



Green Microfinance, factors driving women empowerment and benefits derived from SHGs – A study w.r.t. Bengaluru Rural District

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Abstract

Purpose : The major intention behind the present work is to probe and know how far demographics percussion on the microfinance activities. These microfinance related activities includes green microfinance initiatives undertaken, benefits derived, factors determining women empowerment. The study collected data on members green activities, benefits derived and drivers of women empowerment. Bengaluru rural district very much impacted by the rattling urbanisation and development in some sub-districts over taken the development of Bengaluru Urban district. Since independence the government sponsored programmes could not trickle down to the level of needy rural poor and vulnerable. Further, gender inequality can be traced to poverty, which in its most general sense is inadequate or lack of access to basic necessities of life. Microfinance programmes as a puissant tool of poverty alleviation, and creates financial literacy and overall development of SHG members.

Methodology / Design : A well drafted questionnaire was managed as schedule in order to avoid delay, incompleteness and haunting Covid-19 pandemic norms. A total 216 questionnaires were in the hand and out of this 200 found to be useful forming 94% success rate. Chi-square, contingency co-efficient, ANOVA, Kendall's co-efficient concordance and weighted arithmetic mean were performed.

Findings : The study reveals about the presence significant and high degree of relationship between socio economic characteristics and factors deciding women empowerment, green microfinance initiatives undertaken, and benefit of microfinance. Green micro finance activities includes encourages women empowerment, encourages recycling activities and reuse of resources, and fostering green opportunities. The study also reveals about drivers of women empowerment like more employment opportunities, enhanced savings and involvement in local policies etc., The benefits of microfinance include enhances income and savings, free from money lenders and improved health, sanitation and children education.

Keywords : Empowerment, benefits, green microfinance, local politics, rural area development, benefits.

Introduction :

Financial literacy plays an instrumental role in the women's empowerment and green microfinance. Microfinance is a viable alternative to poverty alleviation in rural areas which has been probed by innumerable researchers (Atahan et al. 2021; Garcia-Perez et al. 2020 Rahman, et al. 2018; Yunus, M. 1998). Microfinance is a powerful tool of empowering the rural women who still needs due care and development. Women empowerment brings justice to women avoiding any kind of discrimination, permits women to context and to take up green microfinance initiatives. Microfinance is a type of service provided to the low income individuals or groups who otherwise would have no access to financial services (Julia Kagam, 2021). Various research scholars like Mayoux, (1999), Hashemi et al. (1990); Khondker, (2018) have stated that participation in the microfinance programmes empower the women socially, politically and economically and thereby improvement in the status of women is found within the household and outside. Microfinance positively contributed to the overall growth in standards of living and livelihood activities (Madhubalaswamy, 2014). Poverty and unemployment are the two challenging road blocks in the attainment of sustainable lifestyle along with savings and investments and microfinance allow to avail the loan that assist them towards financial independence and growth (Sanjeev Kumar Dubay, 2015). SHGs help in capacity building, training and participatory approach in the planning of self employment ventures. SHGs provide a common place for the promotion of activities in clusters and the provision of infrastructure facilities, technology, credit and marketing support for women (Sethi & Atibudhi, 2001; Borbara Mohanta, 2001; Namboodri & Shiyani 2001; Sharma, 2001).

Green microfinance incorporates all microfinance activities to meet the impact of climate change, promotes the concept of green financing. It refers broadly to the practice of weaving the principles of environmental sustainability into duly operations of MFIs and promoting environment friendly practices and solutions. The essential green practices may be, managing internal environmental risk, managing external environment risk; fostering green opportunities and adopting a formal environmental strategy.

The global microfinance industry is worth over INR 8.90 trillion with the loan disbursement which is growing at an average annual rate of 11.5% over the last 5 years (Microfinance Barometer Report, 2019). Out of the borrowers 80% constitute women and 65% of them pertain to rural areas. South Asia dominated as a leading market in microfinance and borrowers to the tune of 85.6 million were benefitted in 2018, with an appreciable number of borrowers belonging to India.

Microfinance industry well supports local economic development through the needed financial and nonfinancial services for small enterprise development. Women generally are naturally better in using financial and nonfinancial resources for building strong relationships and creating culture of collaboration (Kameridou 2013). In the microfinance literature some feels that it as a survival strategy in time of disaster and sustainable peace development (Dawit, 2014; Khanday et al, 2015).

