



Microfinance: A Tool for Poverty Alleviation, An Empirical Study of Rural Areas in Selected Districts in Gujarat

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Abstract: *Microfinance has achieved a significant recognition in all over the world by producing considerable evidence of poverty alleviation. Microfinance is the provision of providing financial services to low income people who have been neglected by formal banking institutions. The main objective of micro-finance is to alleviate poverty by enabling the poor self-dependent and empowerment of women. The aim of present study is to analyze the role of microfinance as a tool of poverty alleviation in rural area of selected districts of Gujarat by taking the responses of SEWA bank (Shri Mahila Sewa Sahakari Bank Ltd.) members. SEWA bank is a pioneer financial institute has been doing a yeomen service for poverty alleviation and empowerment of women. It enjoys great reputation in India and abroad. They have been extending microfinance to individual beneficiaries as well as to SHGs. To study the impact of microfinance role in poverty alleviation of women beneficiaries, a sample of 520 respondents who have availed micro loan and 520 are those respondents who did not avail micro loan are collected in four districts namely Mehsana, Ahmedabad, Gandhinagar and Sabarkantha. Survey technique was used to collect the appropriate information. Poverty indicators recommended by Worlds bank namely Head Count ratio, Poverty Gap ratio and Squared Gap ratio are incorporated. Paired t-test was applied to measure the impact of micro loan. The study found that availment of loan has increased the individual income as well as household income. It indicates that with the increase income beneficiaries are now better off. Availment of loan has decreased the head count ratio. Poverty gap and square poverty gap are also reduced. Result of paired t-test indicates that Microloan has significant impact on mean income of the borrowers after availment of loan in different area.*

Keywords: *Micro-finance, Poverty, SEWA bank, Head Count Ratio, Poverty Gap Index, Squared Poverty Index, Paired t-test.*

I. INTRODUCTION AND CONCEPTUAL FRAMEWORK

Poverty has been a critical issue in India since independence. The pace of poverty reduction in the past decades - despite widespread and enormous schemes - has been slow [1]. According to planning commission report (2013), nearly 21.9% of India's population (219 million) is poor [2]. Poverty indicates a condition in which a person fails to maintain a living standard adequate for his physical and mental efficiency. It gives rise to a feeling of a discrepancy between what one has and what one should have. The term poverty is a relative concept. According to Adam Smith - Man is rich or poor according to the degree in which he can afford to enjoy the necessities, the conveniences and the amusements of human life [3]. Even after more than 50 years of Independence India still has the world's largest number of poor people in a single country. Of its nearly 1 billion inhabitants, an estimated 260.3 million are below the poverty line, of which 193.2 million are in the rural areas and 67.1 million are in urban areas. More than 75% of poor people reside in villages. Poverty level is not uniform across India [4].

To alleviate poverty various initiatives have been taken by the government. The strategy adopted for this purpose was comprised of the expansion of the institutional structure, directed lending to the priority sector and subsidized interest rates to the poor. It was expected that extensive bank branch should meet the financial needs of the entire rural population. Besides, various institutional and policy measures were adopted to alleviate India's rural poverty. Despite of various wage-employment and self-employment programme like 20-Point Programme, National Rural Employment Programme, Jawahar Rozgar Yojana, Employment Assurance Scheme, Food for Work Programme, Sampoorna Gramin Rozgar Yojna, Integrated Rural Development Programme, Development of Women and Children in Rural Areas, Training of Rural Youth for Self Employment, Swarnjayanti Gram Swarozgar Yojana etc. these programmes could not achieve the expected results [5].

Rural Finance Access Survey (RFAS) - 2003 highlighted that rural bank serve primarily the needs of the rich borrower. Meanwhile, the rural poor face severe difficulties in accessing savings and credit from formal sector [6].

Microfinance has achieved significant recognition in all over the world by producing considerable evidence of poverty alleviation. The concept of microfinance is not new. Providing financial services to low income people is very old. There were many informal agencies that were operating in different parts of the world like hui in China, susu in Nigeria, the arisan in Indonesia or the paluwagan in the Philippines and chit funds and Rotating Savings and Credit Associations (ROSCAs) in India [7]. The concept of microfinance was introduced in Bangladesh by Prof. Mohd. Yunus in the mid-1970s not only has it offered credit to support self-employment and small business creation in rural Bangladesh but also established an environment that has led



to improve the economic and social status of women. This is underpinned by the unprecedented growth of microfinance through female borrowers. Grameen Bank is a case in point. When it started its micro-credit operation in mid 1980s, 65% of its borrowers were female. By 1995, they represented 95% of all borrowers of microfinance [8].

The pioneering effort to introduce microfinance in India was the establishment of Self-Employed Women's Association (SEWA) in the State of Gujarat by registering SEWA as a trade union of self-employed workers of the unorganized sector in 1972. In 1974 SEWA formed an urban cooperative bank, called Shri Mahila SEWA Sahakari Bank, with the objective of providing banking services to poor women in unorganized sector in Ahmedabad City, Gujarat.[9] Microfinance refers to all types of financial intermediation services (savings, credit funds transfer, insurance, pension remittances, etc.) provided to low-income households and enterprises in both urban and rural areas, including employees in the public and private sectors and the self-employed [10].

Indian economy is developing by contributing into different sector. Still in India nearly 22% people live below poverty line [11]. Gujarat, the most urbanized state of India, is situated on the western coast of India having the coastline of 1600 km. The population of Gujarat as per census 2011 is 6.04 crore comprising 3.15 crore males and 2.89 crore females. The Sex Ratio in the country which was 933 in 2001 has risen by 10 points to 943 in 2011. While the Sex Ratio in the Gujarat slightly decreased to 919 in 2011 from 920 in 2001. In rural area of the state it has increased by 4 points from 945 in 2001 to 949 in 2011, while in urban areas it remained at 880 in 2011 i.e. at the level of 2001. The Work Participation Rate (WPR) for the Gujarat works out to 41.0 per cent, which is higher than the national average. The WPR for males has increased to 57.2 per cent in 2011 in comparison to 54.9 per cent in Census 2001. The female WPR has reduced to 23.4 per cent in 2011 from 27.9 per cent in Census 2001[12]. The percentage of persons below the Poverty Line in 2011-12 has been estimated as 25.7% in rural areas, 13.7% in urban areas and 21.9% for the country as a whole. In Gujarat Still 16.63 % of person are living below poverty line. State Specific poverty line in terms of monthly per capita (Rs.) for India is Rs.816 in rural and Rs.1000 in urban while in Gujarat it is found Rs.952 and Rs.1152 in rural and urban areas [11].

For poverty alleviation Government of Gujarat has taken many initiatives, Mission Mangalam is one of them. It is as an integrated poverty alleviation approach. It aims to bring the critical mass of resources to address poverty by creating a single platform for stakeholders like Banks, Industry Partners, Micro Finance Institutes and Skill Imparting Institutions, etc. to deliver desired outcomes. While building social business enterprises, the concept of 'Mission Mangalam' envisages integration of Self Help groups and their federations into the value chain of investors. Around 24 lakh women who are currently active under 2 lakh Sakhi Mandals / Self Help Groups (SHGs) are in the state are managing to the tune of Rs.1000 crores through bank linkage [13].

