

**AN ECONOMIC ANALYSIS OF LENDING THROUGH
JOINT LIABILITY GROUPS**

By

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(2018-15-002)**

THESIS

Submitted in partial fulfillment of the requirement for the degree of

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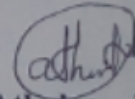
DECLARATION

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I, hereby declare that this thesis entitled "**An economic analysis of lending through Joint Liability Groups**" is a bonafide record of research work done by me during the course of research and the thesis has not previously formed the basis for the award to me of any degree, diploma, associateship, fellowship or other similar title, of any other university or society.

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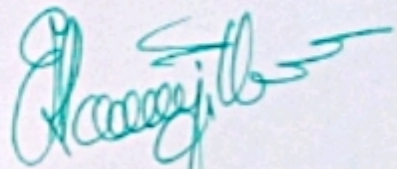
CERTIFICATE

CERTIFICATE

Certified that this thesis entitled "An economic analysis of lending through Joint Liability Groups" is a record of research work done independently by Ms. Athulya Titus (2018-15-002) under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, fellowship or associateship to her.

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Needless to say, solely I am responsible for any errors which may remain...

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LIST OF ABBREVIATIONS

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ADS	: Area Development Society
FACHIG	: Farmers Association of Community self-Help Investment group
FCP	: Farmers' Club Programme
IFAD	: International Fund for Agricultural Development
JLG	: Joint Liability Group
MKSP	: Mahila Kisan Sashakthikaran Pariyojana
NABARD	: National Bank for Agriculture and Rural Development
NHG	: Neighbour Hood Group
SF/MF	: Small Farmer/Marginal Farmer
SHG	: Self Help Group
TNCDW	: Tamilnadu Corporation for Development of Women
VVV	: Vikas Volunteer Vahini

INTRODUCTION

CHAPTER 1

INTRODUCTION

Indian agriculture was dominated by small and marginal farmers. About 85 percent of the total operational holdings in the country were belongs to small and marginal farmers (NABARD, 2020). A number of these farmers do not have access to timely and affordable credit due to the absence of clear title to land in which they cultivate. Even those who have title to their holdings were deprived of bank credit as their holdings considered uneconomical. Banks have generally preferred to finance large farmers neglecting the credit needs of small and marginal farmers. Hence in many parts of the country the small and marginal farmers depend on informal sources for credit at high interest rates which they could not service due to the low returns from agriculture. Thus, enormous areas of farm land cultivated by small and marginal farmers, tenant farmers and oral lessees suffered from low productivity as these areas could not afford to use appropriate inputs and proper technologies due to lack of timely and adequate credit.

NABARD has introduced the concept of Joint Liability Groups (JLGs) during 2005-2006 to amplify flow of credit to landless farmers cultivating land as tenant farmers, oral lessees, share croppers and small and marginal farmers as well as poor individuals for taking up farm and non-farm activities. The Joint Liability Groups (JLG) as defined by NABARD is an informal group comprising of 4 to 10 individuals coming together for the purpose of availing bank loan either individually or through the group mechanism against mutual guarantee. In the first case, the group avails individual loans and all members jointly execute one inter se document signed by all of them making each one liable for repayment. In the second case, members were jointly taking single loan and own the debt liability jointly.

Table 1.1 Progress of JLGs in India

Sl.no	Particulars	Number (in lakhs)	Amount (₹ in lakhs)
1	Joint Liability Group promoted during 2019-20	41.80	
2	Loan disbursed to Joint Liability Groups (JLGs) during 2019-20	-	83,102.95
3	Cumulative Joint Liability Groups promoted as on 31 March 2020	92.56	1,54,853.09

Source: NABARD Website

The Kerala State provides a different picture of the success of JLGs in agriculture. Kudumbashree, the State Poverty Eradication Mission of Kerala, implemented the concept of JLGs with active participation from Panchayati Raj Institutions and using NABARD's interest subsidy. The project not only increased the agricultural production in the state, it has also brought considerable fallow land back under cultivation and empowered thousands of women.

Table 1. 2 Kudumbashree promoted JLGs in Kerala

Particulars	Amount
No. of JLGs	71572
Area under cultivation	50000 Ha
No. of women farmers in JLG	354122

Source: Kudumbashree website

From Table 1. 2 it was clear that as on 1st September 2020 there were 7152 JLGs promoted by Kudumbashree in the state with 3514422 members and with area of cultivation around 50000 Hectares. When the Government of India introduced Mahila Kissan Sashaktikaran Pariyojana (MKSP), Kerala was the first State to submit a project proposal. Kudumbashree had already been working on collective farming through its women's groups across the State. It had also adopted Joint Liability Groups (JLG) as an institutional form for making the groups eligible for support under the schemes of National Bank for Agriculture and Rural Development (NABARD). Kudumbashree saw MKSP as an opportunity for capacity building of the JLGs and thus providing an impetus to women's collectives engaged in farming. Such an initiative, according to Kudumbashree, would strengthen its programmes in the agriculture sector, would enhance women's empowerment, and promote local economic development in addition to improving food security. MKSP Helped in strengthening Kudumbashree intervention in agricultural sector by developing the skills and capabilities of 30,000 selected JLGs through capacity building (Kudumbashree, 2019).

Thus the experiences from many parts of the country especially from Kerala indicate that JLGs had augmented the outreach for agricultural microfinance. The potential of group mobilisation has been harnessed in agriculture and allied activities to address the numerous restraints encountered by small and marginal farmers at individual level. JLG model substitutes' collateral requirement for credit by relying upon social capital of the group. JLGs also address credit plus requirements of agriculture like technology and extension service needs of farmers. By forming JLGs farming community can achieve economies of scale in production and marketing.

1.1 Significance of the Study

The small and marginal farmers who were the back bone of Indian agriculture were deprived of access to latest farming techniques, farm mechanisation, affordable credit, technical expertise, quality inputs, market information and post harvesting technology. The gap between scientific know-how and field level do-how was broadening among these classes of farmers. But there was a need to address the various constraints faced

by these farmers comprehensively to increase the agricultural production and for doubling the farmer's income. This can be achieved by forming Joint Liability Groups. The economies of scale in procurement, technology adoption and marketing were attained if small farmers can join the collective farming through JLGs. The group operation would facilitate requirement for quality and traceability for exports. The better functioning JLGs can also systematise and form Farmer Producer Companies (FPOs) in the long term.

Even though there were enormous scope for organising JLGs, this concept has now reached a stage where it has to be upscaled and mainstreamed in an effective manner. Hence the present study was undertaken to assess the utility of JLGs in enhancing social and economic empowerment of member farmers. In addition to this various constraints experienced by the beneficiaries were also comes under the purview of the present research.

1.2 Statement of the Problem

India's agricultural was predominantly production oriented and it also depends on large number of fragmented small holdings. But these small holdings plays a pivotal role in Indian economy. To accelerate the delivery of public services for small and marginal farmers NABARD introduced the concept of JLGs .Joint Liability Groups through its collective effort had improved the bargaining power of its members. Hence in many parts of the country JLG mechanism has become a great success. Hence the policy makers had the opinion that the way forward will be the JLG route.

JLG mechanism would be of immense importance, especially in a state like Kerala, where agriculture was characterised by fragmented land holdings, with small and marginal holdings constituting around 98 per cent of the total holdings in the state (NABARD, 2019).Since efforts for promotion and functioning of JLGs have been going for more than ten years, and studies regarding the efficiency of JLGs were limited, it is the right time that an assessment of the effectiveness of group lending were done.