Statement of the problem

Microfinance is required as a useful tool for socio-economic upliftment in developing country like India (Sharif Moud, 2018). Microfinance schemes measuringly becoming popular since 1990s which provide financial service in the form of savings and credit opportunities (Johnson et al 1997). The rural urban population is 69.31 and 70% of population lives in rural India. The development of India, hence depends upon the prosperity of rural areas (Syed Mohammed Ghese, 2019). Further, women forms 50% of the population but in country they are given the priority. Women studies reveals that unless and until women are empowered the development of women has no meaning at all. Access to financial services, savings creation, participation in decision making involvement in income generating activities and participate in green microfinance initiatives empowers women. There is a need to verify the poor women who cannot offer any collateral and SHGs fill this vacuum and makes the women to be more aware. The concept group formation, mutual trust, monitoring of loan repayment and utilisation, participation in meeting and decision making makes the poor and vulnerable to feel united and concentrate on savings formation. Microfinance institutions are effective instruments for providing basic services like saving, affordable credit and skill training (Mahfuz et al., 2017). They are important development agents intended to benefit women and lower income people (Cicchieello et al. 2021; Meressa, 2020). Economist empowerment improves women's opportunity to resources and non-financial resources. It created good opportunity for skill development and market information (Addai, 2017).

Status of microfinance in India

Table – 1 depicts information on SHG – BLP in India. The table shows about increase in SHGs savings with banks in monetary terms increased in the three preceding years both in absolute and percentage terms. The main reason behind loan sanction decrease as on 31st March 2021 over 31st March 2020 was Covid-19 pandemic and savings for the same period recorded a 45% increase. The loan disbursement improved during 31st March 2022 with ease in Covid-19 norms.

Table-2 reveals data about credit disbursement by banks. Credit amounting to Rs. 99,729 crores was disburse by banks to 34 lakhs SHGs during 2021-22. Similar trend in progress under MFI / MFO – Bank Linkage can be seen. 28601 loan accounts during 2020-21 amounting to Rs. 15322.33 crores, a total of 24686 loan accounts amounting to Rs. 26,567.02 crores were disbursed during 2021-22 (See NABARD data P. 39). The growth by 72% i.e., from 29 lakh SHGs to 34 lakh SHGs and 18% increase in quantum of credit disbursed. Credit disbursement to SHGs in 2021-22 witnessed an increase across all regions over 2020-21 with highest growth rate being 106% in the case of central region. The disbursement of credit is highest to the Southern Region with Rs. 65,039 crores to 15 lakh SHGs stood first followed by the lowest Rs. 1171 crores to 0.8 SHGs.

Review of literature

Madhubala Swami (2014) found that SHG in urban areas present a slice of urban poor. The study endorses findings of previous studies on impact of microfinance and supplements the existing knowledge with the findings of socio-economic impact of SHGs functioning in an Indian home town.

Kumar Vipin et al. (2015) study reveals that SHGs and MFIs are playing vital role in delivery of services which leads development of poor and low income people in India. Further, the researchers stated that slow progress of education of members, poor quality of group functioning, dropout of members also reported from different studies which should be addressed properly.

Syed Mohammed Ghouse (2019) stated that microfinance are very much successful in reducing social problems in rural areas. The researcher suggested that government should formulate the very effective strategies to control the working mechanism of microfinance institutions as they become part and parcel of Indian economy.

Jeremaiah Machingambi (2020) examined the relationship between sustainable micro finance and sustainability of poor clients. The paper focused more on demonstrating the impact of a sustainable lending approach of the poor clients. The key issues highlighted differences in terms of the target clients and implications for the sustainability of beneficiaries.

Enmanuel John Kaka (2022) stated that women empowerment has a great influence on health, nutrition, education and the overall well being of the societies as well as the children and households. Further, they have supported the concept of microfinance facilitates women to enhance the earnings capacity leading to a greater control to tackle cultural irregularities.

Objectives

1. To study the socio-economic characteristics of respondents.
2. To analyse the green initiatives undertaken by the respondents.
3. To study the factors impacting women empowerment.
4. To analyse the benefits derived from microfinance.

Hypotheses

1. The socio-economic characteristics are not supporting the study on benefits, green microfinance, women empowerment.
2. Green microfinance initiatives are not undertaken by the respondents in the study area.
3. There are no factors empowering women.
4. There are no benefits to be derived from micro finance.