II. REVIEW OF LITERATURE

United Nations had declared the Year 2005 as International year of microcredit. Microfinance has proven to be an effective tool for poverty alleviation [14]. Rationale of microfinance is to provide credit to the poor people who otherwise would not have access to credit services. Micro-credit programme extend small loans to very poor people for self-employment projects that generate income and allow them to take care for themselves and their families. This programme is working in many developing countries. There is no shortage of literature related to microfinance. However researcher has tried to review the following:

A study was undertaken to assess the role of microcredit and its contribution to the improvement and poverty reduction for millions of the poorest people of Bangladesh [15]. The study concluded that 99% clients of MFIs were women and most of them had primary education. Most of the women started their business by taking loan from MFIs as compared to other sources. There was a noticeable and positive impact of micro credit activities on the living standards, empowerment and poverty reduction among the poor people in the society.

Impact of microfinance on poor people was assessed in Davanagere District of Karnataka [16] in terms of empowerment, living standard of poor people and poverty alleviation. The study demonstrated that almost 83.63% clients of MFIs were women. The study also highlighted that reveals that microfinance schemes are highly associated to build up of social and economic empowerment.

Efforts [17] have been made to analyze the effect of Micro Finance Institutions (MFIs) on poverty of households in India. Study was directed to find out –whether the access to MFI reduces poverty and based on the survey originally carried out by EDA System (EDA Rural System Pvt. Ltd. Gurgaon) for SIDBI (Small Industries Development Bank of India) in 2001 as a part of SIDBI's impact assessment study of its micro finance programme. The survey covered a sample of 20 partner Micro Finance Institutions (MFIs) of SIDBI and 5327 households. The study concluded that household in rural areas needed loans from MFIs for productive purposes to reduce poverty.

A study [18] was commissioned by NABARD to measure the impact of micro Finance through SHG Bank Linkage programme on the SHG member households in eastern India. The study was based on primary details collected from 115 members in 60 SHGs. The socio-economic conditions of the members were compared between pre and post SHG situations to quantify the impact. The major findings of this study showed that 52 per cent of sample households registered 23 percent rise in annual income and 30 per cent increase in asset ownership in post-SHG situation. About 72 per cent of the bank loan was used for income generating purpose and the remaining 28 per cent was for consumption and other social functions and contingency purposes.



A study [19] to analyze the factors which impact the empowerment of women residing in Jamnagar City of Gujarat was undertaken. The study contained 100 beneficiaries of Microfinance Institutions i.e. Jana Lakshmi. The study concluded that microfinance institution helps in poverty alleviation and through that standard of living of women also improves. The SHG's have provided social opportunities to make them aware about these rights, entitlements and development programmes as well as starting income generation activities for substantial earnings and self-employment.

With the forgoing discussion it is quite observed that microfinance institutions are supportive in improving the economic position of the respondents by extending microloan and playing a vital role in poverty alleviation. However, an attempt has been made to answer the following questions.

III. OBJECTIVES OF THE STUDY

- i. To know the socio-economic characteristics of the members of SEWA Bank
- ii. To study and assess the impact of Microfinance on Below Poverty Households
- iii. To study the impact of microfinance on individual beneficiaries

IV. HYPOTHESES OF THE STUDY

- H0: There is no significant difference in average income of those who availed micro finance loan as against those who did not avail i.e. $\mu_1 = \mu_2$
- H1: There is significant difference in average income of those who availed micro finance loan as against those who did not avail i.e. $\mu_1 > \mu_2$
- H0: There is no significant difference in average income due to availment of micro finance loan i.e. $D = 0$ (where $D = \mu_1 - \mu_2$)
- H2: There is significant difference in average income due to availment of micro finance loan i.e. $D < 0$ (Where $D = \mu_1 - \mu_2$)

V. RESEARCH METHODOLOGY

Research methodology is descriptive and analytical in nature. Cluster sampling method is used. As a case study data is collected from SEWA bank respondents in rural areas of four districts of Gujarat. Since study is undertaken for SEWA Bank beneficiaries and their main concentration is in Ahmedabad and surrounding districts. Therefore, four districts namely Ahmedabad, Gandhinagar, Mehsana and Sabarkantha are selected randomly for the purpose of study. In each districts there are large number of villages and every village have SEWA bank beneficiaries. Hence five villages are selected at random from each district. From each village a certain number of SEWA bank members (Beneficiaries and Non-Beneficiaries) are selected. Beneficiaries are the members who have availed loan from SEWA bank and Non-beneficiaries are those who did not avail loan. 45 SHGs from Mehsana district; 46 SHGs from Ahmedabad district; 44 SHGs from Gandhinagar district and 44 SHGs from Sabarkantha district are selected from each village. Out of 20 villages in all four districts, a total 179 self-help groups are selected. Six to seven respondents are randomly selected from each self-help groups. From each district 260 beneficiaries and 260 non-beneficiaries are included as a sample size. In a way a total of 1040 respondents including 520 beneficiaries and 520 non-beneficiaries are covered. In a way a sample size consists of 1040 women respondents of SEBA bank. Information was collected through structured questionnaire. First of all, a pilot test comprise of 40 beneficiaries was carried out. After the feedback of test run, the final questionnaire was applied. Descriptive statistics was used to know the general characteristic of the beneficiaries. The study also includes the Poverty measurement indices suggested by World Bank[20] namely Head Count Ratio, Poverty Gap Index and Squared Poverty Gap Index to assess the impact of microfinance in terms of availment of loan on poverty on respondents.

Below Poverty Line is an economic benchmark and poverty threshold used by the government of India to indicate economic disadvantage and to identify individuals and households in need of government assistance and aid. It is determined using various parameters which vary from state to state and within states. Though, in India official National poverty line is described by Tendulkar committee [11] which is estimated at Rs.816 per capita per month and Rs.1,000 per capita per month in urban areas. For Gujarat it is observed 932 per capita per month in rural areas and Rs.1,152 per capita per month in urban areas. But keeping in view the inflation trend, Tendulkar methodology is reviewed by Dr. C. Rangarajan [21] and his recommendations are considered. According to his report, National poverty line is estimated at Rs.972 per capita per month and Rs. 1,407 per capita per month in urban areas. For a family of five, the all Indian poverty line in terms of consumption expenditure would amount to about Rs.4,860 and Rs.7,035 per month in urban areas. For, Gujarat poverty line is estimated at Rs.1,102.83 per capita per month in rural areas and Rs.1,507.06 per capita per month is fixed in urban areas. For a family of five in terms of monthly consumption expenditure, for rural area it is estimated at Rs. 5,514.15 and Rs. 7,535.30 for urban areas. Since responses are taken from the respondents who fall under rural areas. So poverty line is fixed at Rs. 5,500 (rounded off).

The impact of microfinance has been determined by comparing two groups. The t-test is applied to test the significance of results collected from the analysis of surveyed data in the following manner:

- (i) Testing difference between Means of Two Independent Samples: The test is applied to measure the mean income difference between the beneficiaries and non-beneficiaries.
- (ii) Testing Difference between Means of Dependent (Paired) Samples: When the two samples consist of pairs of two observations made on the same selected respondents then the samples are called paired samples.

In present research paper the income of the beneficiaries after availment of the loan is compared with before availment.

VI. LIMITATIONS OF STUDY

In present research paper only women beneficiaries are incorporated. The study is restricted to rural areas of four Districts of Gujarat.