1.3 Objectives of the study

- To assess the effectiveness of group lending on the social and economic empowerment of the members
- To compare the social and economic empowerment of members of JLGs promoted by Kudumbashree and Farmer's Club
- To identify the constraints if any experienced by members

1.4 Utility, Scope and Limitations of the study

The study will bring into light how far JLGs have been successful in empowering its members socially and economically. This research would also focus on the comparison of empowerment of members of JLGs promoted by Farmers Club and Kudumbashree. Which will give an idea about the effectiveness of these two group lending models. In an era where the share of purchased inputs to output is on its peak, credit, especially 'affordable credit through JLGs', had utmost significance in view of country's massive number of small and marginal farmers. There were no innovative method to complement the JLG concept hence it is essential to modify the programme by reducing its pitfalls. There for the identification of the constraints experienced by beneficiaries will enable the policy makers and bankers to take corrective action wherever necessary to make this method of group lending much more attractive and effective for the farmers.

Under the present research, the socio-economic status of the respondents before joining JLGs were compared with that of after joining JLG. But there were difficulty in getting the data related to various variables before the JLG intervention from sample respondents, as the assessment of effectiveness was undertook at the end of the programme. In some cases the participants expressed their difficulty in remembering previous events or experiences accurately. In addition to this some respondents were hesitant to provide details about their current economic situation. Due to the Outbreak of COVID -19 pandemic, information from a number of respondents were collected through telephonic surveys.

1.5 Organisation of thesis

The report of thesis organised under five chapters. First Chapter deals with the statement of the problem, objectives, utility, scope and limitations of the study. The Second chapter contain review of available literature related to Social and economic empowerment through JLGs. The third chapter was about the materials and methods employed under the research. The Fourth chapter was devoted entirely for results and discussion. The last Chapters deals with summary of findings and conclusions. It was followed by references, appendices and abstract of the thesis.

REVIEW OF LITERATURE

CHAPTER 2

REVIEW OF LITERATURE

A literature review discusses and analyses earlier studies undertaken by other researchers in a given field of study. It provides a foundation for theoretical framework for future research work. A good literature review deals with the exact explanation of the research problem, methodology adopted by the researcher to carry out the research and the gap in the research that intent to be filled by future research. With these observations in mind, a review of past available literature dealing with various aspects of the current research problem were presented in this chapter under the following six sub headings:

2.1 Joint Liability Group

2.2 Group lending

2.3 Social empowerment

2.4 Economic empowerment

2.5 Socio economic empowerment

2.6 Constraints faced by farmer group members

2.1 Joint Liability Groups

Joint Liability Group can be defined as the informal group consists of 4-10 individuals who try to avail loans against mutual guarantee from financial institutions for the purpose of agricultural and allied activities. The members of JLG consists of tenants, farmers and other rural workers. JLGs were primarily nurtured for lending purposes, although they also offer the savings facility. In JLGs every member is equally liable for the borrowed amount. The review of various studies and articles concerning Joint Liability groups were discussed in this section.

Nair (2010) found that the concept of Joint Liability Group was extremely favourable to those who could not offer any collateral to take relatively higher loan as compared to SHG loans. Group lending through JLGs were helpful in increasing capital formation, promoting income generating activities among its members from rural areas.

JLGs promoted by Non-Governmental Organisation (NGO) were found to be well organised, better performed, well monitored, and have prompt repayment capacity when compared to JLGs directly formed and managed by the banks. As compared to women JLGs, repayment and other performance was observed poor in case of men JLGs. But some negative elements observed in implementation of the programme were the free riding issues, denial of sequential financing even to the prompt repayers, etc. Hence, policy measures were suggested for successful implementation of the programme in near future.

Krishnan (2012) pointed out that the versatile approach of Kudumbashree in group farming had reduced the non-institutional borrowing and increased the effective rate of capital for agriculture. The problems faced by the groups were those related to limited land tenure and futile financial arrangements.

Sajesh (2013) conducted an empirical study among women JLGs involved in the collective farming under Kudumbashree mission of Kerala. The objective of the study was to assess the perceived effectiveness of collective farming in terms of resource, technology, extension, marketing and capacity building. Considerable improvement was observed in all the variable under study. Thus it was concluded that JLG have potential to overcome the multiple constraints faced by small farmers individually. Major factors influencing the effectiveness of farming groups in agriculture were found to be level of education, social participation, economic motivation, group dynamics, functional linkages and support from the JLG promoting institution.

Devi and Mondel (2014) conducted a study on the women Joint Liability Groups (JLGs) members in rural areas in Bishnupur district of Manipur with the objectives of assessing the extent of success of JLGs in income generation and empowerment of the members. It was found that most of the women have earned higher income with the help of micro-finance given by ORI Micro finance Ltd. Some of them have even started new enterprises after joining the programme. The JLGPI was playing an important role in livelihood enhancement of rural women and their empowerment

Abhinand (2018) made an analytical study on the extent of group cohesiveness and sustainable livelihood among Joint Liability Group members in Alappuzha and Kollam

Districts of Kerala. A total of 200 JLG members were selected through simple random sampling. The collected data was analysed using Chi-square test, ANOVA, Karl Pearson's Correlation, Regression analysis and Descriptive analysis. The study found that there is significant relationship between empowerment of JLG members and the extent of group cohesiveness. The biggest hurdle experienced by the members are the non-availability of land. The study recommended that Government should provide new training programmes to the members of Joint Liability Group and facilitate loan and financial schemes by clubbing Joint Liability Group with financial institutions like ESAF, Cooperative societies, Agricultural and Rural Development Banks etc. and should also help the members to find market to sell out their products.

2.2 Group lending

Group lending means a lending mechanism which allows a group of individuals to provide collateral or loan guarantee through a group repayment pledge. The incentive to repay the loan was based on peer pressure, if one group member defaults, the other group members make up the payment amount. The group lending model was a cornerstone of the JLG Concept. It lowers the costs to a financial institution related to assessing, managing and collecting loans, and can eliminate the need for collateral. The review of various studies concerning group lending were given below.

Che (2007) made an analytical study on the incentive rationale for the use of group lending as a method of financing liquidity-constrained entrepreneurs. The study found that the joint liability feature associated with group lending lowers the of default .But the programme suffers free-riding issues. The study also pointed out that when the projects were repeated many times, however, the joint liability feature provides the group members a credible means of finance which can make the group lending attractive, compared to individual lending.

Amit and Suranjan (2010) identified the effectiveness of group lending based micro finance programme operating through Primary Agricultural Credit Society. The results of the study revealed that not only the marginal and semi-marginal farmers even the landless individuals participates in JLG programme. The repayment rate within these

groups were very high and the rate was about 98 per cent .The reasons of high repayment were attributed to peer pressure and group dynamics within JLG.

