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Sustainable Livelihood and Socio-economic Status: A Study on the Role of Microfinance in Sonitpur District of Assam

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Abstract

In this study, focus has been given on the role played by micro finance in supporting the livelihood generating activities by helping in acquiring the livelihood assets. Further, the changes in the socio-economic status of the beneficiaries of micro finance have also been studied. This study has been conducted in two randomly selected development blocks of Sonitpur district in Assam viz. Balipara development block and Rangapara development block. A sampling size of 400 units has been taken up for collecting the primary data required for the study, consisting of the members of the Self-Help Groups (SHGs) as the sampling unit. The collected primary data have been analyzed with the help of the Statistical Package for the Social Sciences (SPSS) software, have shown positive results regarding acquiring the livelihood assets by the rural folk with the help of micro finance. Moreover, Social Status Index and Economic Status Index has also been computed to study the socio-economic changes among the beneficiaries of micro finance.

Keywords: Sustainable Livelihood, Social Status, Economic Status, Micro Finance.

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Introduction

This paper considers the way in which microfinance plays a role in earning sustainable livelihood, by helping people acquire the requisite livelihood assets.The Oxford dictionary defines livelihood as 'a means of earning money in order to live'. In a classic way Chambers and Conway (1991) proposed the following composite definition of a sustainable rural livelihood:

A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term.

The approach of sustainable livelihood has been taken up by development agencies since 1990s, which serves a way to lower vulnerability and poverty by undertaking livelihood generating activities (Scoones, 1998). The concept of endowments, entitlements and capabilities given by Amartya Sen which have thrown light on how economically weak people can adopt different livelihood options by accessing resources have also influenced the concept of sustainable livelihood (Scoones 1998, Carney 2003).A wide range of resources including tangible and intangible, especially the institutional arrangements are covered in the term endowment, allows the beneficiaries to take-up different livelihood activities. The capabilities of people relates to the valued life options which they choose (Alkire, 2002).

The concept of sustainable livelihood may be defined in different ways, but some authors have put arguments that the approach to attain sustainable livelihood should not be rigid, which means it should not follow any institutional specific design (Ellis 2000, Hinshelwood, 2003).

The following framework of sustainable livelihood gives the basic idea of the key features to be looked into while developing a sustainable livelihood framework:

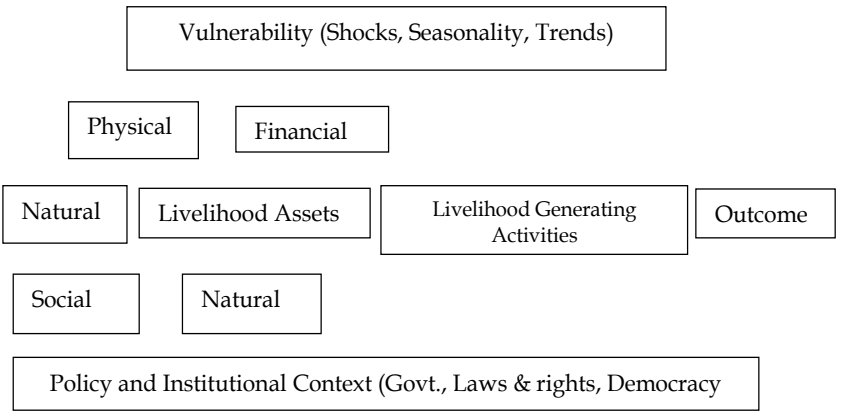

Diagram: Sustainable Livelihood Framework

Source: Adopted from Scoones (1998), Ellis(2000) and Forsyth (2007)

The vulnerability refers to the critical trends, shocks and seasonality which affects the available livelihood assets. People have limited or no control over these. Livelihood assets refers to the capital available with the people which altogether help them to take-up the livelihood generating activities. These capitals mainly refer to the five core assets which are human, natural, physical, financial and social capital. These capital invested in livelihood generating activities helps people to achieve the livelihood outcomes or outputs in the form of income. This leads to many other things which affect their socio- economic status.