Research questions

1. What are the reasons behind the microfinance activities not supporting the study on microfinance?
2. What are the green microfinance initiatives undertaken by the members?

3. Which factors impress the women empowerment?
4. What are the benefits to be derived from microfinance?

Research Methodology

Research methodology is a systematic and scientific method to be followed while doing any research programme. It is a clear path which assists the reach of final stage right from data collection upto reporting of data. Redman and Mory (1923) define research as a “systematized effort to gain new knowledge”. It is actually voyage of discovery (Kothari, C. R. 2013). Research design otherwise called as “blue print” or preprojected for the future and aims at collecting required data systematically. It is a strategy for answering the structured questionnaire using empirical data (Shona, 2021). Research design should be an academic procedure (Claire Sellitz, 1965).

Questionnaire design : It is a set of logic questions list for the purpose of data obtained from respondents (Saul McLeond, 2018). The data collected in a natural setting at the work place and also visited the place of information and requested and clearly explained the intention of data collection. The confirmed SHGs also verified with Karnataka State Official website Panchatantra.kar.nic.in and talukwise report on groups formation.

University of study : The present study confines to Bengaluru Rural district. Convenient sampling technique was preferred for the purpose of data collection as it is convenient to met the members at work or either before leaving their residence or after reaching their residence in the evening.

Participants

Participants otherwise called as SHG members were drawn from confirmed SHGs in the study area.

Name of the sub-district	Groups confirmed	Administrative blocks	Members	Sample
Devanahalli	164	24	15136	48
Doddaballapura	429	28	17236	54
Hosakote	353	28	16966	53
Nelamangala	863	21	14158	45
Total	1809	101	63536	200

Source : i. NABARD, ii. Sample based on members.

The sample considered in the present study is based on members available in the groups provided by the official website of Karnataka government. Panchatantra.kar.nic.in

Method of analysis : The study performed χ^2 , contingency co-efficient, ANOVA, weighted arithmetic mean and Kendall's co-efficient of concordance. These techniques are performed as they are simple to understand, complete and sufficient for the analysis.

Data presentation and analysis : Demographic profile of respondents – A

The required socio economic characteristics of respondents were studied to know the impact created by microfinance on women empowerment and income generating activities. These demographics include marital status, age, education, occupation, monthly income, living conditions and living area.

Research question No. 1 : Are the socio economic characteristics supporting the study on benefits, empowerment and IGAs.

Hypotheses No. 1 : H_0 : The socio economic characteristics are not impacting on the study.

H_1 : There exist significant variation in the data and the data impacts on the benefits, empowerment and IGAs.

The study on socio-economic characteristics is necessary as it is decisive in deciding whether they form the part of sample target population. Table-3 reveals that 165 are married, 20 remain single, 10 divorced and 5 separated. The age data reveals that 75 are in the age group of 40-50 followed by 65 in between 30-40 years, 25 in the range of 20-30, 20 in the age group of 50-60 years and 15 more than 60 years. There are 72 respondents who have studied upto 12th standard, 45, 10th standard, 40 degree holders, 25 studied upto high school and 10 PG and surprising there are 8 illiterates. 101 are self employed category consisting embroidery, cloth selling, toy selling, areca plate

making and preparing the land for agriculture, 36 are doing the business of pickle making and selling, 25 agriculture, 23 play business and 15 running tiffin centers monthly income data reveals 82 are getting income in the range of 10K-15K, 43 in between 5K-10K, 34 in between 15K-20K and 16>20K. 45 respondents are residing in own houses, 120 rent, 22 leased and 13 in temporary sheds. Further, 98 are living in outskirts, 80 in slum and 22 in developing area. 48 participated regularly in social activities, 100 not regular, 44 occasional 8 newer. All the socio-economic characteristics are significantly impacts on microfinance initiatives and three exist high degree of relationship between the two characteristics and microfinance initiatives.

Research Question No. 2 : What are the green microfinance initiatives undertaken by the members?

Hypotheses No. 2 : H_0 : There exists no significant variation in the green microfinance initiatives undertaken by the members.

H_1 : There exist significant variation in the data and different initiatives are undertaken by the members.