Rajeshwari (2012) conducted a study entitled “Group Based Microfinance and its Impact on Rural Households in Rayalaseema Region of Andhra Pradesh”. The study was conducted in two districts namely Kadapa and Kurnool. The data required for the study was collected using a pre-tested interview schedule. The sample for the study includes 120 SHG members as well as 120 JLG members and 60 Non participants. Findings of the study showed that participation in SHG programme increased the annual income, productive assets and family expenditure by slightly compared to that of JLG. The participation in JLG programme increased the annual income, productive assets and family expenditure at a higher percentage. The savings of the SHG members were 124 per cent more than the non-participants .There was no significant increase observed in savings by participation in JLG programme. The values of Gini coefficient, coefficient of variation, Atkinson coefficient, generalized entropy measures and decile dispersion ratio indicated that inequality in income distribution was highest among non-participants and lowest among the members participated in both the microfinance programmes.

2.3 Social empowerment

Social empowerment was understood as the process of developing a sense of autonomy and self-confidence, and acting individually and collectively to change social relationships and the institutions and discourses that exclude the disadvantaged and the marginalised sections in the society and keep them perpetually in poverty and in a state of disempowerment. A review of few literature concerning social empowerment were given below.

Sanayal (2009) examined whether structuring socially isolated women into peer-groups for an explicitly economic purpose, such as access to credit, has any effect on the women's collective social behaviour. The study was based on interviews with 400 women from 59 microfinance groups in West Bengal, India. The findings of the study shows that that one third of these groups undertook various collective actions. The study reported improvements in women's social capital. The factors contributed to these effect

on social behaviour includes economic ties among SHG members, the structure of the group network, and women's participation in group meetings.

Kumar *et al.* (2010) studied the impact of group-based microfinance interventions on the income of rural households in Orissa. A stratified random sampling technique was employed to select sample households from four districts in the state. The sample were further classified into two sub groups according to their livelihood patterns: agriculture & allied activity and micro-enterprise & trading activity. A comparison between the target group of households participating in microfinance programs and a control group was carried out by a univariate Z-test and by multiple regression analysis. The inequality in income distribution was analysed in terms of the Gini coefficient and the Lorenz curve. The results of the study provides strong evidence of the positive effect of microfinance programs on the income of the participating households.

Divya (2019) conducted a study in Nainital and Udham Singh Nagar district of Uttarakhand to study the extent of participation of women in group activities of rural SHGs attached with KVKs and to identify problems associated with participation of women in group activities. A sample size of 160 respondents from both the districts were selected for the study. Interview schedule was used for collecting the data. The research comprises of descriptive and exploratory research design. The group activities in which the women were involved was classified under economic empowerment, socio-cultural empowerment and political empowerment. The study reported that women expressed problems in joining self-help groups in terms of information support, technical support, marketing of products made by them and financial support.

Subbiah (2019) made an attempt to analyse the impact of micro finance on decision making empowerment of SHGs women members in Tirunelveli District of Tamil Nadu, India. The sample for the study includes 195 respondents belonged to selected villages of Tirunelveli district. The researcher has used the statistical tools such as ANOVA and 't' test to analyse the data collected through interview schedule. The study concluded with the finding that there is a significant difference in decision making empowerment of SHGs women.

2.4 Economic empowerment

Economic empowerment was the capacity of women and men to participate in, contribute to and benefit from growth processes in ways which recognise the value of their contributions, respect their dignity and make it possible to negotiate a fairer distribution of the benefits of growth. Economic empowerment increases people's access to economic resources and opportunities including jobs, financial services, property and other productive assets, skills development and market information. A review of few literature concerning economic empowerment were given below.

Sultana and Hassan (2010) undertook a study to analyse the impact of micro-credit on rural women's economic empowerment. The study was conducted in Gazipur District. Ninety respondents were selected as sample using stratified random sampling technique. Out of this, 45 women were involved with Bangladesh Rural Advancement Committee (BRAC) micro-credit program. Other 45 constitute control group. Survey method was used to collect data from the respondents. For measuring economic empowerment, three economic indicators ie. personal income, savings behaviour and assets ownership were considered. t- test was performed to evaluate the impact of micro-credit on economic empowerment. Results of this study showed that BRAC women were more economically empowered than those of non BRAC women. It was also revealed that women participating in microfinance had more active participation in various income generating activities.

Vachya (2011) made an attempt to assess the impact of microfinance on the changes in the level of income and employment of members after joining the SHGs. For this study, 582 members were interviewed with the help of structured schedules. For analysis of the data Logit model was used. The findings of the study revealed that microfinance activities have improved the living condition of the SHG members and the activities through SHGs have also contributed to social empowerment of its participants.

The objective of the study by Cherian and Ramachandran (2012) was to determine the importance of Joint Liability Groups' (JLGs') role in economic progress. Three Hundred JLG members through multistage random sampling from Alappuzha district

form the sample respondents. The reliability of the responses of the members has been analysed by employing Kendall's Coefficient of Concordance. The results showed that the marginal farmers constituting the JLGs have high degree of bargaining power, both with respect to the easy availability of capital and a low rate of interest.

Koogi *et al.* (2013) examined the savings and loan utilisation pattern of the women members of SHG practicing agriculture in of Belgaum district. The study was based on primary data collected from 50 women SHG members. The information collected was tabulated using percentages and presented with the help of graphs and charts .The findings of the study revealed that the loans taken through SHGs have helped members to utilise that loan for purchasing of fertilizers, hiring of labour and tractor charges, harvesting and clearing mud tracks on agricultural fields. The study recommends that SHGs involved in agriculture should be properly and adequately financed.

Miriam *et al.* (2014) analysed the economic empowerment of women in Agriculture through Microfinance Bank in Awgu Local Government Area of Enugu State. Data were collected from 80 women farmers who were beneficiaries of the microfinance loans from Urban and Rural areas. The data was collected through a well-structured questionnaire. The data was analysed using descriptive statistics and Chi-square test. The findings showed that women of the area achieved self – reliance, improved their living standards as a result of the programme. The study also revealed that much more efforts were needed to empower the women. The study recommended that the government should employ more extension persons especially females to guide and motivate the women.

Pal (2014) conducted a study in Burdwan district, West Bengal to study the influence of Self Help Groups on women's decision making in farm activities. The respondents for the study were selected through stratified random sampling technique. Findings of the study revealed that there is significant impact of Self-help groups on rural women's decision making process. The study recommended to provide latest scientific knowledge and skill through effective and appropriate channels.

The objective of the study by Mwangi (2015) was to determine the effects of microfinance services on economic empowerment of small scale farmers in Kiambu County. A sample of 100 respondents from a population of 304,449 was taken. A

multiple regression analysis was undertaken to determine the relationship of three variables namely access to credit, provision of financial literacy and access to market with respect to economic empowerment. The regression analysis established the fact that access to credit, provision of financial literacy and access to market contribute positively to economic empowerment.

Hmingthanzualal et al (2016) undertook a study in Serchhip and Kolasib district. Twenty Self-help Groups (SHGs) formed by National Rural Livelihood Mission (NRLM) engaged in pig-rearing activity was studied to measure the impact of SHG on income of its members. The study was conducted in 4 blocks. Five SHGs from each block and five SHG members from each of SHGs were selected randomly. Total 100 SHG members were interviewed. The results of paired t-test showed significant increase in income after joining the group.

Kapila *et al.* (2016) made an attempt to evaluate the impact of microcredit through Self Help Groups on economic empowerment in the rural areas of Punjab State. The study was based on both primary and secondary data. The primary data was collected from 106 leaders and 318 members of SHGs from the area under study. The secondary data was collected from various published sources of central and state government. Findings of the study showed that microcredit has significantly improved the income of the women respondents which in turn has increased their participation in household decisions. It has further revealed that the impact of microfinance was more among large borrowers than small borrowers. The results of regression analysis indicate that the impact of microcredit is highly significant and established positive relationship with empowerment index in the rural area of Punjab.

