETB/year, which is considered as low and cannot fulfill their basic need. But after the loan, the income level has increased. The number of respondents who reported a yearly income of less than ETB 10,000.00 were 69.5% before the loan, whereas, after loan the number decreased to 23.8%. And before the intervention, the number of beneficiaries who

claimed their income is greater than 10,000 ETB were only 20% but the number increased to 72.4% after the loan (Table 19).

Table 19. Respondents' income before and after obtaining loan (n=105)

Income	Before the loan						After the loan					
	Male		Female		Total		Male		Female		Total	
	f*	%	f	%	f	%	f	%	f	%	f	%
<6000	44	3.8	15	14.3	19	18.1	-	-	-	-	-	-
6000-7500	12	11.4	21	20.0	33	31.4		0	7	6.7	7	6.7
7500-10000	10	9.5	11	10.5	21	20.0	5	4.8	13	12.4	18	17.1
10000-12500	7	6.7	6	5.7	13	12.4	8	7.6	18	17.1	26	24.8
12500-15000	3	2.9	3	2.9	6	5.7	11	10.5	15	14.3	26	24.8
15000-17500	2	1.9		0.0	2	1.9	9	8.6	9	8.6	18	17.1
17500-20000	-	-	-	-	-	-	3	2.9	-	-	3	2.9
20000-22500	-	-	-	-	-	-	3	2.9	-	-	3	2.9
>22500	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0
Don't know	2	1.9	9	8.6	11	10.5	1	1.0	3	2.9	4	5.7
Total	40	38.1	65	61.9	105	100	40	38.3	65	62.0	105	100.0

Source: Field Survey *f = frequency

Thus, the credit scheme of SFPI has positive impact on the beneficiaries' income. But to know whether there is significant variation in mean income after program participation, Wilcoxon signed rank test was employed. This test helped to decide whether the provision of credit had significant impact on income improvement.

Table 20. Wilcoxon sign rank test result for income of beneficiaries before and after loan.

Ranks	N	Mean rank	Sum of Ranks	Z-value	Z-tabulated
Negative Ranks	0 ^{a*}			-22.56.962	1.96
Positive Ranks	94 ^{b*}	14,122.5	1,327,515		
Ties	0 ^{c*}				
Total	94				

Source: Field survey

a.* Yearly income after loan < Yearly income before loan.

b.* Yearly income after loan > Yearly income before loan.

c.* Yearly income after loan = Yearly income before loan.

The test result of Wilcoxon test had shown a significant increase in average yearly income following loan program participation, ($T=0$, $P<0.05$), with the ranks for increase totaling 1,327,515 and the ranks for decrease is none. Thus, we accept yearly income after loan greater than yearly income before loan and concluded that borrowing is the cause for increase in income (Table 20).

To analyze the impact of borrowing on income of men and women beneficiaries' independent two sample t-test was employed.

Table 21. T-test results of yearly income difference for male and female beneficiaries after loan.

Sex	N	Mean	Std.deviation	Mean difference	Std error	T-value	Sig.	df
Male	38	16203.3	3513.9	1092.9	357.11	3.0604	0.031	92
Female	56	12041.7	3353.84					

Source: Field Survey

The result of the T-test, as shown on table 21 , has indicated that there is a significant difference in income between men and female beneficiaries after loan ($t(92) = 3.0604$, $P<0.05$). Thus, the income of male beneficiaries was greater than the female beneficiaries after loan. Thus, borrowing has greater impact on raising income of male beneficiaries than those of women.

3.10.2 Impact of SFPI on employment opportunities

The causes of poverty in Sub-Saharan Africa identified by the World Bank poverty Task force (1996) are many, and inadequate access to employment opportunity is one among them. According to Wolday (2008), the existence of high unemployment rate is among the causes of poverty in Ethiopia as well.

The objective under the PASDEP was the development of MFIs to alleviate urban and rural poverty through employment creation in the informal sector (MOFED, 2006). Thus, as unemployment is one of the causes of poverty,

the impact of SFPI on poverty reduction should be evaluated from the point of employment creation.