Table – 4 shows data on green microfinance activities undertaken by respondents 110 respondents out of 200 expressed strongly agree followed by 72 agree & 18 somewhat agree. Out of 110 who said strongly agree, 18 spoke about green micro finance initiatives encourages women empowerment, 16 each stated about agro forestry and fostering green opportunities, 14 opined about encouraging recycling activities and reuse of resources, 13 encouraged eco friendly products and 10 each identified about use of organic fertilizer and seeds and improved cooking stoves. Out of 72 who expressed agree 12 each expressed about encouraging recycling activities etc., 10 about green microfinance initiatives encourages women empowerment, 10 about encouraging eco friendly products and discouragement of plastic use, 8 pointed at agro forestry. Out of 18 who stated somewhat agree 4 spoke about green micro finance initiatives encouraged women empowerment and 3 identified the initiative of encouraging.

Research question No. 3 : What are the factors impacting women empowerment?

Hypotheses No. 3: H_0 : The exist no significant variation in the factors impacting women empowerment.

H_1 : There exist significant variation in the factors impacting women empowerment.

Table – 5 highlights data about factors driving women empowerment, weighted arithmetic mean qualitative technique was performed to measure women empowerment. The opinions expressed by respondents are defined “f” and the weights “w” which are depending upon the Likert scale points. The sum of “fw” is divided by the sum of weights to get “WA”. The first rank was assigned to more employment opportunities, second rank to encouraged savings, and third rank to women involvement in the local policies etc. The ranking of other factors depend upon the strength of “fw”.

Research Question No. 4 : What are the benefits to be derived from microfinance?

Hypotheses : No. 4 : H_0 : There exist no significant variations in the benefits to be derived from micro finance.

H_1 : There exist significant variation in the factors impacting benefits to be derived from microfinance.

Table-6 speaks about benefits derived from microfinance. These benefits vary from money lenders to widened socio-economic status. 117 respondents out of 200 expressed strongly agree, 58 agree and 25 somewhat agree. Out of 117 respondents who said strongly agree, 28 reported about enhanced income and savings, 25 expressed about free from money lenders, 20 speak out improved health, sanitation and children education and 14 pointed about increase in women empowerment and 12 pointed at free from money lenders. Out of 25 who expressed somewhat agree, 6 said about free from money lenders, 5 each about enhanced income and savings and improved health, sanitation and children education.

Recycling activities and reuse of resources. ‘W’ fails to accept H_0 and accepts H_1 that more exist significant variation in green microfinance initiatives and hence it is concluded that there exist significant high degree of relationship green microfinance and microfinance.

Summary, discussion and finding :

The main intention of the present research paper is to know whether the demographics impacts the study on microfinance activities and green microfinance initiatives undertaken by SHG members. Further, the study also

found the factors driving women employment and the benefits of microfinance. The survey technique is performed and the respondents were met and the required data is collected through a well drafted questionnaire. The respondents belongs Bngaluru rural district. The findings of the study presented, analysed and discussed by using appropriate quantitative techniques like chi-square, contingency coefficient, ANOVA, Kendalls co-efficient of concordance and weighted average. The study affirmed that the socio economic characteristics are impacting on the study. The green microfinance initiatives undertaken includes encouraging eco-friendly products and discouragement of plastic use, green finance initiatives and women empowerment and encouraging recycling activities, reuse resources. Factors like more employment opportunities through IGAs, enhanced savings advances to market are the drivers of women empowerment. Further, it was revealed that enhanced income and savings, free from money lenders and improved health etc are the benefits of microfinance.

Conclusion :

Microfinance is a developmental approach which removes poverty and vulnerabilities. SHG – BLP a popular programme resulted in greater impress in transforming the rural live of poor. This programme provides cheapest and most direct source of funds. Slowly the migrated labour force is setting on Bengaluru rural areas are involving in the developmental works. They also support the agriculture, ready to work as unskilled labourers, construction etc., The SHG members should use the available labour force for their microfinance initiatives. Women SHG members contribute small savings and after waiting time they also avail loan from banks to take up any economic activities. The study found that there exist significant demographics supporting the microfinance industry. Members are interested in green microfinance initiatives like using eco-friendly products, encouragement of women empowerment initiatives and encourages recycling initiatives and re use of resources. The drivers of women empowerment are more employment opportunities through IGAs, enhanced savings and access to markets. Finally the benefits derived includes enhanced income and savings, free from money lenders and improved health and sanitation and children education.