Lagare (2016) undertook a study entitled, "Impact of women self-help groups on income, employment, investment and saving in South Konkan Region" .The sample consisted of 300 SHG members from 60 SHGs. The tool for analysis was frequency and percentages .The selected SHGs were categorized taking into consideration group activities performed by SHG. The SHGs were classified as farming activities, agro-processing activities, and non-farming activities. The results indicated that after joining the SHG, per member income increased. This increase in income was high in farming

category. Within different categories of groups, the increase in employment was highest in farming category, followed by agro-processing category and lowest in non-farming category. The investment in different assets also increased after participation in SHG group.

Abinav (2019) conducted a study in Perambra block of Kozhikode district. The objective of the study was to assess the economic impact of SUBICSHA on SHG members. Primary data were collected from 120 SHG members associated with SUBICSHA. Economic impact of SUBICSHA on SHG members was analysed based on before and after situation using percentage analysis and paired t-test. The study found that the income levels, overall expenditure pattern, saving habit, borrowing power of SHG members have improved after joining SUBICSHA.

2.5 Socio-economic empowerment

Socio-economic empowerment refers to enabling an individual to acquire the ability and capacity of performing certain tasks which could lead to his/her development, thereby moving the individual from low to high level of development. The socio-economic empowerment of rural people provides them with the ability to fight poverty and hunger. When rural people are empowered, they are strong willed and are better informed to take decisions and stand by such decisions. The review of various studies on Socio-economic empowerment were as follows.

The objectives of the study by Jena (2007) was to find out the Socio-economic empowerment of farm women through self-Help Groups (SHG's). The study was conducted in four villages of Gop Mandai of Puri District. Eighty respondents from 12 SHG's form the sample for the study. Descriptive statistics and paired t test were used to analyse the data. The results revealed that there is significant changes in social and economic condition of respondent's especially social participation, healthcare and income level.

Samuel (2007) was undertaken a study to know the empowerment of women through microfinance. The study was conducted in Dindigul district. A total of 90 members from 30 SHGs constituted the sample. To assess the impact of SHGs on women empowerment paired t-test, impact index and multiple linear regression analysis were

done. The results showed that there is significant improvement in empowerment after joining SHG.

The study undertaken by Abraham (2011) used sectional data to measure the empowerment of farmer members of SHGs formed by Vegetable and Fruit Promotion Council Kerala (VFPCCK). The Empowerment index was calculated for sample farmers using the information collected on the 5 dimensions of empowerment such as leadership propensity, self-confidence, employment generation, increase in income and decision making power. The sample farmers were classified based on the empowerment index score. The study found that the members of the older self-help groups scored better in empowerment index measurement.

Bhusan and Sambhavi (2012) conducted a study entitled “The role of women Self Help Groups in empowerment and capacity building of farm women”. The study was conducted in two blocks of Korba district in Chhattisgarh state. The sample for the study includes 120 respondents from 40 Women Self Help Groups and, out of which 80 were members of SHG while 40 were non-members. The data collected were analysed with appropriate statistical tools revealed that there was significant difference between the SHG members and non-members while considering their involvement in farm activities. The extent of involvement in case of members was more in economic, social and decision making activities while it was found to be more in social activities in case of non-members. Through constraint analysis it was found that there is difficulty in functioning of the SHG. The respondents were of the opinion that lack of family and organizational support, proper training facility, and improper maintenance of records were the main roadblocks in functioning of the SHG. The respondents expressed their need for effective co-operation of bank staff with their groups.

Latha and Kumar (2012) found that the agricultural women SHGs performing well in availing and repaying micro credit. The SHGs had contributed to their socio-economic empowerment and to better livelihood conditions. The suggestions of the study include reduction of interest rates and improvement of the marketing facilities for the SHG's products.

Okon *et al.* (2012) conducted a study in Akwa Ibom State. The study assessed the impact of microcredit scheme on rural farmers. The study was based on survey design. Data were collected from 300 farmers randomly selected from two agricultural zone in the State. Findings of the study revealed that there is a significant impact of microfinance scheme on rural farmers. The results further shows that farmer's access to microcredit has also given them access to better financial products and services.

Sendilkumar (2012) made an attempt to study the empowerment dynamics of farmers before and after joining in GALASA programme in Thrissur district. Sixty farmers belonged to two farmers groups were selected as sample respondents by applying simple random sampling. The components of empowerment were measured before and after joining in the group. Through analysis of data it was found that there is considerable improvement in the empowerment dimensions. The Empowerment Dynamic Index (EDI) was computed for the situation before and after joining of farmers in the group. The study concluded that the programme played a significant role in the empowerment of rice farmers. The study underlined the fact that GALASA programme set up a stage for sustainable development of paddy cultivation in the state.

Benjamin and Patil (2013) made an attempt to study the impact of microfinance on women empowerment. The study was conducted among borrowers of the matrilineal tribal society of India. The study was conducted for a period of five years, where in, data is compiled for 300 microfinance women clients (experimental group) and 150 non-microfinance women clients (control group). Propensity Score Matching and Difference-in-Difference techniques were applied to analyse the data. The findings of the study highlights that microfinance has a positive impact on income, expenditure and savings of its clients. It also led to an improvement in asset structure, increased access to livestock, micro machines, family wealth and family savings, education decision-making, improved mobility, communication skills, self-confidence, increased political participation to promote gender equality, etc.

Choga (2013) made an attempt to evaluate impact of microfinance on rural farming sector. Quota and purposive sampling were used to select 154 individual respondents from 20 Investment Groups organised by Farmers Association of Community self-Help Investment Groups (FACHIG) Trust. The study found that FACHIG had a robust social

collateral system based on peer pressure. The Investment Groups of FACHIG resulted in Livelihoods enhancement, in the form of wealth accumulation.

Mula and Sarker (2013) was attempted to assess the empowerment of women through microfinance. The study was conducted in Cooch Behar District of Eastern India. A total of 144 members from 48 groups of twelve blocks (four SHGs from each block) formed the sample size. To assess the impact paired t-test and Impact Index were used. The study revealed a significant positive change in the economic variables like personal -income, employment generation, asset building, productive investment, savings .The programme also led to the socio-economic upliftment of rural women folk and empowered them particularly in the sphere of child education, leadership and entrepreneurship ability, technology adoption, decision making etc.

Thangamani and Muthuselvi (2013) undertook study to identify women empowerment through Self Help Group in Mettupalayam Taluk. Sample for the study includes two hundred Self Help Group members from Mettupalayam Taluk. Chi – Square test, Garret ranking and Opinion survey were used for analysis .It was found that the socio-economic situation of respondents has been changed after joining the Self Help Groups. The study recommended that by involving voluntary organizations in social mobilisation and creating an enabling policy environment, micro fiancé can achieve robust growth and can become a successful movement.

Wadud (2013) conducted a research to study the impact of microcredit on farm performance, output and food security. The data was collected in a farm level survey from 4 districts of Bangladesh. The survey was conducted on 682 farms in which 450 were owned by microcredit receivers and the remaining 232 were that of microcredit non-receivers. Cobb-Douglas stochastic frontier and data envelopment analysis (DEA) along with inefficiency effects model and propensity score matching (PSM) techniques were applied to assess the effects. Results of the study showed positive impact of microcredit on farm income.