In spite of advances, the sustainable livelihood approaches have been criticized as an insufficiently developed framework without having right approaches in formulation (Baumann 2000, Carney 2003). Some critics have pointed out that diagram of the sustainable livelihood framework which gives impetus on institutional design and livelihood assets (such as physical, natural etc.) has made it a "confusing diagram" and everybody must realize that community work is not easily captured in this diagram. (Hinshelwood, 2003)

Review of literature

The Guidance Note on Recovery: Livelihood (2010) was developed as collaboration between the International Recovery Platform (IRP) and United Nation Development Programme India (UNDP-India)

has pointed out the livelihood assets which, supports livelihood generation as human, social, physical, financial and natural capital.

Micro finance is a tool which acts as an input for ensuring sustainable livelihood to the poor people of the world. There is an important linkage between micro finance and sustainable livelihood (Abul Bashar *et. al.,* 2011)

In spite of having an extensive banking infrastructure, 70% of the rural population do not have access to formal financing. Micro finance has played an important role to bring the population closure to avail financial services. By hosting maximum number of micro finance model in India, micro finance sector has improved the standard of living of the rural folk (Pema Lama *et. al.,* 2011).

Inclusive growth takes place when all the sectors of the society have equal opportunity and access to finance. Livelihood is an important area which can deliver immense benefit to the self-help group member if the micro finance is tuned in the right direction (K.S. Srinivasa Rao *et. al.,* 2011)

Objectives of the study

The objectives of these research papers are as follows:

i. To study the livelihood assets owned by the beneficiaries of micro finance.

Sustainable livelihood activities undertaken by the beneficiaries substantially depend upon the livelihood assets owned by them. So, this study has focused on the livelihood assets owned by the beneficiaries with the help of micro finance which in turn help them to get themselves engaged in different livelihood generating activities.

ii. To study the changes in the socio-economic status of the beneficiaries, if any.

Further, this study will also focus on the change of socio-economic status of the beneficiaries. The changes are calculated by computing Social Status Index and Economic Status Index.

Research Methodology of the study

The descriptive research design which involves studying the state of affairs as it exists using a range of qualitative and quantitative techniques of data collection have been used for the study. The primary data were collected by using a self-developed questionnaire for getting the information from respondents. The questionnaire was developed by using 5 point Likert Scale to measure the attributes of opinion. The study has been conducted in two randomly selected community development blocks out of the 14 development blocks of Sonitpur district in Assam. Secondary data pertaining to the research have been collected from different sources including books, journals, websites, reports of different institutions etc.

Selection of sample: The population of the study comprises of the registered members of the Self-help group of Balipara and Rangapara Development blocks, which were 41,280 and 11050 respectively for the financial year 2014-15 and 2015-16. To calculate the sample size following factors need to be considered:

- **Population size:** The size of the population affects the size of the sample, however in case of population size being more than 20,000 the difference in the sample size is not much.
- **Margin of Error (Confidence Interval):** No sample is perfect and margin of error indicates the percentage of error that the researcher allows. The margin of error is taken at 0.05 for this research study.
- **Confidence level:** Confidence level refers to the percentage of all possible samples that can be expected to include the true population parameter. The confidence level is taken at 95% for this research study.
- **Standard of deviation:** Standard deviation refers to the variance expected in the responses. Standard deviation is taken as .5 in this research study.

Chart for required sample size with different population sizes at different confidence level:

Table: Sample Size

	Margin of error			Confidence level		
Population	10%	5%	1%	90%	95%	99%
10	50	80	99	74	80	88
500	81	218	476	176	218	286
1000	88	278	906	215	278	400
10000	96	370	4900	264	370	623
100000	96	383	8763	270	383	660
1000000+	97	384	9513	271	384	664

Source: www.checkmarket.com

Confidence level corresponds to a Z-score, and is a constant value needed for the equation. The value of Z score at 95% confidence level is 1.96. Considering the above mentioned factors the sample size was calculated using the following formula:

Sample size = n = { $z^2 * \sigma^2 * [N / (N - 1)] } / { ME^2 + [z^2 * \sigma^2 / (N - 1)] }$

Where, n= sample size; z = z score; N= population size; ME = Margin of error;

σ = std. deviation.