References

- Addai, B. (2017). Women Empowerment Through Microfinance: Empirical evidence from Ghana. **Journal of Finance and Accounting**, 5(1), 1-11.
- Atahan, A.D.R., Sakti, I.M., Huruta, A.D., Kim, M.S. (2021). Gender and renewable energy integration. The mediating role of green microfinance. **Journal of cleaner production**. 318, 128536.
- Borbora, S., & Mahanta, R. (2001). Microfinance through SHGs and its impact: A case of Rashtria Gramin Vikas Nidhi – credit and saving programme in Assam. **Indian Journal of Agricultural Economics**, 56(3), 449-450.
- Cicchello, A., Girm, A., Kazemikhasragh, F., & Panetti, E. (2021). Sustainability reporting and firms economic performance; Evidence from Asia and Africa. **Journal of knowledge economy**, 12(4), 1741-1759.
- Claire Selltiz (1965). Research methods in social relations. New York, Holt, Rimehart and Winston: <http://www.worldcat.org/googlebooks/google.co.in>
- Dawit, T. (2014). **Women’s economic empowerment through micro credit intervention: The use of Chinaksen Woreda, Oromiya National Regional State**, (Msc. Thesis). Haramaya University.
- Emmanuel Kaka. (2022) Empowering women through MF qualitative evidence. **Global Journal of Accounting and Economy Research**, 3(1), 53-81, ISSN: 2319-443X.
- Garcia – Perez, I., Fernandez – Izquierolo, M.A. Manoz – Tores, M. T. (2020). MFIs fostering sustainable development by region, **Sustainability**, 12, 2682.
- Hashemi, S.M., Schaler, S.R., & Ritey, A. P. (1991). Rural credit programmes and women empowerment in Bagladesh, **World Development**, 24(4), 635-653.
- Jeremaiah Machingambi. (2020). The impact of MF on the sustainability of poor clients: A conceptual review. **Journal of entrepreneurial innovatives**, 1(1), 1-6.
- Johnson, S., & Rogaly, B. (1997). Microfinance and poverty reduction. Oxfam poverty guidelines, Oxfam: Oxford, Paper No. 23, 120 Geneva.

Julia Kagan. (2021). MF Investigation, Investpaedia. Com/terms/m/mf.asp.

Kamberidou, I. (2013). Women entrepreneurs; we cannot have change unless we have men in the room; **Journal of Innovation and entrepreneurship**, 2(1), 1-18.

Khanday, M.I., Shah, B.A., Mir, P.A. & Rasool, P. (2015) Environment of women in India historical perspective. **European Academic Research**, 2(11), 14494-14525.

Kothari, C. R. (2013). Research Methodology. New age international (P) ltd., Publishers, New Delhi.

Kumar Vipin., Chauhan Monu., & Kumar Ritesh. (2014). An interview of the MF in India. **Abhinav National Monthly Referred journal of research in commerce and management**, 4(10), 19-26.

Madhubala Swamy. (2014) : Impact analysis of SHGs in Urban Miles: A case study. **Arthashastra, Indian Journal of Management review**, 23(2), 242-266.

Mahfuz, R., Mia, A., Ismail, B., & Isa, R. (2017). Factors affecting the financing cost of microfinance institutions : Panel evidence. **Enterprise Development and Microfinance**, 29(2), 103-117.

Mayoux. (1999). Questioning vistures spirals microfinance and women empowerment in Africa. **Journal of International development**, Nov – Dec, 957-984.

Meressa, H. H. (2020). Growth of microfinance and small scale enterprise and its driving factors : Empirical evidence from entrepreneurs in emerging region of Ethiopia. **Journal of innovation and entrepreneurship**, 11(1) 1-15.

Namboodari, N.V., & Shiyami, R.L. (2001). Potential Role of SHG in rural financial deepening, **Indian Journal of Agricultural Economics**, 56(3) : 401-489.

Rahman, M.M. Khanum, R., Nghiem, S. (2018). The effects of microfinance on women's empowerment: New Evidence from Bangladesh. **International Journal of Social Economics**, 44, 1745-1757.

Redman, L. V., & MOzy, A.V.H. (1923). **The Romance of Research**, P. 10.

Saul McLeod. (2018). Questionnaire: Definition, examples design and type. **Simply Psychology**, <http://www.simple.psychology.org>.

Sethi, B., & Atibudhi, H. N. (2001). Microfinance: An innovative tool for banking with the unbankgales : A study in Kalahandi District, Odisha : **Indian Journal of Agricultural Economics**, 56(3), 477.

Sharief Moh. (2018). A study on the performance of MF institutions in India. **International Academic Journal of Accounting and Financial Management**, 5(4), 116-128.