VII. RESULTS AND DISCUSSION

(A) Demographic Profile of Respondents

1. Age of the sample respondents

As per the guidelines of Reserve Bank of India [22], an individual above 18 years can become a member of an SHG. Table 1 shows the age group of surveyed respondents both beneficiaries and non-beneficiaries. In the present research study majority of the respondents including both beneficiaries and non-beneficiaries are in the age group of 26 to 40 years.

Table 1: Age of the Respondents

Age Group	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
18 to 25 years	3 (2)	6 (5)	4 (3)	5 (4)	18 (3)	6 (5)	16 (12)	3 (2)	2 (2)	27 (5)
26 to 40 years	81 (62)	56 (43)	83 (64)	77 (59)	297 (57)	100 (77)	65 (50)	106 (82)	101 (78)	372 (72)
41 to 50 years	40 (31)	52 (40)	40 (31)	46 (35)	178 (34)	16 (12)	31 (24)	19 (15)	18 (14)	84 (16)
Above 51 years	6 (5)	16 (12)	3 (2)	2 (2)	27 (5)	8 (6)	18 (14)	2 (2)	9 (7)	37 (7)
Total	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

This age group is considered as the most productive period. It is found that among the beneficiaries 3 per cent are in the age group of 18 to 25 years, 57 per cent in 26-40 years, 34 per cent in 41-50 years and only 5 per cent in above 50 years of age group. Among the non-beneficiaries 5 per cent are in the age group of 18 to 25 years, 72 per cent in 26-40 years, 37 per cent in 41-50 years and 7 per cent in above 51 years of age group.

2. Marital Status of the Respondents

Most of the surveyed women respondents are found married and the proportion of the unmarried girls and widows is very low.

Table 2: Marital Status of Respondents

Particular	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
Unmarried	2 (2)	0	2 (2)	4 (3)	8 (2)	3 (2)	8 (6)	1 (1)	2 (2)	14 (3)
Married	125 (96)	130 (100)	128 (98)	124 (95)	507 (98)	124 (95)	117 (90)	126 (97)	125 (96)	492 (95)
Divorced	0	0	0	0	0	1 (1)	1 (1)	0	0	2 (.38)
Widow	3 (2)	0	0	2 (2)	5 (1)	2 (2)	4 (3)	3 (2)	3 (2)	12 (2)
Total	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

Table 2 shows that 98 per cent of the beneficiaries and 95 per cent of the non-beneficiaries are married women. The proportions of unmarried respondents are 2 and 3 per cent. The proportions of widow's are 1 per cent in case of beneficiaries and 2 per cent in case of non-beneficiaries. Less than 1 per cent respondents are found divorced only in case of non-beneficiaries.

3. Religion of the Respondents

Table 3 shows the religion of the respondents. Majority of the respondents are Hindus. 83 per cent in case of beneficiaries and 89 per cent in case of non-beneficiaries belong to Hindu community. While 17 and 11 per cent Muslims respondents are found in beneficiaries and non-beneficiaries respectively. All non-beneficiaries in case of Ahmedabad district belong to Hindu community. While in case of Mehsana district 59 per cent beneficiaries are Hindu and 41 per cent non-beneficiaries belong to Muslim community.

Table 3: Religion of the Respondents

Particular	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
Hindu	77 (59)	118 (91)	112 (86)	123 (95)	430 (83)	92 (71)	130 (100)	116 (89)	125 (96)	463 (89)
Muslim	53 (41)	12 (9)	18 (14)	7 (5)	90 (17)	38 (29)	0	14 (11)	5 (4)	57 (11)
Total	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

4. Caste of the Respondents

The respondents are distributed on the basis of social caste. Table 4 shows the caste wise classification the respondents. It is found that majority of the beneficiaries (63 per cent) and non-beneficiaries (62 per cent) belong to general category. 14 per cent of beneficiaries and 15 per cent non-beneficiaries belong to scheduled castes. 17 and 11 per cent respondents are found in other caste. In present study those respondents who belong to Muslim community are included in other caste. 3 per cent beneficiaries and 9 per cent non-beneficiaries are observed in other backward class. 2 and 3 per cent respondents belong to schedule tribes in case of beneficiaries and non-beneficiaries respectively

Table 4: Caste Wise Classification of Respondents

Particulars	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
SC	17 (13)	13 (10)	25 (19)	19 (15)	74 (14)	19 (15)	6 (5)	23 (18)	28 (22)	76 (15)
ST	0	6 (5)	4 (3)	2 (2)	12 (2)	0	13 (10)	3 (2)	0	16 (3)
OBC	0	4 (3)	6 (5)	5 (4)	15 (3)	0	37 (28)	5 (4)	7 (5)	49 (9)
General	60 (46)	95 (73)	77 (59)	97 (75)	329 (63)	73 (56)	74 (57)	85 (65)	90 (69)	322 (62)
Other	53 (41)	12 (9)	18 (14)	7 (5)	90 (17)	38 (29)	0	14 (11)	5 (4)	57 (11)
	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

5. Education Status of the Respondents

The table 5 shows the education status of the respondents both beneficiaries and non-beneficiaries. 28 per cent beneficiaries and 38 per cent non-beneficiaries are illiterate. While 25 per cent beneficiaries studied up to primary level, twenty nine per cent up to high school, fourteen per cent up to higher secondary and four per cent beneficiaries above higher secondary. Among non-beneficiaries 36 per cent have availed education up to primary level, 22 per cent up to high school, 4 per cent higher secondary and above higher secondary respectively. The study also reveals that the level of literacy is very low among the Mehsana and Sabarkantha district non-beneficiaries. In both the districts 48 per cent of the non-beneficiaries are found illiterate.

Table 5: Education Status of the Respondents

Education	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
Illiterate	40 (31)	11 (8)	48 (37)	45 (35)	144 (28)	63 (48)	27 (21)	46 (35)	62 (48)	198 (38)
Primary	42 (32)	30 (23)	27 (21)	32 (25)	131 (25)	56 (43)	36 (28)	49 (38)	47 (36)	188 (36)
High School	34 (26)	47 (36)	36 (28)	32 (25)	149 (29)	6 (5)	47 (36)	26 (20)	14 (11)	93 (18)

Higher Secondary	11 (8)	33 (25)	14 (11)	16 (12)	74 (14)	3 (2)	9 (7)	5 (4)	5 (4)	22 (4)
Above Higher Secondary	3 (2)	9 (7)	5 (4)	5 (4)	22 (4)	2 (2)	11 (8)	4 (3)	2 (2)	19 (4)
	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

6. Family Size

The family sizes of the beneficiaries and non-beneficiaries respondents are given in Table 6. The table shows that 5 per cent of the beneficiaries and 4 per cent of the non-beneficiaries have small families with up to two family members. 61 per cent of the beneficiaries and 78 per cent of the non-beneficiaries have medium size families with three to five family members. However, 34 per cent of the beneficiaries and 18 per cent of the non-beneficiaries have more than six family members.