The survey result had indicated that 60% of the respondents were engaged in cultivating crops. Being a seasonal work, all of them were semi-employed, and as a result their income was very low before joining the program. The remaining was engaged in other local activities such as petty trade and serving as daily laborer (Table 22).

Table 22. Respondents' employment opportunities before loan (n=105)

Type activities	Male		Female		Total	
	f	%	f	%	f	%
Cultivating crops	26	24.8	37	35.2	63	60.0
Cultivating crops and fattening	10	9.5	6	5.7	16	15.2
Petty trading		0.0	9	8.6	9	8.6
Cultivating crops and trading		0.0	4	3.8	4	3.8
Being daily laborers	4	3.8	2	1.9	6	5.7
Unemployed			7	6.7	7	6.7
Total	40	38.1	65	61.9	105	100.0

Source: field survey F = frequency

Respondents without assistance in their farm operation before loan were 15.2%, but after loan it decreased to 2.2%. It means that after loan, the whole family was engaged in the farm activities. Prior to obtaining the loan, none of the respondents use hired labor but after loan 16.3% use hired labor to herd their cattle (Table 23).

Table 23. Type of laborers used by households in the farm (n=92)

Type laborer	Before the loan						After the loan					
	Male		Female		Total		Male		Female		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
Self only	5	5.4	9	9.8	14	15.2		0	2	2.2	2	2.2
Self and family members	31	33.7	47	51.1	78	84.8	31	33.7	44	47.8	75	81.5
Hired labor and family members		0.0		0.0		0.0	5	5.4	8	8.7	13	14.1
Hired labor and self		0.0		0.0		0.0		0.0	2	2.2	2	2.2
Total	36	39.1	56	60.9	92	100.0	36	39.1	56	60.9	92	100.0

Source: field survey f = frequency

Such result indicates that the program had not only created employment opportunity to the whole family beneficiaries it has also opened opportunity to daily laborers from outside.

3.10.3 Impact of SFPI in improving asset possession

Credit is usually viewed in terms of its contribution in mitigating poverty through allowing the poor to acquire productive capital assets in order to improve their capacity to generate income, savings and investment. The income earning capacity of the entrepreneurs in the informal sector is low because they lack income generating assets. One method of transferring economic resources to the poor is through provision of financial services with which a poor person can buy any asset to generate income (Bekele, 1996; Nazrul, 2009). Therefore, as capital assets are the key for generating income, the impact assessment of credit on reducing poverty should be evaluated from the point of increasing asset possession of clients (both capital and household assets).

In this study, the number of livestock owners had increased after the loan. For instance, the number respondents who own oxen and cows before the loan were 69 and 48, respectively, but after the loan the number has raised to 91 and 77, respectively (Table 24).

Table 24. Respondents' possession of livestock*

House hold asset	Before the loan					After the loan				
	Male	Female	Total	Mean asset		Male	Female	Total	Mean asset	
				Male	Female				Male	Female
Oxen	32	37	69	2	1	38	53	91	3	2
Cows	21	27	48	1	1	29	48	77	2	2
Bulls	2	1	3	1	1	18	24	42	1	1
Heifers	6	9	16	1	1	13	27	40	1	2
Calf	18	22	40	1	1	14	42	56	1	2
Goats	0	0	0					0		
sheep	33	59	92	3	2	35	60	95	6	5
Horses	8	2	10	1		20	5	25	1	1
Donkeys	21	19	40	1	1	29	34	63	1	1
Hen	28	50	78	3	4	32	56	88	4	5

Source: field survey *Respondents gave multiple responses

Besides owning livestock, respondents were able to construct grain store, “*gotera*”, and barn or stable for storing grain and to serve as shades for animals, respectively. Others had acquired beehives for honey production and poultry cages (Table 25).