Therefore,

$n = [(1.96)^2 * 0.5^2 * \{52330/ (52330-1)\}] / [0.05^2 + \{(1.96)^2 * 0.5^2/ (52330 -1)\}]$

n = 3.8416 *.25 * 1.000019 / .0025 + 1.835

n = 382.67 or 383 (Approx.)

This is after keeping in mind that some respondents won't submit responses within prescribed time limit and some questionnaire may be returned without having all the data filled. So, the researcher decided to collect data from 430 samples. The duly filled questionnaire of 400 respondents have been evaluated for the purpose of the study.

- **Data Analysis:** The researcher has used SPSS as main analysis software package. The statistical techniques used for analysis in this research study are as follows:

I. **Descriptive Analysis:** It is designed to demonstrate the distribution of the variables by using the frequencies and cross-tabs.

II. **Analysis of Variance (ANOVA):** This technique helps to draw inferences whether the difference in the means for population are attributed to some specific cause or attributed by chance.

Hypothesis and research query for the study

Hypothesis: The hypothesis formulated for the purpose of study is as follows:

H_0: There is no significant difference between the livelihood assets owned by the beneficiaries and the livelihood activities undertaken by them.

H_1: There is significant difference between the livelihood assets owned by the beneficiaries and the livelihood activities undertaken by them.

Research query: The research query for the purpose of study is as follows:

Whether there is any change in the socio-economic status of the beneficiaries after availing micro finance?

Data Analysis, interpretation and results

Test of reliability:

The results of Cronbach Alpha (α), measure of internal consistency of a test, were interpreted to test the reliability of the collected primary data. The values of this test are interpreted as follows:

≥0.9 – Excellent; ≥ 0.8 – Good; ≥ 0.7 – Acceptable; ≥ 0.6 – Questionable; ≥ 0.5 – Poor and ≤ 0.5 – Unacceptable. According to this, Cronbach's Alpha measuring the internal consistency for Socio-economic changes is Acceptable (George and Mallery, 2003; Gliem and Gliem, 2003).

Table 1 Reliability Statistics:

Reliability Statistics		
	Cronbach's Alpha	N of Items
Socio-economic changes	.771	14

Source: Self compiled (by using SPSS)

The test results shows that reliability statistics is .771 which is ≥ 0.7 and the collected data fall in the 'acceptable' category.

Demographic profile of the respondents:

The demographic profile of the respondents consisting of the beneficiaries of micro finance have been shown in the following table:

Table: Demographic profile of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Age	Upto 25	46	11.5	11.5	11.5
	26 – 35	133	33.2	33.2	44.8
	36 – 45	157	39.2	39.2	84.0
	Above 45	64	16.0	16.0	100.0
Education	Illiterate	33	8.2	8.2	8.2
	Primary	71	17.8	17.8	26.0
	Middle	144	36.0	36.0	62.0
	High	113	28.2	28.2	90.2
	Others	39	9.8	9.8	100.0
Family Pattern	Nuclear	219	54.8	54.8	54.8
	Joint	181	45.2	45.2	100.0
Family Size	1 to 3	19	4.8	4.8	4.8
	4 to 6	182	45.5	45.5	50.2
	7 and above	199	49.8	49.8	100.0

Source: Field Survey

The above table shows the demographic profile of the female beneficiaries of micro finance. The highest number of beneficiaries (39.2%) belongs to the age group of 36 to 45 and majority of them have studied up to middle level (36%). Moreover, the size of the family of almost all the beneficiaries (95.3%) is more than 4 members. A major portion of these women beneficiaries belongs to nuclear family group.

Hypothesis testing

This section of analysis is done to test the following hypotheses:

H_0: There is no significant difference between the livelihood assets owned by the beneficiaries and the livelihood activities undertaken by them.