Table 6: Number of Family Members

Particular	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
Up to 2	10 (8)	4 (3)	6 (5)	5 (4)	25 (5)	4 (3)	3 (2)	4 (3)	10 (8)	21 (4)
3 to 5	86 (66)	103 (79)	60 (46)	68 (52)	317 (61)	101 (78)	101 (78)	108 (83)	97 (75)	407 (78)
6 and above	34 (26)	23 (18)	64 (49)	57 (44)	178 (34)	25 (19)	26 (20)	18 (14)	23 (18)	92 (18)
Total	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

7. Earning Members in a Family

The respondents were also asked about the number of earning members in their families. Table 7 shows that in 86 per cent of the beneficiaries and 91 per cent of non-beneficiaries have up to two earning members in their families. About 14 per cent beneficiaries and about 8 per cent non-beneficiaries have three to four earning members. Just about less than 1 per cent of both the beneficiaries and non-beneficiaries have more than four earning members in their families.

Table 7: Number of Earning Members

Particular	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
1 to2	107 (82)	110 (85)	118 (91)	112 (86)	447 (86)	122 (94)	105 (81)	126 (97)	121 (93)	474 (91.15)
3 to 4	22 (17)	20 (15)	12 (9)	18 (14)	72 (13.8)	8 (6)	25 (19)	4 (3)	7 (5)	44 (8.46)
Above 4	1 (1)	0	0	0	1 (.2)	0	0	0	2 (2)	2 (.38)
Total	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

VIII. IMPACT ASSESSMENT

SEWA bank members are assessed in terms of amount of micro loan availed by them, its utilization, economic activities of respondents, below poverty line and on income level to measure the impact of Microfinance role in poverty alleviation.

1. Amount of Loans

Generally, as per Reserve Bank [22] guidelines after six months of the formation of SHG, the members can avail loan from the bank. The table 8 given below shows the amount of loan availed by the beneficiaries. It is found that 50 per cent beneficiaries have availed loan more than Rs.30,000, 36 per cent have taken up to Rs.20,001 to Rs.30,000 whereas only 12 per cent and 2 per cent beneficiaries have availed loan ranging between Rs.10,001 to Rs.20,000 and up to Rs.10,000. Very low percentage



beneficiaries are found availed loan up to Rs.10,000 only in Mehsana, Gandhinagar and Sabarkantha districts. Highest 72 per cent beneficiaries in Ahmedabad district have availed loan above Rs.30,000.

Table 8: Amount of Loan

Loan Amount (Rs.)	Beneficiaries				
	Mehsana	Ahmedabad	Gandhi Nagar	Sabarkantha	Gujarat
Up to 10000	4 (3)	0	1 (1)	3 (2)	8 (2)
10001-20000	20 (15)	4 (3)	23 (18)	14 (11)	61 (12)
20001-30000	55 (42)	32 (25)	41 (32)	64 (49)	192 (36)
Above 30000	51 (39)	94 (72)	65 (50)	49 (38)	259 (50)
	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries.

2. Utilization of Loan

Generally loans amount are given not only purpose of investing in only in productive activities. The beneficiary's respondents can also utilise loan amount for some other purposes. During the survey beneficiaries respondents were also asked about the different purposes for which they consume the loans. Table 9 shows the purpose of microfinance loan of the beneficiaries. A perusal of the table explains that most of the beneficiaries about 81 per cent have availed loan for productive purpose. Whereas consumption and household durables purposes constitute 1 per cent for both. 5 per cent beneficiaries in Ahmedabad district have availed loan for the purpose of repayment of debts. 4 per cent beneficiaries of Ahmedabad district have utilise loan in buying household durables. 4 per cent beneficiaries have utilised loan for both marriage and education of their children. 8 per cent beneficiaries have consumed loan in repair of their houses.

Table 9: Purpose of Microfinance Loan

Particular	Beneficiaries				
	Mehsana	Ahmedabad	Gandhinagar	Sabarkantha	Gujarat
Productive	116 (89)	78 (60)	115 (88)	110 (85)	419 (81)
Consumption	2 (2)	3 (2)	0	0	5 (1)
Household Durables	0	5 (4)	0	0	5 (1)
Marriage	4 (3)	10 (8)	5 (4)	3 (2)	22 (4)
Education	5 (4)	11 (8)	3 (2)	2 (2)	21 (4)
Repayment of debt	0	6 (5)	0	0	6 (1)
Repair house	3 (2)	17 (13)	7 (5)	15 (12)	42 (8)
Total	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries.

3. Economic Activities of Respondents

Microfinance programme has helped the beneficiaries to adopt various economic activities. With the help of microfinance loan, the beneficiaries have started small self-employment activities such as needle making, food making, iron work, stitching, dairy business, small shops etc. Table 10 explain the nature of economic activities undertaken by the beneficiaries of SEWA bank after availment of loan. A perusal of the table provides that agriculture is a popular activity among the sample respondents. Thirty one per cent beneficiaries and twenty eight per cent of the non-beneficiaries are involved in agricultural activity. Dairy business is the second popular activity. 14 per cent of the beneficiaries and 6 per cent non beneficiaries are engaged in dairy business. 13 per cent beneficiaries and 7 per cent non-beneficiaries are engaging themselves in casual work. 8 per cent, 3 per cent, 1 per cent, 2 per cent beneficiaries and non-beneficiaries are involved in stitching, food making, Grah Udyog and vegetable selling. However, it is observed that 5 per cent beneficiaries are not involved in any economic activities. They are managing home. The percentage of not involved in any activity in case of non-beneficiaries is found 24 per cent. It explains that large percentages of beneficiaries are involved in economic activity as compare to non-beneficiaries. Thereby it indicates the employability of the beneficiaries.

Table 10: Economic Activities of Respondents

Economic Activity	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.



Dairy Business	26 (20)	7 (5)	21 (16)	20 (15)	74 (14)	6 (5)	2 (2)	14 (11)	7 (5)	29 (6)
Agriculture	43 (33)	23 (18)	42 (32)	54 (42)	162 (31)	53 (41)	11 (8)	42 (32)	38 (29)	144 (28)
Tailoring, Stitching & Embroidery	14 (11)	5 (4)	8 (6)	13 (10)	40 (8)	15 (12)	5 (4)	8 (6)	11 (8)	39 (8)
Needle Making	5 (4)	0	3 (2)	3 (2)	11 (2)	0	0	0	0	0
Casual Labour/Work	12 (9)	38 (29)	9 (7)	11 (8)	70 (13)	8 (6)	15 (12)	8 (6)	3 (2)	34 (7)
Shop	3 (2)	14 (11)	20 (15)	7 (5)	44 (8)	8 (6)	14 (11)	14 (11)	16 (12)	52 (10)
Service (Job)	13 (10)	16 (12)	11 (8)	5 (4)	45 (9)	7 (5)	21 (16)	6 (5)	8 (6)	42 (8)
Others	1 (1)	7 (5)	5 (4)	2 (2)	15 (3)	5 (4)	5 (4)	4 (3)	2 (2)	16 (3)
Food Making	4 (3)	4 (3)	3 (2)	2 (2)	13 (3)	2 (2)	5 (4)	3 (2)	4 (3)	14 (3)
Grah Udyog	0	5 (4)	0	0	5 (1)	0	3 (2)	0	1 (1)	4 (1)
Vegetable Selling	2 (2)	4 (3)	2 (1)	0	8 (2)	0	6 (5)	2 (2)	1 (1)	9 (2)
Iron Work	1 (1)	3 (2)	1 (1)	1 (1)	6 (1)	1 (1)	4 (3)	3 (2)	2 (2)	10 (2)
Managing Home (Not involved in any activity)	6 (5)	4 (3)	5 (4)	12 (9)	27 (5)	25 (19)	39 (30)	26 (20)	37 (28)	127 (24)
	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

4. Impact of Microfinance on Below Poverty Line Households

Below Poverty line (BPL) households are the main target group of the microfinance programme. Therefore, the impact of this programme in terms of availment of loan has been assessed for the BPL households. The BPL families among the sample households are selected with the help of poverty line. As mentioned earlier, the poverty line is fixed Rs.5,500 per month for Gujarat for identifying poor. On the basis of this poverty line, the impact of microfinance in terms of availment of loan has been estimated on incidence of poverty, depth of poverty and severity of poverty.