Sharma, K. C. (2001). Microfinancing Through SHGs : **Journal of Agricultural Economics**, 56(3), 460-461.

Shona McCombes. (2021). How to create a research design. <http://www.scribber.com/research>.

Sujata Khandker. (2018). In conversation with S. Kondker Feminism in India. <http://feminsmimindia.com>.

Syed Mohammed Ghouse (2019). MF – A Catalyst in accelerating the growth of Indian Rural Economy. **International Journal of Recent Technology and Engeering**, 8(3), 2010-2012.

Yonus, M. (1998). Poverty alleviation : Is economics can help? Lessons from the Grammen Ban experience. **Journal of International Affairs**, 52, 47-65.

Table – 1 Progress under SHG-Bank Linkage Programme (2019-20 to 2021-22)

(Number in lakh/Rs in crore)

Particulars		2019-20		2020-21		2021-22	
		No. of SHGs	Amount	No. of SHGs	Amount	No. of SHGs	Amount
SHG savings with Banks as on 31st March	Total SHG Nos.	102.43 (2.29%)	26152.05 (12.12%)	112.23 (9.57%)	37477.61 (43.31%)	118.93 (5.97%)	47240.48 (26.05%)
	All women SHGs	88.32 (3.53%)	23320.55 (13.91%)	97.25 (10.11%)	32686.08 (40.16%)	104.05 (6.99%)	42104.77 (28.81%)
	% of Women	86.22%	89.17%	86.65%	87.21%	87.45%	89.13%
	Of which NRLM/SGSY 57.89 (3.75%)	14312.7 (11.23%)	64.78 (11.9%)	19353.7 (35.22%)	71.84 (10.89%)	27576.94 (42.49%)	
	% of NRLM/SGSY Groups to Total	56.52%	54.73%	57.72%	51.64%	60.40%	58.38%
	Of which NULM/SJSRY	4.69 (6.83%)	1523.57 (-5.63%)	5.29 (12.79%)	1954.09 (28.26%)	5.81 (9.87%)	2600.19 (33.06%)
	% of NULM/SJSRY Groups to Total	4.58%	5.83%	4.71%	5.21%	4.89%	5.50%
Loans disbursed to SHGs during the year	Total No. of SHGs extended loans	31.46 (16.60%)	77659.35 (33.17%)	28.87 (-8.23%)	58070.68 (- 25.2%)	33.98 (17.71%)	99729.22 (71.74%)
	All women SHGs	28.84 (21.95%)	73297.56 (37.64%)	25.9 (- 10.19%)	54423.13 (- 25.7%)	31.50 (21.63%)	93817.21 (72.38%)
	% of Women Groups	91.67%	94.38%	89.71%	93.72%	92.70%	94.07%
	Of which NRLM/SGSY	20.49 (24.26%)	52183.73 (56.24%)	15.84 (-22.69%)	29643.04 (- 43.19%)	22.91 (44.64%)	63100.77 (112.87%)
	% of NRLM/SGSY Groups to Total	65.13%	67.20%	54.87%	51.05%	67.42%	63.27%
	Of which NULM/SJSRY	1.59 (23.26%)	3406.22 (-0.39%)	1.13 (-28.93%)	2112.04 (-37.99%)	1.84 (62.45%)	5816.10 (175.38%)
	% of NULM/SJSRY Groups to Total	5.05	4.39	3.91	3.63	5.40%	5.83%
Loans outstanding against SHGs as on 31st March	Total No. of SHGs linked	56.77 (11.82%)	108075.07 (24.08%)	57.8 (1.81%)	103289.71 (-4.43%)	67.40 (16.61%)	151051.30 (46.24%)
	No. of all Women SHGs linked	51.12 (14.59%)	100620.71 (27.00%)	53.11 (3.89%)	96596.6 (- 4.00%)	62.65 (17.96%)	142288.61 (47.30%)
	% of Women SHGs	90.05	93.10	91.89	93.52	92.95%	94.20%
	Of which NRLM/SGSY	36.89 (12.30%)	67717.07 (24.66%)	33.78 (-8.43%)	57336.62 (- 15.33%)	44.54 (31.87%)	94231.52 (64.35%)
	% of NRLM/SGSY Groups to Total	64.98	62.66	58.44	55.51	66.09%	62.38%
	Of which NULM/SJSRY	2.67 (18.67%)	5466.87 (32.99%)	2.23 (-16.48%)	4056.45 (-25.8%)	3.27 (46.52%)	7608.57 (87.57%)
	% of NULM/SJSRY Groups to Total	4.70	5.06	3.86	3.93	4.85%	5.04%