Alam and Rasa (2014) made an attempt to find the impact of microcredit on socio-economic status and living standards of the farmers in rural areas of district Gujranwala in Pakistan. The universe for the study includes all farmers who received loan from the

Punjab Rural Support Program in district Gujranwala for agricultural purpose. The Sample of 185 respondents was selected using the simple random sampling technique. Both descriptive and inferential statistics were used for analysis. Through descriptive analysis, it was clear that microcredit has played a positive role in improving the socioeconomic status of farmer's .The study further revealed that microcredit played a positive role in changing and improving the living standards, diet patterns, health status and children's education of the respondents. The results of the Chi square test indicated that there was a significant impact of microcredit in improving socioeconomic status and household living standard of the farmers.

Lavoori and Paramanik (2014) made an attempt to examine the impact of microfinance on women empowerment. The impact was viewed in terms of from respondent's participation in decision making, increase in income as well as employment generation. The findings of the study was based on a field study conducted in two villages of Andhra Pradesh. The results of the study showed that participation and decision making ability of women members is positively impacted by SHG programme.

A study was conducted by Bannatti (2015) to assess the impact of self-help groups' agricultural activities on farm women during the year 2014-2015. One hundred and twenty farm women formed the sample for the study. A structured interview schedule was used to collect the data. The data was analysed by using frequency, percentage, mean, standard deviation, paired' test and chi square. Results of the study revealed that the women were getting monetary benefits as well as non-monetary benefits like increased confidence, increased communication skill and respect from the family members from agricultural activity .The results of chi-square test indicated that, asset acquisition, expenditure pattern, crop productivity, cropping pattern, employment generation and annual income of the SHG members had significant association with joining of SHG.

Behera (2015) conducted a study in Bonaigarh and Subdega block of Sundargarh of District. The study revealed that most of the SHG members have financial dealings with co-operative society, SHG and NGOs etc. The study also reported that the process of social engineering initiated by the Self Help Groups has generated reflections in the society and SHGs have been upheld as new paradigm of societal transformation.

Kabengele (2015) attempted to assess and compares two financing model i.e. matching grants and microcredit in order to know which model has greater impact in improving livelihoods of peasant farmers. The respondents for the study were peasants who have accessed funding from Vision Fund Zambia a microcredit institution and Smallholders Agriculture Promotion Program an Institution that provides matching grants. The study is based on assessing livelihood improvement of peasant farmers using Care International framework that is focusing on capabilities, economic activities and assets. A total of one hundred and forty six respondents were selected using simple random procedure. The data was analysed using statistical package for social science (SPSS). Using descriptive statistics and focus group discussions, the study found that there is marginal difference in livelihood improvement between microcredit and matching grants on assets and capabilities of the respondents. Matching grants exhibit higher impact on economic activities of the recipients as compared to microcredit. The study recommends that institutions offering matching grants must consider streamlining the process of project approval and disbursement while microcredit institution must tailor their services to client's needs and charge interest taking into consideration the vulnerability context. It was found that matching grants are a better model for financing poor and vulnerable peasant farmers.

Nithyanandhana et al. (2015) studied the significance and effect of programmes by Self Help Groups (SHGs) by comparing empowerment levels of SHGs in Chennai operate under Mahallir Thittam which was a state government programme funded by the Tamil Nadu Corporation for Development of Women (TNCDW). The International Fund for Agricultural Development (IFAD) empowerment indices were used to study levels of empowerment. Friedman test, Chi Square test and DMRT test were also used to measure the relationship between observed variables. The study showed that the levels of self-confidence and self-esteem of women increased after joining the programme.

Sendilkumar (2015) made an attempt to study the empowerment dynamics of women farmers in the value chain of Kadali banana cultivation. Sixty women farmers who cultivated Kadali banana in Mattathur Panchayath of Thrissur district were selected as sample respondents through simple random sampling. The dynamics of empowerment

dimension was studied with the inclusion of knowledge, psychological, economic, social and political sub components .The data was collected through well-structured interview schedule and focus group discussion. Empowerment Dynamics Index (EDI) were computed to measure empowerment of farmers involved in Kadali banana cultivation. The results showed there were 18 per cent increase in the overall empowerment dimension of women farmers.

Srivastava and Samanta (2015) made an attempt to assess the impact of JLG intervention on sustainable livelihood support and promotion of social capital in the context of East Champaran district of Bihar. The study was based on primary data collected through interview of the selected JLG members and other stakeholders. World Bank's social capital assessment tool had been used to determine the extent of accumulation of social capital and to assess the impact of credit thorough JLG on livelihood enhancement. Both qualitative and quantitative techniques were used in the study. The study revealed that JLGs has significant impact on improvement in land holding under cultivation, improving livestock and inputs for agricultural activities. It was also found that credit through JLG has also played an important role in empowering these poor people in decision making process.

The main objective of this study made by Dhakal (2016) was to find the impact of microfinance service on rural farmers. The study was conducted among the 385 farmers of Syangja district of Nepal. Paired sample t-test, correlation and frequency distribution was used to analyse the data. The study was found that there is significant change in the economic status of farmers after involving in the microfinance activities. The statistical analysis of Paired sample t-test shows that there were significant change in income and expenditure of farmers before and after involving in microfinance activities.

Gelan (2016) conducted a study to assess the empowerment members in Southern Ethiopia. Primary and secondary data was used for analysis. The primary data were collected from 160 women members and non-members of microfinance users. The data were analysed with the help of descriptive statistics, ordered logit econometric model. Empowerment index was prepared using important indicators to assess the empowerment status of the sampled respondents. Ordered logit model was used to

assess factors affecting women empowerment. A total of twelve variables were fitted into the model in which seven variables were found to have influence on women empowerment. The variables such as years of experience in income generation, years of membership in Micro finance institution and contact with development agency were found to have positive influence on women empowerment.

Swamy *et al.* (2016) studied the impact of SHGs on tribal women using the descriptive research design. Using a proportionate random sampling method, 26 SHGs have been chosen as sample for the study. The data have been collected through an interview schedule with the group leaders and members. The impact of SHGs are studied under 3 dimension: Social, Financial and political. The study found that the SHGs impacted the SHG members in financial aspects and also influenced their social and political conditions

Kumar and Rathakrishnan (2017) assessed the performance of existing Farmer Interest Groups (FIG) in instilling the livelihood promotion among the rural agrarian masses through upgraded group approaches. The study was conducted among members of guava FIG of Dindigul district, Tamil Nadu, India. The objective of the study was to identify the performance determinants of FIG. Hundred FIG members were taken as respondents. Multiple regression and step-down regression were used for analysis. The results indicated that FIGs express medium to high-level performance in their members' perception. It was also revealed that member's, occupational status, decision making pattern, extension participation, status of operational holding and family support were the major contributing variables towards the performance of Farmer Interest Groups.

Lakhwinder and Lavleesh (2017) studied the economic, social and managerial impacts of self-help groups in enhancing income. The study was conducted in three cultural zones of Punjab. A sample of 200 members of self-help groups belonging to these three zones were the respondents of the study. An interview schedule was used to assess the impact of Self-Help Groups. The findings of the study revealed that the as economic benefits by joining in the groups respondents were received higher price for their products instead of selling individually and understood banking operations to avail credit facility. A large number of respondents developed courage to think independently

and understood group activities and managed group activities after joining the group. In addition to this, the social empowerment of the members in terms of team spirit, talking freely within family, and confidence in dealing with people were enhanced.