Microfinance and Incidence of Poverty

The Head Count Index (HCI) is the most commonly used method for explaining the incidence of poverty. It measures the proportion of population that is poor. This is the share of the population whose income is below the absolutely defined poverty line, which in the present study is Rs.5,500 per month. The table 11 given below explains the status of beneficiaries and non-beneficiaries. The table provides that all the beneficiaries were not BPL before availing the microfinance loan. The sample study shows that number of BPL families availed microfinance loan in the study are 20, 12, 17 and 25 percent in Mehsana, Ahmedabad, Gandhinagar and Sabarkantha districts, respectively.

Table 11: Number of BPL Family based on HCI

Districts	Number of Beneficiaries	Number of Non-Beneficiaries	Beneficiaries		Non-Beneficiaries	Reduction in BPL Family	
			Availment of Loan			Before and After Analysis	Beneficiaries and Non-Beneficiaries Analysis
			Before	After			
Mehsana	130	130	26 (20)	4 (3)	33 (26)	22 [85]	29[88]
Ahmedabad	130	130	16 (12)	0	14 (11)	16 [100]	14 [100]
Gandhinagar	130	130	22 (17)	3 (2)	31 (24)	19 [86]	28 [90]
Sabarkantha	130	130	32 (25)	6 (5)	39 (30)	26 [81]	33[85]
Gujarat	520	520	96 (18)	13 (3)	117(23)	83 [15]	104 [20]

Source: Field survey 2015-16.

Note: (i) The figures given in parentheses indicate percentages of beneficiaries and non-beneficiaries BPL Family

(ii) The figures given in square brackets indicate percentage reduction in the number of BPL Family.

The before and after availment of microfinance loan by beneficiaries analysis explains that 18 per cent of the beneficiaries respondents families were BPL in Gujarat before availing the microfinance loan but after availing the loan their financial position have improved and the number of BPL families was reduced to 3 percent. So, on an average there is 15 per cent reduction in the number of BPL families. After availing the loan, 85, 86 and 81 per cent of the beneficiary’s families from Mehsana, Gandhinagar and Sabarkantha districts have crossed the poverty line respectively, However, this figure is found 100 per cent in case of Ahmedabad district. The table also shows a comparison between BPL beneficiary and Non-beneficiary family. It is observed that 23 per cent of non-beneficiary and 3 per cent of the beneficiary’s family are BPL. The numbers of BPL families of non-beneficiaries in the Mehsana, Ahmedabad, Gandhinagar and Sabarkantha districts are more than the BPL families of beneficiaries by 88, 100, 90 and 85 per cent respectively. It can be said that availment of microfinance loan has resulted in reducing the incidence of poverty among the beneficiary respondents.

An attempt has been made to measure the impact of availment of loan for both the below poverty line (BPL) and above poverty line (APL) sample respondent’s family separately. The availment of loan provided under the microfinance programme has shown an increase in the respondent’s family income. As a result, some of the BPL families have been able to cross the poverty line and shifted to the APL category. It is also observed that large numbers of beneficiaries were APL before availing the microfinance loan and their family income has increased. In this way, availment of microfinance loan has led to changes in the poverty situation of the beneficiaries as shown in Figure 1.

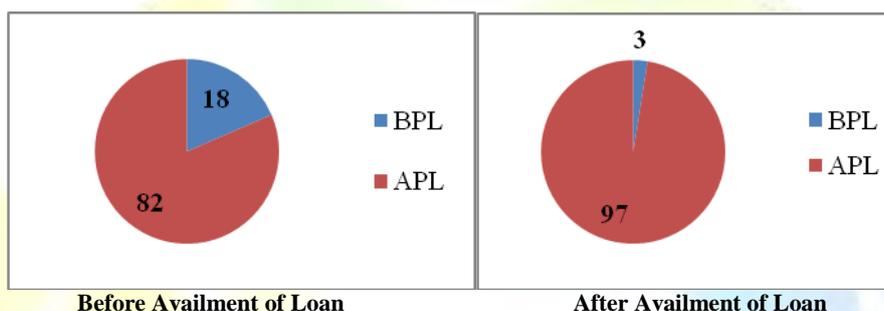


Figure1: Changes in Poverty Status from Before to after availment of loan

The table 12 reveals a change in the family incomes of BPL and APL respondent families separately. The table shows the impact of availment of microfinance loan on the level of income of beneficiary’s families.

Table 12: Impact of Availment of Loan on BPL

Changes in Poverty Status from before to after availment of Loan	Number of Beneficiaries	Family Income Before Availment of Loan	Family Income After Availment of Loan	Difference in Income	Percentage Increase in Income
Mehsana					
BPL → BPL	4 (3.07)	2950	4925	1975	66.95
BPL → APL	22 (84.62)	4836	7318	2482	51.32
APL → APL	104 (80.00)	6587	9553	2966	45.04
Total	130 (100)	6178	9032	2854	46.19
Ahmedabad					
BPL → BPL	0	0	0	0	0
BPL → APL	16 (12.31)	4638	9013	4375	94.34
APL → APL	114 (87.69)	9185	14442	5257	57.23
Total	130 (100)	8625	13774	5148	59.69
Gandhinagar					
BPL → BPL	3 (2.31)	3667	5000	1333	36.36
BPL → APL	19 (86.36)	4132	6137	2005	48.54
APL → APL	108 (83.07)	8211	10979	2768	33.71
Total	130 (100)	7510	10133	2623	34.93
Sabarkantha					

BPL → BPL	6 (4.62)	3500	4983	1483	42.38
BPL → APL	26 (81.25)	4662	7027	2365	50.74
APL → APL	98 (75.38)	6653	9913	3261	49.01
Total	130 (100)	6109	9108	3000	49.10
Gujarat					
BPL → BPL	13 (2.50)	3369	4969	1600	47.49
BPL → APL	83 (15.96)	4582	7283	2701	58.95
APL → APL	424 (81.54)	7714	11314	3600	46.66
Total	520 (100)	7106	10512	3406	47.94

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries.

It is observed that 3 per cent beneficiary in Mehsana district, 2 per cent in Gandhinagar and 5 per cent in Sabarkantha districts remained BPL even after availing the microfinance loan. However, no BPL was found in case of Ahmedabad district. It is also noticed that these BPL families were poor at the time of availing the loan and their family income were Rs. 2,950, 3,667 and 3,500 per month for Mehsana, Gandhinagar and Sabarkantha districts respectively. These beneficiaries could not cross the poverty line. It may be due to the fact that such beneficiaries might have consumed loan for non-productive purposes.