(Figures in parenthesis indicate the increase/decrease over previous year)

Source : Microfinance Status NABARD 2021-22

Table – 2 : Region-wise Status of Bank Loan Disbursed to SHGs during 2019-20 to 2021-22

(Rs lakh)

Region	2019-2020			2020-21			2021-22		
	No. of SHGs	Total Loans Disbursed	Average Loan Disbursed	No. of SHGs	Total Loans Disbursed	Average Loan Disbursed	No. of SHGs	Total Loans Disbursed	Average Loan Disbursed
Northern	62,905	84,694	1,34,637	67,658	94,045	1,39,001	79,532	1,17,102	1,47,239
North Eastern	37,807	57,893	1,53,128	68,116	1,03,651	1,52,168	94,871	1,84,636	1,94,618
Eastern	11,23,517	17,85,075	1,58,883	11,24,578	14,87,551	1,32,276	13,01,505	25,68,978	1,97,385
Central	1,11,074	1,04,249	93,856	1,28,617	1,05,428	81,971	1,84,322	2,16,983	1,17,720
Western	1,74,218	2,49,327	1,43,112	1,61,159	2,30,331	1,42,921	2,39,086	3,81,363	1,59,509
Southern	16,36,481	54,84,696	3,35,152	13,37,266	37,86,063	2,83,120	14,98,951	65,03,860	4,33,894
Total	31,46,002	77,65,935	2,46,851	28,87,394	58,07,068	2,01,118	33,98,267	99,72,923	2,93,471

Region-wise share in SHGs credit linked

Year	Northern Region	NER	Eastern Region	Central Region	Western Region	Southern Region
2019-20	2	1.2	35.7	3.5	5.5	52
2020-21	2.3	2.4	38.9	4.5	5.6	46.3
2021-22	2.3	2.8	38.3	5.4	7	44.1

Source : NABARD

Table – 3 : Demographics of Respondents – IGAs & SHGs

Socio economic characteristics	x ²	TV@0.05	df	result of x ²	“c”	Result of ‘C’
Marital status	355.0	7.815	3	Significant	0.80	High Degree
Age	77.50	9.488	4	Significant	0.52	High Degree
Education	87.95	11.070	5	Significant	0.55	High Degree
Occupation	121.90	9.488	4	Significant	0.61	High Degree
Monthly income	65.25	9.488	4	Significant	0.50	High Degree
Living conditions	141.69	7.815	3	Significant	0.64	High Degree
Living Area	47.31	5.991	2	Significant	0.43	High Degree
Participation in social activities	86.00	7.815	3	Significant	0.49	High Degree

Source : Field Survey

Note : x² = chi-square

$$‘c’ = \sqrt{(x^2 / x^2 + N)}$$

Where ‘c’ = contingency coefficient

N = Number of observations

When the value 'c' is equal or near 1, it means there is high degree of association between attributes. Contingency co-efficient will always to be less than 1.

Table – 4 : Green Microfinance initiatives undertaken by respondents

Green microfinance initiatives	SA	A	SWA	RT	RT ²
Solar Home System	8	6	2	16	256
Encouraging recycling activities, reusing resources	14	12	3	29	841
Agro forestry	16	8	2	26	676
Use of organic fertilizers and seeds	10	7	1	18	324
Acquiring efficient fridges	5	4	1	10	100
Improved cooking stoves	10	6	1	17	289
Encouraging eco friendly products and discouragement of plastic use	13	10	2	35	1225
Fostering green opportunities	16	7	2	25	625
Green microfinance initiatives encouraged women empowerment	18	12	4	34	1156
Total	110	72	18	200	5492

Source : Field Survey

Note : SA - Strongly Agree, A - Agree, SWA - Somewhat Agree, RT - Row Total

$$\begin{aligned}
 SSR &= \sum RT^2 - (\sum RT)^2 / N \\
 &= 5492 - (200)^2 / 9 \\
 &= 42492 - 4444.44 = 1047.56
 \end{aligned}$$

$$\begin{aligned}
 W &= 12 \times SSR / K^2 N (N^2 - 1) \\
 &= 12570.72 / 6480 = 1.93
 \end{aligned}$$

Test the significance of W by using the chi-square statistic.

$$\begin{aligned}
 x^2 &= k (n-1) w \\
 &= 3 (9-1) 1.93 \\
 &= 3 \times 8 \times 1.93 = 46.32
 \end{aligned}$$

Decision : At 8 d.f. with 0.5 level of significance the TV = 15.507. The calculated value being 46.32 higher than the critical table value and hence 'w' fails to accept H₀ and accepts H₁. Therefore it is concluded that there exist significant relationship between the green micro finance and women empowerment.