Table 25. Types of productive assets constructed after obtaining the loan

Type of asset	Average value of asset (ETB)	Male		Female		Total	
		f	%	F	%	f	%
		Barns	2000	12	11.4	9	8.6
Stables	1400	24	22.9	37	35.2	61	58.1
Grain stores	800	23	21.9	18	17.1	41	39.0
Beehives	600	7	6.7	0	0.0	7	6.7
Poultry cages	300	6	5.7	16	15.2	22	21.0
Others		12	11.4	9	8.6	21	20

Source: field survey f = frequency

Change in household asset possession is one of the impact indicators of microfinance intervention. The assumption is that accessing loan to the poor from MFIs increase income which in turn increases the capacity of owning better household assets. Pursuant to Getaneh (2005), microfinance service is said to have positive impact on household level variables such as: household income, household assets, education and nutrition. The household asset possessions of the beneficiaries increase due to program participation (Table 26).

Table 26. Asset possession of households before and after loan. (n= 105)

Type of assets	Before the loan						After the loan					
	Male	Female	Total	%	Mean asset		Male	Female	Total	%	Mean asset	
					Male	Female					Male	Female
Chair	11	23	34	32.4	2	3	22	43	65	61.9	3	5
Table	9	14	23	21.9	1	1	18	37	55	52.4	1	2
Bed	18	26	44	41.9	1	,	28	45	73	69.5	1	1
Radio	9	3	12	11.4			30	12	42	40.0	1	1
Corrugated iron house							8	4	12	11.4	1	1
Mobile telephone							15	6	21	20.0	1	1

Source: field survey.

Thus, measuring asset accumulation at household level is an approach that is recommended as a focus of impact study (Ledgerwood, 1999).

Beneficiaries in this study were asked about their asset accumulation at the household level, by attaching a current money value to assets that existed before and after participation of the program. Prior to program participation some of the respondents had possessed modest household assets with low quality, such as chair, table, bed and radio, but after the program participation more respondents own these assets (Table 4.32). The most common household assets were chairs, a table and a bed. None of the beneficiaries had assets with higher monetary value, such as a house with corrugated iron sheet and mobile phone before the loan. But after the program participation, the percentage of respondents having these assets had increased by 11.4% and 20%, respectively.

Thus, SFPI's credit scheme has a positive impact on increasing household as well as capital asset accumulation.

Prior to the loan, the number of respondents with assets valued less than or equal to ETB 10,000.00 was 24.8%, but after program participation it was decreased to 7.6%. Before loan, 45.8% of the respondents had claimed that the value of their valuable assets to be greater than ETB 20,000.00, whereas, after program participation the percentage increased to 65.7% (Table 27). As one sign of poverty is lack of assets, Getahun (1999) noted that the income earning capacity of the entrepreneurs in the informal sector is low because they lack the necessary capital assets for income generation. Such result is an indication of how credit provision increased asset possession of the beneficiaries.

Table 27. Value of asset possessions by respondents before and after the loan (n=105)

Value of total household and capital assets (ETB)	Before the loan						After the loan					
	Male		Female		Total		Male		Female		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
<10000	6	5.7	19	18.1	25	23.8	2	1.9	6	5.7	8	7.6
10000-20000	11	10.5	16	15.2	27	25.7	7	6.7	18	17.1	25	23.8
20000-30000	9	8.6	13	12.4	22	21.0	9	8.6	14	13.3	23	21.9
30000-40000	7	6.7	10	9.5	17	16.2	7	6.7	11	10.5	18	17.1
40000-50000	3	2.9	-	-	3	2.9	6	5.7	7	6.7	13	12.4
50000-60000	1	1.0	-	-	1	1.0	4	3.8	2	1.9	6	6.7
60000-80000	-	-	-	-	-	-	2	1.9	-	-	2	1.9
80000-100000	-	-	-	-	-	-	-	-	-	-	-	-
>100000	-	-	-	-	-	-	-	-	-	-	-	-
Don't know	3	2.9	7	6.7	10	9.5	3	2.9	7	6.7	10	9.5
Total	40	38.3	65	61.9	105	100.1	40	38.2	65	61.9	105	100.9

Source: Field survey f = frequency

The impact of borrowing on the value of asset holdings by women was better than by men. On average, 18.1% of male household heads and 36.1% of female household heads had reported that the value of their asset possession before loan to be less or equal to ETB 20,000.00; but after the loan, only 8.6% of the male and 23.1% of the female households heads remained at that position. To assess the validity of the variation in value of asset accumulation before and after loan, Wilcoxon signed rank test was employed.