Table 13 depicts the percentage of loan utilized by the beneficiaries for different purposes. It is observed that 23 per cent beneficiaries utilized loans for productive purposes. So there was a minor increase in their income after availment of loan. But in Ahmedabad district, most of the BPL beneficiaries were close to the poverty line as their income was more than Rs.5,500 per month. Therefore, all these BPL beneficiaries crossed the poverty line after availing the loan.

Table 13: Percentage of Loans Utilized by the Beneficiaries for Different Purposes

Changes in Poverty Status from Before to After Availment of Loan	Production	Consumption	Household Durables	Marriage	Education	Repayment of Debt	Repair of House
BPL → BPL	23	15	0	15	8	0	38
BPL → APL	76	0	4	1	5	1	13
APL → APL	83	1	0	4	4	1	6

Source: Field survey 2015-16.

Some of the BPL families crossed the poverty line after availment of loan. 17 per cent beneficiary's family of Mehsana district, 12 per cent of Ahmedabad district, 15 per cent of Gandhinagar district and 20 per cent of Sabarkantha district crossed the poverty line after availing the loan. Overall, in Gujarat 16 per cent beneficiary's family cross the barrier of poverty line. The income level of these BPL families explains that they were close to poverty line at the time of availment of microfinance loan. The income of these BPL families were Rs.4,836, 4,638, 4,132 and 4,662 per month for Mehsana, Ahmedabad, Gandhinagar and Sabarkantha districts respectively. For Gujarat it is found Rs.4,582 per month. Thus availment of loan from Micro finance institution led to a significant increase in their income and shifted them above the poverty line. The increase in their income is 51.32 per cent, 94.34 per cent, 48.54 per cent and 50.74 per cent for Mehsana, Ahmedabad, Gandhinagar and Sabarkantha districts respectively. These poor families are the largest beneficiaries of the loan. Table 13 reveals that these BPL families utilized 76 per cent of the loans for productive purposes.

Table 12 also shows that the large number of the beneficiaries were APL at the time of availing loan. The percentage of these APL is 80, 87.69, 83.07, and 75.38 in Mehsana, Ahmedabad, Gandhinagar and Sabarkantha respectively. Before availment of loan the monthly income of these APL beneficiaries family is Rs.6,587, 9,185,8,211 and 6,653 per month in Mehsana, Ahmedabad, Gandhinagar and Sabarkantha respectively. However, after availment of loan, there was an increase in their monthly income of 45.04, 57.23, 33.71 and 49.01 per cent respectively. Therefore, in Gujarat the average number of APL beneficiaries is 81.54 per cent. After availment of loan the monthly income of these APL beneficiaries families is Rs.7,714 which increased by 46.66 per cent to reach at Rs. 11,314. These APL beneficiaries used 83 per cent of the bank loan for productive purposes as mentioned in Table 13.

Microfinance and Depth of Poverty (Poverty Gap Index)

Headcount index is simple to measure and understand but it does not consider the intensity of poverty. The Poverty Gap is a method for measuring the depth of poverty. Table 14 explains that value of poverty gap is Rs. 6,900 for the beneficiary's families after availment of loan as compared to Rs.1,03,900 before availment of loan. The value of poverty gap is Rs.1,36,500 for non-

beneficiaries families. It indicates that availment of loan has resulted in reducing the depth of poverty among the beneficiaries families.

Table 14: Value of Poverty Gap (in Rs.)

District	Value of Poverty Gap (in Rs.)			Reduction in Poverty Gap	
	Beneficiaries		Non-Beneficiaries	Before and After Availment of Loan	Beneficiaries and Non-Beneficiaries
	Before Availment	After Availment			
	A	B	C	D=A-B	E=C-B
Mehsana	24800	2300	29700	22500	27400
Ahmedabad	13800	0	14500	13800	14500
Gandhinagar	31500	1500	43400	30000	41900
Sabarkantha	33800	3100	48900	30700	45800
Gujarat	103900	6900	136500	97000	129600

Source: Field Survey 2015-16

A moderately popular measure of poverty is the poverty gap index, which adds up the extent to which individuals on average fall below the poverty line, and expresses it as a percentage of the poverty line. This measure is the mean proportionate poverty gap in the population (where the non-poor have zero poverty gap). It is calculated by adding up all the shortfalls of the poor (considering the non-poor have a zero shortfall) and dividing the total by the population. In the study, poverty gap index is calculated for the beneficiaries and non-beneficiaries family and the values are shown in Table 15. The table reveals that among the beneficiary's respondent's family the value of poverty gap was .0363 before availing the loan as compared to .0024 after availment of loan. Therefore, microfinance programme in terms of availment of loan led to the reduction in the value of poverty gap index. The difference in the value of poverty gap index before and after availment of loan is .0315, .0193, .0420 and .0429 for the beneficiaries of Mehsana, Ahmedabad, Gandhinagar and Sabarkantha districts respectively. The table also explains the difference in the value of poverty gap index between beneficiaries and non-beneficiaries. The difference is .0383, .0203, .0586 and .0641 for Mehsana, Ahmedabad, Gandhinagar and Sabarkantha districts respectively. Therefore, availment of loan reduces both the incidence as well as depth of poverty among the beneficiaries.

Table 15: Value of Poverty Gap Index

District	Value of Poverty Gap Index			Value of Poverty Gap Index	
	Beneficiaries		Non-Beneficiaries	Before and After Availment of Loan	Beneficiaries and Non-Beneficiaries
	Before Availment	After Availment			
Mehsana	0.0347	0.0032	0.0415	0.0315	0.0383
Ahmedabad	0.0193	0.0000	0.0203	0.0193	0.0203
Gandhinagar	0.0441	0.0021	0.0607	0.0420	0.0586
Sabarkantha	0.0473	0.0043	0.0684	0.0429	0.0641
Gujarat	0.0363	0.0024	0.0477	0.03392	0.04531

Source: Field Survey 2015-16

Microfinance and Severity of Poverty (Squared Poverty Gap Index)

Squared poverty gap index considers account not only the distance isolating the poor from the poverty line (the poverty gap), but also the inequality among the poor. This is defined as the average of the weighted-sum of the individual poverty gaps where the weights are proportionate poverty gaps themselves. The respondent's family falling quite below the poverty line as compared to those standing close to this line has been given higher weightage. Table 16 depicts the value of squared poverty gap index. It reveals that the severity of poverty is high among the beneficiary's respondents before availment of loan as compared to after availment of loan situation. The difference in the value of poverty severity among beneficiary's respondents before availment the loan is .0097, .0041, .0132 and .0124 for the beneficiary's respondent of Mehsana, Ahmedabad, Gandhinagar and Sabarkantha districts respectively. It is also observed that the severity of poverty is high among the non-beneficiaries while comparing with beneficiaries. Therefore, severity of poverty is reduced among the beneficiaries after availment of loan.