H_1: There is significant difference between the livelihood assets owned by the beneficiaries and the livelihood activities undertaken by them.

Table- One-way ANOVA for livelihood assets and livelihood generating activities

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
1Land	Between Groups	2.331	8	.291	2.486	.012
	Within Groups	45.829	391	.117		
	Total	48.160	399			
2Water supply	Between Groups	2.367	8	.296	2.065	.038
	Within Groups	56.030	391	.143		
	Total	58.398	399			
3Fruit bearing tree	Between Groups	2.306	8	.288	2.057	.039
	Within Groups	54.791	391	.140		
	Total	57.097	399			
4 Fishery	Between Groups	1.243	8	.155	3.256	.001
	Within Groups	18.655	391	.048		
	Total	19.898	399			
5 Bicycle	Between Groups	5.978	8	.747	3.745	.000
	Within Groups	78.022	391	.200		
	Total	84.000	399			
6 Livestock	Between Groups	3.585	8	.448	2.137	.032

	Within Groups	81.975	391	.210		
	Total	85.560	399			
7 Improved agricultural equipment	Between Groups	.591	8	.074	1.218	.287
	Within Groups	23.719	391	.061		
	Total	24.310	399			
8 Savings	Between Groups	.431	8	.054	.348	.946
	Within Groups	60.506	391	.155		
	Total	60.938	399			
9 Credit facility	Between Groups	.522	8	.065	1.001	.435
	Within Groups	25.518	391	.065		
	Total	26.040	399			
10 Salary or wage	Between Groups	5.227	8	.653	2.771	.005
	Within Groups	92.213	391	.236		
	Total	97.440	399			

Source: Primary data (SPSS)

Test results

From the above table it has been found that significant differences ($p<0.05$) between the livelihood assets exist for item no.1, 2, 3, 4, 5, 6 and 10. Item 7, 8 and 9 reported no significant difference as P value is > 0.05. Thus it can be concluded that for items 1, 2, 3, 4, 5, 6 and 10 null (H_0) is rejected while for the rest of the items, it can be concluded that there were no statistically significant differences as reported by one-way ANOVA.

Further by using descriptive analysis of cross-tabulation the following table was prepared:

Table: Livelihood Assets * Livelihood Generating Activities Cross tabulation

Count		Activities									
		Agriculture	Horticulture	Pig rearing	Poultry farming	Fishery	Weaving	Bamboo & cane work	Small scale business	others	Total
Land	Y	8	7	6	6	5	5	1	15	3	56
	N	91	9	25	34	21	36	16	73	39	344
Total		99	16	31	40	26	41	17	88	42	400
Water	Y	72	10	27	33	24	37	14	77	35	329
Supply	N	27	6	4	7	2	4	3	11	7	71
Total		99	16	31	40	26	41	17	88	42	400
Fruit	Y	22	5	7	6	5	5	0	18	1	69
bearing tree	N	77	11	24	34	21	36	17	70	41	331
Total		99	16	31	40	26	41	17	88	42	400
Fishery	Y	2	0	2	1	0	7	3	2	4	21
	N	97	16	29	39	26	34	14	86	38	379
Total		99	16	31	40	26	41	17	88	42	400
Bicycle	Y	56	5	22	30	21	34	14	65	33	280
	N	43	11	9	10	5	7	3	23	9	120
Total		99	16	31	40	26	41	17	88	42	400
Livestock	Y	55	9	21	28	21	34	13	63	32	276
	N	44	7	10	12	5	7	4	25	10	124
Total		99	16	31	40	26	41	17	88	42	400
Improved	Y	4	3	2	3	4	1	1	6	2	26
equipment	N	95	13	29	37	22	40	16	82	40	374
Total		99	16	31	40	26	41	17	88	42	400
Savings	Y	81	15	26	32	20	32	13	71	35	325
	N	18	1	5	8	6	9	4	17	7	75
Total		99	16	31	40	26	41	17	88	42	400
Credit	Y	91	16	29	39	25	36	14	82	40	372
Facility	N	8	0	2	1	1	5	3	6	2	28
Total		99	16	31	40	26	41	17	88	42	400
Salary	Y	44	5	20	22	18	29	13	52	29	232
Wage	N	55	11	11	18	8	12	4	36	13	168
Total		99	16	31	40	26	41	17	88	42	400