Table 28. Wilcoxon signed ranks test result for the value of assets before and after borrowing

Ranks	N	Mean rank	Sum of Ranks	Z-value	Sig.	Z-tabulated
Negative Ranks	1 ^{d*}	543.5	543.5	-12.368	0.00	1.96
Positive Ranks	91 ^{e*}	895.5	90445.5			
Ties	3 ^{f*}					
Total	95					

Source: field survey

*d. the value of total assets after loan < the value of total assets before loan

*e. the value of total assets after loan > the value of total assets before loan

*f. the value of total assets after loan = the value of total assets before loan

The test results had shown that there is a significant increase in value of assets after program participation ($T= 543.5$, $P< 0.05$) with the ranks for increases totaling 90,445.5 and the ranks for decreases totaling 543.5. Thus, provisions of credit had significantly increased asset accumulation (Table 28).

To compare the impact of borrowing on value of household assets between men and women clients, independent two sample t-test was employed.

Table 29. T- test on value of assets between male and female clients after loan.

Sex	N	Mean	Std. deviation	Mean difference	Std. Error	T-value	Sig	Df
Male	37	32837.84	16647.5	7665.42	3237.94	1.071576	0.089	93
Female	58	31172.41	13177.8					

Source: field Survey

The result of the t-test had shown that there is no significant difference in value of assets after loan between male and female beneficiaries ($P>0.05$) (Table 29).

3.10.4 Impact of SFPI on improving food consumption

At household level microfinance service is said to have positive impact on household variables such as: household income; household assets, education, nutrition and coping strategies (Getaneh, 2005). This is because of indirect impact of increase in income generated from the business activities they were engaged.

When the beneficiaries were asked about the overall household diet condition after program participation, in total, 55.2% of the beneficiaries had reported that their overall diet condition has improved significantly since SFPI program participation (Table 4.37).

In general, 96.2% of the respondents had reported that such betterment in diet was due to loan access from the institution (Table 30).

Table 30. Respondents' household diet condition after the loan

Descriptions	Indicator	Male		Female		Total	
		f	%	f	%	f	%
House hold diet condition after the program participation	Increase significantly	22	21.0	36	34.3	58	55.2
	Increase	18	17.1	29	27.6	47	44.8
	Stayed the same	-	-	-	-	-	-
	Decrease						
Is the improvement due the loan	Yes	37	35.2	64	61	101	96.2
	No	3	2.9	1	1	4	3.8
Was any loan diverted for food consumption	Yes	40	38.1	65	62	105	100.0
	No	-	-	-	-	-	-
Was there time to eat less for payment of loan	Yes	40	38.1	65	61.9	105	100.0
	No	-	-	-	-	-	-

Source: Field Survey f = frequency

The same question was raised during FGD and the majority had agreed that due to participating in the program they were able to eat better quality and quantity of food. The majority claimed that they used to eat less quality food items but after program participation they were able to eat what they called “better quality” food such as meat, egg, butter and so on.

Regarding expenditure on food, 16.2% of the respondents' monthly food consumption expenditure was less than ETB 500 before the loan, whereas after loan, the number decreased to 6.7%. It means that most of the respondents who used to be within this consumption level before loan shifted to higher level of food expenditure after program participation. The number of beneficiaries, who reported monthly expenses for food to be greater than ETB 700, was 38% before intervention but after the loan it had increased to 67.6%. Thus, borrowing has positive impact on securing food consumption level of the household (Table 31).