Table 16: Value of Squared Poverty Gap Index

District	Value of Poverty Gap Index			Value of Poverty Gap Index	
	Beneficiaries		Non-Beneficiaries	Before and After Availment of Loan	Beneficiaries and Non-Beneficiaries
	Before Availment	After Availment			
Mehsana	0.0101	0.0004	0.2243	0.0097	0.2239
Ahmedabad	0.0041	0.0000	0.0535	0.0041	0.0535
Gandhinagar	0.0134	0.0002	0.4790	0.0132	0.4788
Sabarkantha	0.0129	0.0005	0.6081	0.0124	0.6076
Gujarat	0.0101	0.0003	0.0143	0.0099	0.0141

Source: Field Survey 2015-16

Impact of Microfinance on Household Income of Beneficiaries

Household family income is sum of money received by all family members. The availment of loan from microfinance institutions increases the individual beneficiary's income, which subsequently improve the family income. The family income of beneficiaries before and after availment of loan is shown in table 17. It is evident from the table that increase in household family income is the highest in Ahmedabad district (59.69 per cent) followed by Sabarkantha (49.10 per cent); Mehsana (46.23) and Gandhinagar (34.93 per cent) after availment of loan. The household family income of non-beneficiaries is compared with beneficiary's household family income after availment of loan. The results are given in table 18. The table reflects that the highest increase in household income is found in Gandhinagar district (49 per cent) followed by Mehsana (47 per cent); Sabarkantha (32 per cent) and Ahmedabad district (5 per cent). The availment of loan from microfinance institutions supports its beneficiaries to contribute towards their family income in a more effective manner.

Table 17: Income of Beneficiaries Family Before and After Availment of Loan

District	Average Monthly Income of Beneficiaries Family (in Rs.)			
	Availment of Loan		Increment	
	Before	After	Amount	Percentage
Mehsana	6177	9032	2855	46.23
Ahmedabad	8625	13774	5148	59.69
Gandhinagar	7510	10133	2623	34.93
Sabarkantha	6109	9108	3000	49.10
Gujarat	7105	10512	3407	47.95

Source: Field survey 2015-16.

Table 18: Income of Household beneficiaries and Non Beneficiaries

District	Average Monthly Income of Respondents Family (in Rs.)			
	Beneficiaries	Non-Beneficiaries	Increment	
			Amount	Percentage
Mehsana	9032	6138	2894	47
Ahmedabad	13774	13127	647	5
Gandhinagar	10133	6787	3346	49
Sabarkantha	9108	6882	2227	32
Gujarat	10512	8233	2278	28

Source: Field survey 2015-16.

Table 19 shows the level of family income of beneficiaries before and after availment of loan. The table explains that majority of the beneficiary respondents, i.e 36 per cent belong to the income group Rs.6,000 to Rs.9,000, after availment of the loan. 26 per cent beneficiaries appear in the income group of Rs. above 12,000 after availment of loan. It is evident from the table that a beneficiary family income has improves after availment of loan and they have moved into higher income group.

Table 19: Level of Household Family Income

Family Income Level (Rs.)	Beneficiaries									
	Before Availment of Loan					After Availment of Loan				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.



Less than 3000	3 (2)	0	0	1 (1)	4 (1)	0	0	0	0	0
3000 - 6000	63 (48)	21 (16)	44 (34)	79 (61)	207 (40)	6 (5)	0	18 (14)	9 (7)	33 (6)
6000-9000	55 (42)	66 (51)	63 (48)	41 (32)	225 (43)	61 (47)	12 (9)	55 (42)	60 (46)	188 (36)
9000-12000	7 (5)	29 (22)	10 (8)	8 (6)	54 (10)	47 (36)	42 (32)	35 (27)	41 (32)	165 (32)
Above 12000	2 (2)	14 (11)	13 (10)	1 (1)	30 (6)	16 (12)	76 (58)	22 (17)	20 (15)	134 (26)
	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

The perusal table 20 depicts the comparison of non-beneficiaries family income with beneficiary’s income after availment of loan. It is observed that 36 and 38 per cent both beneficiaries and non-beneficiaries appear in the income group of Rs.6,000 to Rs.9,000. 32 per cent beneficiaries falls in the income group of Rs.9,000 to Rs.12,000 whereas it is found only 12 per cent in case of non-beneficiaries. 32 per cent non-beneficiaries belong to the income group of Rs.3,000 to Rs.6,000 whereas it is found only 6 per cent in case of beneficiaries. It indicates that the household family income of the beneficiaries is higher than that of the non-beneficiaries.

Table 20: Level of Household Family Income

Family Income Level	Beneficiaries after Availment of Loan					Non Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
Less than 3000	0	0	0	0	0	4 (3)	2 (2)	0	3 (2)	9 (2)
3000 - 6000	6 (5)	0	18 (14)	9 (7)	33 (6)	64 (49)	13 (10)	46 (35)	41 (32)	164 (32)
6000-9000	61 (47)	12 (9)	55 (42)	60 (46)	188 (36)	59 (45)	11 (8)	66 (51)	62 (48)	198 (38)
9000-12000	47 (36)	42 (32)	35 (27)	41 (32)	165 (32)	3 (2)	33 (25)	11 (8)	16 (12)	63 (12)
Above 12000	16 (12)	76 (58)	22 (17)	20 (15)	134 (26)	0	71 (55)	7 (5)	8 (6)	86 (17)
	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

Impact of Availment of Loan on Individual Beneficiaries

The beneficiary’s respondents are expected to consume the microfinance loan for productive activities, which increase their level of income. Two methods have been applied in order to determine the change in income: (i) The income of the beneficiaries is compared before and after availing the loan; (ii) The income of beneficiaries is compared with the non-beneficiaries.

(i) Changes in the income of the Individual Beneficiaries after availment of Loan:

Availment of loan from microfinance institutions i.e. SEWA bank, has improved the level of income of the beneficiaries. A perusal of Table 21 provides that the average income of the beneficiaries is Rs. 4,844 per month after availment as compared to only Rs. 1,993 per month before availment of loan, i.e., about 2.5 times increase in income after availment of loan over the before availment of loan.. This increase in income is found to be 142 per cent, 144 per cent, 136 per cent and 149 per cent per month for the beneficiaries of Mehsana, Ahmedabad, Gandhinagar and Sabarkantha respectively.

Table 21: Income of the Beneficiaries Before and After Availment of Loan

District	Beneficiaries				Value of 't'
	Before Availment of Loan	After Availment of Loan	Increment		
			Amount (Rs.)	Percentage	
Mehsana	1855	4491	2636	142	22.823*
Ahmedabad	2530	6179	3649	144	25.696*
Gandhinagar	1800	4257	2457	136	23.542*
Sabarkantha	1787	4448	2661	149	22.015*
Gujarat	1993	4844	2851	143	44.587*

Source: Field survey 2015-16.

*Significant at 1 per cent level of significance.

It is evident from the table that the increase in income is the highest in district Sabarkantha. A paired sample t-test is used to measure the significance of difference between the average incomes of the beneficiaries. The test shows that the difference between the average incomes of the beneficiaries before and after availment of loan is significantly different at one per cent level in all the districts. Critical value of t at 5 % level of significance is found 1.96454&at 1% level of significance is found 2.585.

Calculated value of t is more than the critical value so H0 is rejected and H1 is accepted and conclude that there is significant difference in average of the beneficiaries’ income due to availment of microfinance loan.

The microfinance programme enables its beneficiaries to earn income monthly. Table 22 depicts the data showing the level of income of individual beneficiaries before and after availment of loan. The table reveals that 18 per cent beneficiaries did not have any income before availment of loan but after availment of loan it is found only 4 per cent. It clearly indicates that 14 per cent beneficiaries have started earning monthly income. 38 per cent beneficiaries are found earning monthly income less than Rs. 2000; 35 per cent within the range of Rs.2001 to Rs.4000; 10 per cent within the range of Rs.4001 to Rs. Rs.6000 before availment of loan. It is also observed that none of the beneficiaries were earning monthly income more than Rs.6000 before availment of loan. However, the situation has improved after availment of loan.