Source: Field Survey

The cross tabulation further validates the results of the ANOVA test. Because, in the test results it have been seen that there exist no significant difference between the savings, credit facilities and the livelihood generating activities undertaken by the beneficiaries. Here also the case is same, the beneficiaries who have savings and credit facilities have undertaken different activities, which means that they have not confined themselves to one activity. They can opt for any livelihood generating activity which they think is suitable for them.

Further, the table shows that the beneficiaries have scope for getting themselves engaged in any other livelihood generating activity along with their primary activity. The substitute activity would give them more support to make their living better. For example, 99 of the respondents as shown in the second column (land) are earning their livelihood through agricultural activities but only 8 of them have agricultural land. Since, they have other livelihood assets with them (e.g. 55 have livestock), so they may engage in other activities for which they have the necessary resources.

According to Juan Somavia*, ILO Director- General* Social Status Index (SSI) and Economic Status Index (ESI) "Microcredit plays a critical role in empowering women, helps deliver newfound respect, independence, and participation for women in their communities and in their households" *(*Mayoux, 2000*)*

The most important thing to mention here in this study is that the beneficiaries of micro finance studied are all women. Women constitute seventy percent of the world's poor. Still, conventionally, the financing institutions of the formal sector prefer to lend fund to the males and other businesses. So, women are the most neglected in getting finance. So, microfinance is a major support system to them as it helps them to borrow money and use this borrowed fund to utilise in earning a sustainable livelihood. It empowers them and makes them to contribute in the economic growth of the nation in general and in growth of their families and communities in particular (ILO, Geneva).

In this study, the researcher has opted to calculate the changes in the socio-economic status of the beneficiaries by computing the

Social Change Index and Economic Change Index. These indexes were used by Islam *et. al.* (2008)in their study on poverty alleviation of rural women in Bangladesh and by Ahmed *et. al.* (2011) to study the impact of micro-credit programme on changing the livelihood status of rural women. The indexes are computed as follows:

Social Status Index (SSI)

The Social Status Index is calculated by using the following formula:

$$\textbf{Social Status Index (SSI)} = \sum \frac{wifi}{n}$$

where,

wi= Weight
fi = No. of Respondents
n = Total Respondents

The responses of beneficiaries were collected on a five point Likert scale where 0 representing strongly disagree and 4 representing strongly agree. There was a total of seven questions for recording the changes in the social status which focused on improvement in the standard of living, social status, competency level, self-confidence, self-reliance, literacy and communication and awareness related to mutual help. The detailed frequencies have been shown in the table below:

Table: Frequencies for Computing Social Status Index

QUERY-1	QUERY-2	QUERY-3	QUERY-4	QUERY-5	QUERY-6	QUERY-7	TOTAL
9	1	37		8	14	7	82
28	51	75	42	19	26	48	289
88	120	183	215	124	211	116	1057
208	185	79	116	189	112	139	1028
67	43	26	21	60	37	90	344

Source: Field survey

Here,

Query 1: Micro finance helps in improving the standard of living.
Query 2: Micro finance helps in improving social status.
Query 3: Micro finance helps in improving competency level.
Query 4: Micro finance and membership in self-help group creates better awareness about mutual help.
Query 5: Micro finance and membership in self-help group creates self-confidence to face problems
Query 6: Micro finance and membership in self-help group creates awareness about self-reliance
Query7: Micro finance and membership in self-help group improves literacy and communication skills.