Table 31. Respondents' expenditure for food (n=105)

Monthly expenditure for food (ETB)	Before the loan						After the loan					
	Male		Female		Total		Male		Female		Both	
	f	%	f	%	f	%	f	%	f	%	F	%
<500	5	4.8	12	11.4	17	16.2	2	1.9	5	4.8	7	6.7
501-700	18	17.1	23	21.9	41	39.0	9	8.6	11	10.5	20	19.0
701-900	6	5.7	14	13.3	20	19.0	11	10.5	14	13.3	25	23.8
901-1100	5	4.8	9	8.6	14	13.3	8	7.6	13	12.4	21	20.0
1101-1300	4	3.8	2	1.9	6	5.7	5	4.8	9	8.6	14	13.3
1301-1500	-	-	-	-	-	-	3	2.9	6	5.7	9	8.6
1500-1700	-	-	-	-	-	-	-	-	2	1.9	2	1.9
>1700	-	-	-	-	-	-	-	-	-	-	-	-
I don't know	2	1.9	5	4.8	7	6.7	2	1.9	5	4.8	7	6.7
Total	40	38.1	65	61.9	105	99.9	40	38.2	65	62.0	105	100

Source: Field Survey f = frequency

To assess the validity of the variation in mean expenditure for food before and after loan Wilcoxon signed ranks test was employed (Table 32).

Table 32. Wilcoxon sign ranks test result for average monthly food consumption expenditure before and after the loan.

Ranks	N	Mean rank	Sum of Ranks	Z-value	Sig.	Z-tabulated
Negative Ranks	4g*	35.23	140.92	-12.052	0.0	1.96
Positive Ranks	93h*	107.86	10030.5			
Ties	1i*					
Total	98					

Source: field survey

*g average monthly food consumption expenditure after loan < the average monthly food consumption expenditure before loan.

*h average monthly food consumption expenditure after loan > the average monthly food consumption expenditure after loan.

*I average monthly food consumption expenditure after loan = the average monthly food consumption expenditure before loan.

There was a significant increase in average monthly expenditure for food following program participation ($t= 140.92$, $P<0.05$) (Table 32).

3.10.5 Impact of SFPI on improving access to education

Lack of educational opportunity is one of the most powerful determinants of poverty and unequal access to educational opportunity is strongly correlated with income inequality (Assefa, 2004). Thus, creating access to education is one area of intervention under the poverty reduction strategy. Poor people rarely afford educational access to their children. Even if educational access is achieved, the poor cannot cover the costs related with education, such as, uniforms, books, and other related expenses, due to lack of sufficient income.

It is expected that through the microcredit service the beneficiaries start their own businesses or expand the existing one, as their income increases (Ledgerwood, 1999). Through the increased income The beneficiaries are expected to provide better education to their household members as a result of the increased income.

The research had attempted to evaluate the impact of the SFPI's credit program on annual educational expenditure of respondents. Among the beneficiaries, 91.4% had school age children and can afford to send their children to public school (Table 33). The result of the test had revealed that there is significant variation or differences in education expenditure before and after loan ($p < 0.05$). This indicates that participation in the program had helped respondents to be able to expend more to fulfill educational materials and equipments for household members.

Table 33. Number of respondents with school age children (n=105)

Existence of school age children	Male		Female		Total	
	f	%	f	%	f	%
Yes	34	32.4	62	59.1	96	91.4
No	6	5.7	3	2.9	9	8.6
Total	40	38.1	65	62.0	105	100

Source: field survey. f = frequency

Before the loan, 15% of the respondents were not sending their children to school, whereas, this figure had decreased to 6.3% after the intervention of SFPI. In addition, 43.8% of the respondents were sending two or more

children to school before the loan, whereas, the number had increased to 71.0% after the loan. It means that 27.2% more respondents can afford to send two or more children to school after the loan (Table 34).