Kumari (2018) conducted a study in Sonebarsa block of Saharsa district to assess the impact of women Self Help Groups on decision making in farm activities, household food consumption pattern and allocation of household income as well as loan utilisation pattern. The district Saharsa has been selected purposely for the research. Through random sampling technique 100 respondents were selected. Findings of the study revealed that the farm women's decision making level after joining the SHG was much higher compared to that of non-SHG women. The most important finding of the study was that woman respondents after becoming the SHG member had taken mostly joint decisions in almost every area of agriculture activities.

Mishra *et al.* (2018) conducted a study to know the impact of self-help groups. The study was conducted in Myllem and Mawphlang Blocks of East Khasi Hills district of Meghalaya. The sample for the study consists of 120 respondents. The sample comprises both beneficiaries and non-beneficiaries. The data collected was analysed using frequency and Z test. The findings of the study revealed that the membership in SHG helped in income generation, banking and increased extension contact, decision making, confidence building, risk taking ability achievement motivation and leadership. .

Raghunathan (2018) investigated the effectiveness of women's self-help group (SHG) in improving access to information, women's empowerment in agriculture, agricultural practices, and production diversity. The study used cross-sectional data on close to 1,000 women from five states in India .The nearest-neighbour matching models is used to match SHG and non-SHG women along a range of observed characteristics. The findings showed that participation in an SHG increased women's access to information and their participation in agricultural decisions, but has limited impact on agricultural practices or outcomes. The limited impact on agricultural practices is due to financial constraints, social norms, and women's domestic responsibilities.

Ahtesham and Mittal (2019) made an investigation into the socio-economic benefit of availing microfinance to farmers, in the state of Punjab. The variables used to measure economic impact includes increase in income, savings and investment while variables like education, health and societal relations have been used to measure social impact. ANOVA has been applied to study whether there is any significant difference in the benefits of availing microfinance with duration of availing microfinance. The results shows that for those beneficiaries who are availing microfinance for more than 5 years, the socio-economic impact is much higher, while it is comparatively lesser for people availing microfinance for lesser duration.

Hasan *et al.* (2019) assessed the effects of microcredit programs on women empowerment in rural areas of Bangladesh. The study compared the effect of micro credit programmes of Grameen Bank and BRAC. In this particular study, both primary and secondary data were used. Primary data were collected by a household survey in Tangail district. Percentage analysis, cross-tabulation, and paired t-test had been used to analyse and interpret the data collected. The results showed that microcredit programs of Grameen Bank and BRAC have a significant impact on women empowerment in Tangail district of Bangladesh.

Kumari and Manglani (2019) conducted a study on the empowerment through the intervention of self-help groups in Haryana. A stratified multi-stage sampling was used to collect the data. Total 90 women beneficiaries were used to collect data. Composite index and factor analysis were used with 22 indicators to examine the empowerment of women .The study revealed that the economic empowerment index received higher value. The study revealed that women's socio-economic status rise after joining SHGs.

The study by Rathod and Devi (2019) was undertaken to examine the socio-economic empowerment index of SHG members and non-members in Dahod District of Gujarat. The primary data were collected for the period of 2015-2016 from the respondents (60 SHG members and 60 non-members) in two taluks by survey method using interview schedule. The results indicated that the group approach through SHGs was a cost-effective way to meet the social and economic needs of tribal women farmers.

2.6 Constraints experienced by farmer group members

JLG members face a number of constraints, which increase risk and uncertainty and act as disincentives for increased production, consequently preventing them from accessing agricultural markets. In this section a few literature concerning some general constraints facing smallholder farmers were included.

Ibrahim *et al.* (2013) undertook a study to assess the access to credit problem that persists in dry land of Sudan. The study relied on primary data collected through structured questionnaire. The sample for the study comprises of 200 farm households selected through a multi-stage random sampling technique. Descriptive statistics and Heckman model were applied to analyse the data. The study recommended to improve farm profits, the agricultural investment should be improved.

Sivasiya *et al.* (2013) undertook a study to determine the constraints faced by farm women in self-help group programmes in Ajmer district of Rajasthan. Two Panchayat Samities namely i.e. Masuda and Bhinay were selected from the District purposively considering maximum number of self-help groups. From each Panchayat Samiti two Gramseva Sahkari Samities (GSS) were selected randomly. Thus, from each GSS 10 per cent members were randomly selected. Therefore, the sample constitute of 120 respondents. The results showed that the majority of the respondents fell in medium level of involvement in planning and execution of SHG programmes. For the purpose of this study the constraints were classified to 7 broad areas viz., personal and familial, infrastructural, technical, financial, administrative, operational / resource and social constraints. The study revealed that infrastructural constraints were the major roadblock for the respondents.

The objective of the study by Emerole *et al.* (2014) was to identify the risks, vulnerability of Self-Help-Group led micro finance in Abia State in Nigeria. Two-stage random sampling and purposive sampling techniques were used for selecting communities and respondents. Socioeconomic and some farm operation variables were

analysed descriptively. Fire outbreak, ill health, theft, soil erosion and attack of farm products by pests and diseases were perceived risks experienced by farmers. The study recommended that encouragement should be provided to attract younger women to join the groups.

Ofuoku and Albert (2014) conducted a study to analyse the perception of the rural woman about credit oriented self-help group in Nigeria. A sample size of 110 respondents were used for the study. The data was collected using structured interview schedule and questionnaires. The data collected were analysed using descriptive statistics and linear regression. The study reported that some bottlenecks experienced by respondents such as inadequate access to extension services and lack of commitment by the leaders and members.

Chinchu (2015) made a study on sustainability of farming by women groups in Thiruvananthapuram district. The objective of the study was to analyse the extent of attainment of the three pillars of sustainable development, namely, economic development, social development and environmental protection by the agricultural activities of the Self-Help Groups. A total of Two hundred SHG-based farm women were chosen as the sample respondents. The collected data were analysed using ANOVA, correlation analysis, Sustainable Agricultural Development Index (SADI) and Principal Component Analysis. The finding of the study was that the sustainability of groups involved in collective farming was "Above Average". The Principal Component Analysis shows that all the three indicators contributing almost equally to the sustainability of group farming with 'economic development' slightly more than the other two indicators. Through constraint analysis it was found that 'cumbersome procedures in getting bank loan' as most prominent constraint and it is followed by 'non-availability of water for irrigation'.

Karthik *et al.* (2017) examined the constraints faced in functioning of farmer groups in Warangal District of Telangana State. The sample for the study includes 120 farmers from the District. Three farmer groups were selected for the study Rythumitra groups (G1), Farmer groups of NGO (G2) and Commodity interest groups (G3). A sample of 40 respondents from each group were selected for the study. Constraint analysis were carried out using frequency, percentage and ranking method. Majority of respondents

from Rythumitra groups expressed that lack of village level worker to assist the group management activities was major constraint. In the case of respondents of G2 majority of respondents expressed that few members deviated from group adoption practices as prescribed by NGO, whereas in Commodity interest groups majority of respondents expressed that uncontiguous land area of members as hindrance in functioning of group.