For investigative purpose of the study the perception of the respondents were attributed with the following scores:

Table: Scoring for Social status

Opinion For Social Status	Scoring System
Strongly Disagree	0
Disagree	1
Neither Agree Or Disagree	2
Agree	3
Strongly Agree	4

Source: Compiled by the author

The table below shows the computation of Social Status Index:

Table: Computation of Social Status Index

Opinion For Social Status	Weight (Wi)	Number Of Respondents (Fi)	Social Status Index
Strongly Disagree	0	82	
Disagree	1	289	
Neither Agree Or Disagree	2	1057	61.28%
Agree	3	1028	
Strongly Agree	4	344	

(Source: Field Survey)

$$SSI = \frac{(0*82)+(1*289)+(2*1057)+(3*1028)+(4*344)}{(400*7*4)} X\ 100$$

= 61.28%

The tableshows thatthe highest number of responses (i.e. 1028+344=1372) have been recorded as 'agree', which means the respondents are agreeing with the fact that there is an improvement in their social status by availing micro finance. The results of weighted average index shows that the improvement in numerical term is by 61.28%.

Economic Status Index (ESI)

The Economic Status Index is calculated by using the following formula:

$$\text{Economic Status Index (ESI)} = \sum \frac{wifi}{n}$$

where,

wi = Weight

fi = No. of Respondents

n = Total Respondents

The responses of beneficiaries were collected on five point Likert scale where 0 representing strongly disagree and 4 representing strongly agree. There were seven questions in total for recording the changes in the economic status which focusedon improvement in the economic independency, spending capacity, income, savings, employment, increase in the value of assets and improvement in thrift management.The detailed frequencies have been shown in the table below:

Table: Frequencies for Computing Economic Status Index

QUERY-1	QUERY-2	QUERY-3	QUERY-4	QUERY-5	QUERY-6	QUERY-7	TOTAL
2	7	15	27	8	15	25	99
21	28	40	49	32	25	36	231
47	99	94	133	114	202	215	904
242	215	175	134	150	124	89	1129
88	51	76	57	96	34	35	437

(Source: Field Survey)

Here,

Query 1: Micro finance helps in improving economic independence

Query 2: Micro finance helps in improving capacity to spend more

Query 3: Micro finance helps in improving the value of assets

Query 4: Micro finance helps in improving the income

Query 5: Micro finance helps in improving the savings

Query 6: Micro finance helps in generating employment

Query 7: Micro finance helps in learning thrift management

For investigative purpose of the study the perception of the respondents were attributed with the following scores:

Table: Scoring for Economic status

Opinion For Social Status	Scoring System
Strongly Disagree	0
Disagree	1
Neither Agree Or Disagree	2
Agree	3
Strongly Agree	4

Source: Compiled by the author

The table below shows the computation of Economic Status Index:

Table: Computation of Economic Status Index

Opinion For Social Status	Weight (Wi)	Number of Respondents (Fi)	Economic Status Index
Strongly Disagree	0	99	
Disagree	1	231	
Neither Agree Or Disagree	2	904	64.05%
Agree	3	1129	
Strongly Agree	4	437	

$$ESI=\frac{(0*99)+(1*231)+(2*904)+(3*1129)+(4*437)}{(400*7*4)} X\ 100= 64.05\%$$

The table shows that the beneficiaries have improved their economic status by 64.05% by availing micro finance. The respondents have given overall positive response to the queries

related to improvement in their economic dependency, improvement in income etc.

Conclusion

Micro finance has played an important role in the lives of the weaker section of the society by becoming an accessible input to own livelihood assets and to invest these livelihood assets for generating livelihood. Micro finance has helped overcome the challenges pertaining to accessing formal financing by rural folks, especially women. The Sustainable Livelihood Framework explains the different aspects related to earning sustainable livelihood, which includes the vulnerability (climate change, natural disaster etc.) in the context of livelihood, the livelihood assets (natural, physical, financial, social and human), livelihood generating activities, outcomes (income) and the external important factors like policies of government, different institutions etc.

The analysis of primary data has brought forth positive results, which show that micro finance not only plays an indispensable role in acquiring livelihood assets but also in improving their socio-economic status. The study was conducted in a rural area in the state of Assam and it has been shown that micro finance still has immense scope to make life better for the weaker section of the society by helping them make their livelihood sustainable.

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