Table 22: Income of Beneficiaries Before and After Availment of Loan

Monthly Income (Rs.)	Before Availment of Loan					After Availment of Loan				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
Zero	21 (16)	17 (13)	24 (18)	31 (24)	93 (18)	6 (5)	0	5 (4)	8 (6)	19 (4)
Less than 2000	59 (45)	35 (27)	53 (41)	49 (38)	196 (38)	6 (5)	7 (5)	10 (8)	5 (4)	28 (5)
2001-4000	45 (35)	50 (38)	46 (35)	40 (31)	181 (35)	48 (37)	23 (18)	45 (35)	56 (43)	172 (33)
4001-6000	5 (4)	28 (22)	7 (5)	10 (8)	50 (10)	50 (38)	38 (29)	42 (32)	39 (30)	169 (33)
6001-8000	0	0	0	0	0	16 (12)	31 (24)	22 (17)	13 (10)	82 (16)
8001-10000	0	0	0	0	0	4 (3)	28 (22)	6 (5)	9 (7)	47 (9)
Above 10000	0	0	0	0	0	0	3 (2)	0	0	3 (1)
Total	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

(ii) Change in Income of the Individual Beneficiaries and Non-Beneficiaries

The income of the individual beneficiaries is compared with the individual incomes of non-beneficiaries. It is evident from Table 23 that average income of non-beneficiaries is Rs.2,088 per month as compared to Rs. 4,844 per month for the beneficiaries. It shows that 133 per cent increase in the monthly income of beneficiaries over the income of non-beneficiaries. The highest increase in the monthly income of the beneficiaries as compared to non-beneficiaries was found in Mehsana district followed by Sabarkantha, Ahmedabad and Gandhinagar district. The significance of difference between the average incomes of the beneficiaries and non-beneficiaries is measured with t-test (Two-Sample Assuming Equal Variances). This test shows that the differences are significant both at 1% and 5 per cent level of significance. Thus, availment of micro finance has helped the beneficiaries to increase their monthly income. Critical value of t at 5 % level of significance is found 1.9692 and at 1% level of significance is found 2.5805. Calculated value of t is more than the critical value so H0 is rejected and H1 is accepted and conclude that there is significant difference in average income of those who availed MF as against those who did not avail.

Table 23: Income of the Beneficiaries and Non-Beneficiaries

District	Average Income (in Rs.)				Value of 't'
	Beneficiaries	Non-Beneficiaries	Increment		
			Amount	Percentage	
Mehsana	4491	1359	3132	230	17.199*
Ahmedabad	6179	2622	3557	136	8.3126*
Gandhinagar	4257	2702	1555	58	6.0024*
Sabarkantha	4448	1667	2781	167	11.993*
Gujarat	4844	2088	2781	133	18.265*

Source: Field survey 2015-16.

*Significant at 1 per cent level of significance.

The perusal of table 24 explains the comparison of beneficiary’s income after availment of loan and non-beneficiaries income. It is evident that 26 per cent non-beneficiaries did not have any monthly income whereas it is found 4 per cent in case of beneficiaries after availment. It explains that 22 per cent beneficiaries have generated monthly income by getting employment opportunities.

Table 24: Beneficiaries after and Non Beneficiaries Respondent Income

Monthly Income (Rs.)	Beneficiaries					Non-Beneficiaries				
	Meh.	Ahm.	Gan.	Sab.	Guj.	Meh.	Ahm.	Gan.	Sab.	Guj.
Zero	6 (5)	0	5 (4)	8(6)	19 (4)	31 (24)	39 (30)	27 (21)	37 (28)	134 (26)
Less than 2000	6 (5)	7 (5)	10 (8)	5 (4)	28 (5)	77 (59)	16 (12)	19 (15)	56 (43)	168 (32)
2001-4000	48 (37)	23 (18)	45 (35)	56 (43)	172 (33)	19 (15)	35 (27)	50 (38)	24 (18)	128 (25)
4001-6000	50 (38)	38 (29)	42 (32)	39 (30)	169 (33)	3 (2)	21 (16)	24 (18)	8(6)	56 (11)
6001-8000	16 (12)	31 (24)	22 (17)	13 (10)	82 (16)	0	9 (7)	9 (7)	5 (4)	23 (4)
8001-10000	4(3)	28 (22)	6(5)	9 (7)	47 (9)	0	6 (5)	1 (1)	0	7 (1)
Above 10000	0	3 (2)	0	0	3 (1)	0	4 (3)	0	0	4 (1)
Total	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)	130 (100)	130 (100)	130 (100)	130 (100)	520 (100)

Source: Field survey 2015-16.

Note: The figures given in parentheses indicate percentages of beneficiaries and Non-beneficiaries.

LEGENDS: Meh. = Mehsana, Ahm = Ahmedabad, Gan. = Gandhinagar, Sab. = Sabarkantha, Guj. = Gujarat

32 per cent non-beneficiaries were earning monthly income less than Rs. 2,000; 25 per cent within the range of Rs.2,001 to Rs.4,000; 11 per cent within the range of Rs.4,001 to Rs.6,000; 4 per cent within the range of Rs.6,001 to Rs.8001; and 1 per cent non-beneficiaries were earning within the range of Rs.8,001 to Rs.10,000 and above Rs.10,000 respectively. It is also observed that beneficiaries monthly income have increased while comparing with non-beneficiaries income. The studies conducted by Dunn & Arbuckle[23] (2001), Asian Development Bank[24] (2007), K. Sivachithappa[25] (2013), Habib, M., Jubba, C.[26] (2015), also show the similar results of increase in income of the beneficiaries after availment of loan as compared to their income before availment of loan.

IX. CONCLUSION

Present research paper focused on the impact of microfinance in terms of availment of loan on poverty and income. Impact on poverty is measured through changes in individual and family incomes. The analysis of primary data explained that income of the beneficiaries has increased who have availed loan from microfinance institutions. The studies undertaken by Dunn & Arbuckle [23] (2001), Kondo[27](2007), Deepti Bansal[5] (2011) have also produced similar results showing the impact of microfinance programme on the family income. On the basis of Head Count ratio, it is found that 18 per cent of the beneficiaries household were BPL in Gujarat before availing the microfinance loan but after availing the loan their financial position have improved and the number of BPL household was reduced to 3 percent. So, on an average there is 15 per cent reduction in the number of BPL household. Headcount index is simple to calculate and understand but it does not consider the intensity of poverty. The Poverty Gap is a calculated for measuring the depth of poverty. The value of poverty gap is found Rs. 6,900 for the beneficiary’s families after availment of loan as compared to Rs.1,03,900 before availment of loan. The value of poverty gap is Rs.1,36,500 for non-beneficiaries families. It explained that availment of loan has resulted in reducing the depth of poverty among the beneficiaries families. Therefore, availment of loan reduces both the incidence as well as depth of poverty among the beneficiaries. It is also observed that the severity of poverty is high among the non-beneficiaries while comparing with beneficiaries. Therefore, severity of poverty is reduced among the beneficiaries after availment of loan.

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