The review as a whole underlines the significance of group formation in agriculture and its impact on sustainable livelihood of farmers. But it was found the studies regarding effectiveness of Joint liability Groups were limited. There for there is ample scope for assessing effectiveness of group lending through JLG. Hence the next chapter deals with the methodology adopted for the study based on review of past research.

MATERIALS AND METHODS

CHAPTER 3

MATERIALS AND METHODS

The study entitled ‘An economic analysis of lending through Joint Liability Groups’ have been conducted with the objectives to assess the effectiveness of group lending on the social and economic empowerment of the members, to compare the social and economic empowerment of members of JLGs promoted by Kudumbashree and Farmer’s Club and to identify the constraints if any experienced by members. The methods employed to study these objectives were presented under the following sub heads.

3.1 Concepts used in the study

3.2 Location of the study

3.3 Sources of data

3.4 Sample design

3.5 Variables used for the study

3.6 Statistical tools used for the study

3.1 Concepts used in the study

The major concepts used in the study were given below

3.1.1 Marginal farmers

Marginal farmers are farmers with landholding of up to 1 hectare

3.1.2 Small farmers

Small farmers are farmers with a landholding of more than 1 hectare and up to 2 hectares

3.1.3 Joint Liability Groups

A Joint Liability Group (JLG) is an informal group comprising of 4-10 individuals coming together for the purpose of availing bank loan on individual basis or through group mechanism against mutual guarantee.

Generally, the members of a JLG would engage in a similar type of economic activity. Members should belong to similar socio-economic background and carrying out farming and allied activities and who agree to function as a Joint Liability Group.

3.1.4 Empowerment

According to World Bank “Empowerment is the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes”.

3.1.5 Social Empowerment

Social empowerment is the process of developing a sense of autonomy and self-confidence, and acting individually and collectively to change social relationships and the institutions and discourses that exclude poor people and keep them in poverty.

3.1.6 Economic empowerment

Economic empowerment is the ability to make and act on decisions that involve the control over and allocation of financial resources.

3.1.7 Effectiveness

Effectiveness is the capability of producing a desired result or the ability to produce desired output. When something is deemed to be effective, it means it has an intended or expected outcome.

3.1.8 Economic analysis

Economic analysis is a systematic approach to determine how effectively the economy or something within it is operating.

3.2 Location of the study

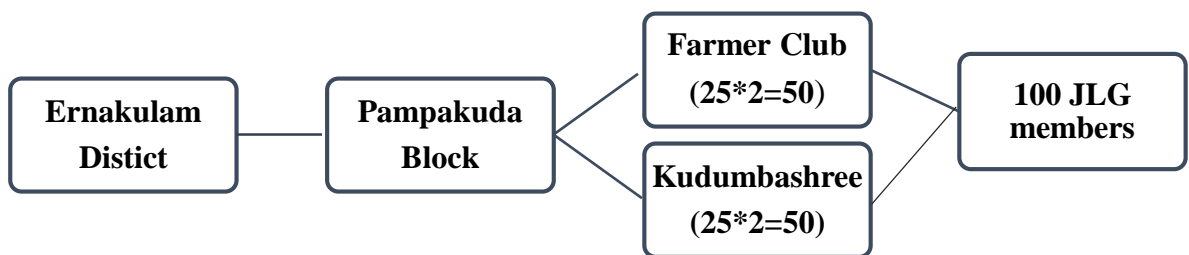
The location of the study was Pampakuda Block in Ernakulum district.

3.3 Sources of Data

The study was based on primary data. The required data were collected through pre-structured interview schedule.

3.4 Sample design

Fig 3.1 Sample design



The study was based on primary data. A multi - stage sampling technique was used to select sample respondents. In the first stage, one blocks, out of the 14 blocks in Ernakulum district, Pampakuda Block was purposively selected. In the second stage, 50 JLGs was randomly selected based on the list obtained from the District Development Office, NABARD and District Mission, Kudumbashree comprising 25 JLGs each promoted by Farmers' Clubs and Kudumbashree involved in the cultivation of crops. In the third stage, 2 members from the selected 50 JLGs were taken as sample respondents. Thus 100 JLG members constituted the sample respondents.

3.5 Variables measured

Variables for each objectives were found out based on review of literature and also based on expert's opinion. Objectives of thesis along with identified variables and statistical tools were given in the following table.

Table 3.1 Variables and statistical tools used for analysis

Objectives	Variables	Statistical tools
To assess the effectiveness of group lending on the social and economic empowerment of the members	<ul style="list-style-type: none"> • Monthly household Income • Monthly Household Expenditure • Monthly Household Savings • Household assets • Employment Days in a month • Economic Decision making ability • Access to asset • Control over asset • Access to resources and services • Control over resources • Quality of life • Self confidence • Social awareness and recognition • Participation in social activities • Skills • Access to Facilities/services • Decision making ability 	Indices and Wilcoxon Signed rank test

Table 3.1 continued

Objectives	Variables	Statistical tools
<p>To compare the social and economic empowerment of members of JLGs promoted by Kudumbashree and Farmer's Club</p>	<ul style="list-style-type: none"> • Monthly household Income • Monthly Household Expenditure • Monthly Household Savings • Household assets • Employment Days in a month • Economic Decision making ability • Access to asset • Control over asset • Access to resources and services • Control over resources • Quality of life • Self confidence • Social awareness and recognition • Participation in social activities • Skills • Access to Facilities/services • Decision making ability 	<p>Mann-Whitney U test</p>
<p>To identify the constraints if any experienced by members.</p>	<ul style="list-style-type: none"> • Structural constraints • Operational constraints • Managerial constraints • Empowerment constraints 	<p>Kendall's Coefficient of concordance (W)</p>

3.6 Statistical tools used for the study

3.6.1 Wilcoxon Signed- rank test

The Wilcoxon signed-rank test is a non-parametric test used to compare two matched samples. It is used to assess whether their population mean ranks differ. It can be used

as an alternative to the paired t -test. Here Wilcoxon Signed-rank test was used to assess the effectiveness of group lending on empowerment of JLG members.

Assumptions:

- The dependent variable was measured at continuous or ordinal scale
- The independent variable was related or matched pairs.
- Two samples were not normally distributed

The test statistic (W) = $\sum_{i=1}^{N_r} [\text{sgn.}(x_{2,i} - x_{1,i}) \cdot R_i]$

Let N be the sample size, i.e., the number of pairs. Thus, there are a total of $2N$ data points. For pairs $i=1, \dots, N$, let $x_{1,i}$ and $x_{2,i}$ denote the measurements.

Where sgn is the sign function

IF N_r more than or equal to 20, Z score can be calculated as $Z=W/ \sigma W$

The significance of the Z score is determined by computing the p -value using the standard normal distribution. If this p -value is less than a specified level (usually 0.05), the null hypothesis is rejected in favour of the alternative hypothesis.

3.6.2 Mann-Whitney U test

The Mann-Whitney U test is used to compare differences between two independent groups when the dependent variable is either ordinal or continuous, but not normally distributed. The test is often considered the nonparametric alternative to the independent t -test. Here Mann-Whitney U test was used to compare the socio economic empowerment between members of JLGs promoted by Farmers Club and Kudumbashree.

Assumptions:

- Dependent variable should be measured at the ordinal or continuous level.
- Independent variable should consist of two categorical, independent groups
- Independence of observations. In other words, there must be different participants in each group with no participant being in more than one group.
- The test can be used when two variables are not normally distributed.