Table 34. Distribution of Respondents on the basis of number children who had access to school (n=96)

Number of children attend school	Before the loan						After the loan					
	Male		Female		Total		Male		Female		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
None	4	4.2	11	11.5	15	15.6	2	2.2	4	4.0	6	6.3
1	13	13.5	26	27.1	39	40.6	8	8.3	14	14.6	22	22.9
2	7	7.3	18	18.8	25	26.0	11	11.5	17	17.7	28	29.2
3	6	6.3	5	5.2	11	11.5	6	6.6	12	12.5	18	19.1
4	3	3.1	2	2.1	5	5.2	4	4.2	8	8.3	12	12.5
5	1	1.0		0.0	1	1.1	2	1.8	5	5.2	7	7.1
>6	0	0.0	0	0.0	0	0.0	1	1.0	2	2.1	3	3.1
Total	34	35.4	62	64.7	96	100.	34	35.6	62	64.4	96	100.2

Source: Field Survey f = frequency

The result of this study revealed that as the income of the family increases, affordability to avail all necessary educational materials to children increases.

Table 35. Respondents' annual educational expenditure before and after the loan (n=96)

Education expenses	Before the loan						After the loan					
	Male		Female		Both		Male		Female		Both	
	f	%	f	%	F	%	f	%	f	%	f	%
<500	8	8.3	19	19.8	27	28.1	3	3.1	7	7.3	10	10.4
500-750	13	13.5	33	34.4	46	47.9	7	7.3	11	11.5	18	18.8
750-1000	8	8.3	7	7.3	15	15.6	11	11.5	24	25.0	35	36.5
1001-1250	3	3.1	3	3.1	6	6.3	6	6.3	10	10.4	16	16.7
1250-1500	2	2.1		0	2	2.1	4	4.2	6	6.3	10	10.4
1500-1750		0		0	0		3	3.1	4	4.2	7	7.3
>1750												
Total	34	35.3	62	64.6	96	100	34	35.5	62	64.7	96	100.1

Source: Field Survey f = frequency

With regard to educational expenditure 76% of the beneficiaries' annual education expenditure was below or equal to ETB 750.00, but after program

intervention only 29.2% of the clients were spending that much. Those beneficiaries who could afford to spend greater than ETB 1000.00 were only 8.4%, but after the intervention, 34.4% of them were able to spend that much for their children's education (Table 35). To check the validity of variation of expenditure "before" and "after" intervention for educating their children Wilcoxon signed rank test was employed.

The result of Wilcoxon signed rank test had revealed that there is significant variation or differences in education expenditure before and after loan ($p < 0.05$) (Table 36). This indicates that participation in the program had helped respondents to be able to household members.

Table 36. Wilcoxon signed ranks test result for annual educational expenditure before and after the loan.

Ranks	N	Mean rank	Sum of Ranks	Z-value	Sig.	Z-tabulated
Negative Ranks	3 ^{j*}	52.4	157.2	-9.4	0.00	1.96
Positive Ranks	89 ^{k*}	62.7	5580.3			
Ties	4 ^{l*}					
Total	96					

Source: field survey

*j = average annual educational expenditure after loan < the average annual educational expenditure before loan

*k = average annual educational expenditure after loan > the average annual educational expenditure before loan

*l = average annual educational expenditure after loan = the average annual educational expenditure before loan

The issue of educational expenditure was raised during FGD, and the majority of the focus group had agreed that due to increased income they were able to send their children to school. The discussants had claimed that the children used to wear the same uniform year after year and was of poor quality due to shortage of income, but now as a result of additional income, they were able to purchase sufficient exercise books, new school uniform, shoes and books each year. In addition, some participants in the FGD noted that they were able to educate their children up to secondary level further

way from their residences, which signifies that they were able to rent houses and cover other costs related to their education. Thus, it can be said that SFPI has positive impact on education of household members of the beneficiaries.

3.10.6 Impact of SFPI services on improving access to medical facilities.

Poverty hinders poor people to get access to a range of community services such as safe drinking water, sanitation, transport, health and education. Through increased income access to health facilities improves. Those who earn low level of income have no or little access to public services such as medical facilities. Similar to improving educational facilities, SFPI's credit scheme is expected to improve access to medical facilities as well. To assess the impact of SFPI on medical services, one needs to identify the health status of the family in the household 'before' and 'after' the intervention.