Table – 5 : Factors driving women empowerment – weighted arithmetic mean

Factors driving women empowerment	Weight	5	4	3	2	1	T	WA
	Likert scale	SA	A	N	DA	SDA		
Advanced savings	F	169	29	-	-	2	200	2
	fw	849	116	-	-	2	963	64.20
More employment opportunities through IGAs	f	172	86	-	1	1	200	1
	fw	860	104	-	2	1	967	64.47
Access to markets	f	167	30	1	-	2	200	3
	fw	835	120	3	-	2	960	64.00
Ownership of assets	f	129	41	9	8	13	200	13
	fw	645	164	27	16	13	865	57.60
Divorce acceptance	f	120	25	10	14	31	200	18
	fw	600	100	30	28	31	789	52.60
Reduction in dowry	f	130	26	21	9	14	200	14
	fw	650	104	63	18	14	849	56.60
Enhancement of decision making in daughters marriage and education	f	146	35	10	5	4	200	10
	Fw	730	140	30	10	4	914	60.93
Women involvement in local politics voting supporting a candidate, contest in BBMP elections	f	170	26	-	2	2	200	3
	fw	850	104	-	4	2	960	64.00
More self confidence	f	140	45	8	4	3	200	9
	fw	700	180	24	8	3	915	61.00
Shifting marriage system	f	120	26	18	20	16	200	17
	fw	600	104	54	40	16	814	54.27
Collective awareness of injustice	f	130	27	-	19	24	200	16
	fw	650	108		38	24	820	54.67
Women's control over income	f	120	39	15	10	16	200	15
	fw	600	156	45	20	16	837	55.80
Women's freedom movement	f	110	25	18	21	26	200	19
	fw	550	100	54	42	26	772	51.47
Access to social spaces, transportation, participation in extra family group	f	161	32	-	3	4	200	7
	fw	805	128		6	4	943	62.87
Freedom from domestic violence	f	150	29	8	10	3	200	11
	fw	750	116	24	20	3	913	60.82
Psychological well being	f	163	31	-	6	-	200	6

	fw	815	124		12		951	63.40
Effective local enforcement of legal rights	f	160	32	2	3	3	200	7
	fw	800	128	6	6	3	943	62.87
Autonomy for women in marriage	f	135	36	10	9	10	200	12
	fw	675	144	20	18	10	867	57.80

Source : Faced Survey

Likert scale : SA - Strongly Agree, A - Agree, N - Nutral, DA - Disagree, SDA - Strongly Disagree

Weights : 5 + 4 + 3 + 2 + 1 = 15

Weighted average = Total / sum of weights

Table – 6 : Benefits derived from Microfinance

Type of benefit derived	SA	A	SWA	T
Free from money lenders	25	12	6	43
Enhanced income and savings	28	14	5	47
Increase in women empowerment	14	10	2	26
Increased standard of living	15	6	3	24
Improved health, sanitation and children education	20	7	5	32
Common platform to discuss issues	7	5	2	14
Widened socio economic status	8	4	2	14
Total	117	58	25	200

Source : Field Survey

Note: SA – Strongly Agree; A – Agree; SWA – Somewhat Agree, T - Total

Hypotheses

H ₀	There exist no significant variation in that data	Reject
H ₁	There exist significant variation in that data	Accept

ANOVA Table

Source of variation	SS	df	MS	f-ratio	5% limit (From F Table)
Between the sample	620.45	(3-1) = 2	620.45/2 = 310.225	310.225/29.70 = 10.445	
Within the sample	534.73	(21-3) = 18	534.73 / 18 = 29.70		(2, 18) 3.55
Total	1155.18	(21-1)=20			

Source: Survey data

ANOVA Analysis : The calculated value being 10.445 higher than $TV = 3.55$ @ 5% level of significance with $df = v_1 = 2$ $v_2 = 18$ fails to accept H_0 and accepts H_1 and hence it is concluded that there exist significant variation in the benefit of SHGs.