In general, 30.5% of respondents had reported that some members of the household were inflicted with sickness before the loan, whereas, after the loan, only 19% of respondents had claimed that their household members were sick (Table 37). The change in diet might have contributed to the reduction of health problems in the households.

Table 37. Number of households who were sick before and after the loan (n=105)

Sick person	Before the loan						After the loan					
	Male		Female		Total		Male		Female		Both	
	f	%	f	%	f	%	f	%	f	%	F	%
Yes	9	8.6	23	21.9	32	30.5	6	5.7	14	13.3	20	19
No	31	29.5	42	40.0	73	69.5	34	32.4	51	48.6	85	81
Total	40	38.1	65	61.9	105	100	40	38.1	65	61.9	105	100

Source: field survey f = frequency

The main issue concerning health is accessibility of medical services to the sick person. Only 28.1% of respondents were able to receive medical treatment before the loan. But after the loan, 65% could afford to receive medical treatment (Table 38).

Table 38. Access to medical services before and after the loan.

family member received medical treatment	Before the loan (n=32)						After the loan (n=20)					
	Male		Female		Total		Male		Female		Both	
	f	%	f	%	f	%	f	%	F	%	F	%
Yes	3	9.4	6	18.8	9	28.1	5	25	8	40	13	65
No	6	18.8	17	53.1	23	71.9	2	10	5	25	7	35
Total	9	28.1	23	71.9	32	100	7	35	13	65	20	100

Source: field survey f = frequency

The source of fund for 55.6% of beneficiaries who had medical treatment before the loan was borrowing from family members and friends. After the loan, however, 69.2% of those who received medical treatment, their sources of fund were income from business activities financed by the loan. Thus, the intervention of SFPI has impact on medical treatment of the beneficiaries' household (Table 39).

Table 39. Source of income for medical expenses

The source	Before the loan (n=9)						After the loan (n=13)					
	Male		Female		Total		Male		Female		Total	
	f	%	f	%	f	%	f	%	f	%	F	%
Selling asset	1	11.1	2	22.2	3	33.3	1	7.7	2	15.4	3	23.1
Saving		0.0		0.0	0	0.0		0.0		0.0	0	0.0
Borrowing from friends and relatives	2	22.2	3	33.3	5	55.6		0.0	1	7.7	1	7.7
Income from business activities							4	30.8	5	38.5	9	69.2
Other		0.0	1	11.1	1	11.1		0.0	0.0	0.0	0	0.0
Total	3	33.3	6	66.6	9	100	5	38.5	8	61.5	13	100

Source: field survey

4. CONCLUSIONS

The majority of the beneficiaries were denied access to credit from both the formal and informal financial institutions for a long time, and as a result, they could not engage either in new agricultural businesses or expand the existing one in order to reduce poverty. The new financial institutions had created an easy, affordable guarantee system, i.e. group collateral, and as a result, almost all respondents had benefitted by taking the loan under this system. The existence of group collateral had enabled marginalized people to access the services. Accordingly, most clients were able to access loan three or more times from the institutions.

The majority of respondents utilized the loan for purchase of fertilizers, improved seed, leasing additional land, and for fattening animals and raising dairy cows to increase their productive capacity and income.

Overall, credit provision had a significant impact on income of the beneficiaries who were engaged in diversified agricultural operation, including farming, milk production, fattening and retailing grain. The reasons for positive changes in income of the beneficiaries were the loan obtained to finance productive capital assets and working capital of the business activities.

SFPI program has also a positive impact on enterprise expansion and in increasing job opportunities for the household members and the community at large. SFPI intervention has also encouraged institutional savings of respondents as their overall savings has increased after SFPI intervention.

Future intervention along this line calls for rectification of the problems encountered, such as the amount of the loan, the time table for repayment of the loan, communication and strengthening awareness level of the clients and the promotion of saving culture.

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