The test involves the calculation of a statistic, called U , whose distribution under the null hypothesis was known. In the case of small samples, the distribution was tabulated, but for sample sizes above 20, approximation using the normal distribution was fairly good. The procedure for large sample was given below. As an initial step assign numeric ranks to all the observations, beginning with 1 for the smallest value. When there are groups of tied values, assign a rank equal to the midpoint of unadjusted rankings. After that add up the ranks for the observations which came from sample.

Then calculate $U_1 = R_1 - [n_1(n_1 + 1)]/2$

Where n_1 is the sample size for sample 1, and R_1 is the sum of the ranks in sample 1.

Similarly calculate $U_2 = R_2 - [n_2(n_2 + 1)]/2$

Where n_2 is the sample size for sample 2, and R_2 is the sum of the ranks in sample 2.

The smaller value of U_1 and U_2 is the one used when checking significance tables.

The sum of the two values is given by

For large samples, U is approximately normally distributed. In that case, the standardized value Z was calculated

$$Z = \frac{U - m_u}{\sigma_u}$$

Here m_U and σ_U are the mean and standard deviation of U

3.6.3 Kendall's coefficient of concordance (W)

Kendall's coefficient of concordance was used to identify the most severe constraints with in the four broad constraints faced by JLG members. The Kendall's coefficient of concordance (W) was a measure of the extent of agreement or disagreement among JLG members when rankings the constraints based on severity. The value of W is positive and ranges from zero to one where one denotes perfect agreement among farmers and zero denotes maximum disagreement.

The constraints were ranked from the most severe to the least severe using numerals 1, 2, 3 ... n in that order (where n is a positive integer). The total rank score for each constraint was computed and the constraint with the least score was ranked as the most severe constraint, while the constraint with the highest score was ranked as the least severe constraint. The total rank score computed was used to calculate the Kendall's Coefficient of Concordance (W), which measures the degree of agreement between respondents in the ranking. The equation for the Kendall's coefficient of concordance was given below

$$W = \frac{12[\sum T^2 - (\sum T)^2/n]}{nm^2(n^2 - 1)}$$

Where, W = Kendall's Coefficient of Concordance,

T = Sum of ranks for constraints being ranked,

m = Total number of respondents

n = Total number of constraints

3.6.4 Indices

To assess socio-economic empowerment indices were calculated for each indicators of empowerment. Indices were calculated based on Likert scale of Summated ratings. The formula employed to construct indices in this particular research was given below.

$$Index = \frac{\sum_{i=1}^n \sum_{j=1}^a S_{ij} * 100}{\sum \max S_j}$$

i = Respondents

j= Factors

S_j = Score of the jth factor

S_{ij} = Total Score of the jth factor of the ith respondent

Max S_j = Maximum score for the j^{th} factor

Based on the above mentioned methodology data were collected and analysed. The results of the analysis were presented in the subsequent chapter.

RESULTS AND DISCUSSION

CHAPTER 4

RESULTS AND DISCUSSION

In India, historically, spread of institutional credit was insignificant. Findings of the Situation Assessment Survey of Farmers- Indebtedness of Farmer Households, by the NSSO (GOI, 2003) highlighted that less than half (48.6%) of country's farming community (89.35 million households) has no access to any source of credit. The situation was reported to be more critical in case of small farmers, who account for more than 80 per cent of total number of farm holdings in the country, but only 45 per cent of them had access to credit. Despite various efforts to improve the reach of these sections of the community to institutional sources, a large segment of the population remained outside the formal credit.

One of the major innovations in the rural credit in India during the 1990s was the Micro credit programme initiated by NABARD. The movement started in 1992, has made rapid strides. This programme has enabled more than 7 crore households in the country to gain access to credit facilities from the formal banking system (NABARD, 2008-09). But the programme failed to cater to the needs of agriculture. As a result of this concept of JLGs was introduced in 2005-2006.

Joint Liability Group concept gained momentum with the advantage of group based lending where all members in the group were liable for each other's loan. The programme was also capable of preventing some of the restraints built in the SHG-bank linkage programme, such as limit in loan amount, minimum waiting period for loan eligibility, few members' disagreement in accepting liability, etc. Under group liability, clients have an authority to screen and choose other clients, so that only trustworthy individuals were included in the group with mutual agreement. In addition, to this members will make sure that funds were invested properly. Enforcement of payment was enhanced because members face peer pressure to repay their loans. Thus, the system effectively shifts core responsibility from the lender to the client themselves. There by reducing non repayment of loan. Group liability also helps in overcoming the

information asymmetries found in credit markets, especially for households without collateral. For the banks and other financial institutions, joint liability contracts enable to reduce cost of screening, monitoring and enforcement.

By reviewing the relevant literature it has seen that JLGs was a potential tool for ensuring livelihood support. The members of JLGs in many part of the country were very satisfied with the provision of the required backward and forward linkages provided through their Federation of JLGs or through their promoting institutions like NGOs or the farmers club. Micro enterprises promoted by JLG members have resulted in additional employment creation. Repeated loans availed by well performing JLGs enabled them to invest in productive equipment's resulting in increased volumes and profits. After taking loans from the banks through JLGs, many farmers stopped distress sale of their produce, got a higher price due to negotiation with a trader as a group .JLGs facilitated the members to access technical training and this resulted in skill up gradation which increased their confidence level. Hence this paper seeks to assess the effectiveness of group lending on social and economic empowerment of members of JLGs and also try to identify the constraints experienced by JLG members.

This chapter was presented as follows

- 4.1 Socio economic profile of sample respondents
- 4.2 Effectiveness of group lending on socio- economic empowerment of JLG members
- 4.3 Comparison of socio- economic empowerment between members of JLGs promoted by Kudumbashree and Farmers club
- 4.4 Constraints experienced by JLG members

4.1 Socio economic profile of sample respondents

Socio economic status is the measure of social and economic prospects of individual respondents. It indicates the social position of an individual with respect to educational status, income and occupation. Socio economic profile of individual JLG members

were analysed using variables like age, gender, marital status, religion etc. The socio economic details of respondents were depicted in the following Table.

Table 4.1 Socio economic profile of JLG members

Sl.No.	Variables	Unit	No. of respondents
1	Age (in Years)		
	30-40		9(9)
	40-50		33(33)
	50-60		48(48)
	60-70		7(7)
	70-80		3(3)
2	Gender		
	Male		38(38)
	Female		62(62)
3	Marital status		
	Unmarried		2(2)
	Married		94(94)
	Widow		3(3)
	Divorced		1(1)
4	Religion		
	Christian		43(43)
	Hindu		57(57)
5	Social Category		
	SC		13(13)
	OBC		41(41)
	General		46(46)

Table 4.1 continued

6	Educational status		
	Primary		16(16)
	High school		66(66)
	SSLC		13(13)
	Plus Two		31(31)
	Graduation		2(2)
7	Occupation		
	Self employed		69(69)
	Wage employed		31(31)
8	Economic status		
	APL		17(13)
	BPL		83(83)
9	Monthly income (₹)		
	Below 10000		59(59)
	10000-20000		12(12)
	20000-30000		24(24)
	30000-40000		4 (4)
	Above 40000		1 (1)
10	Source of income		
	Agriculture		69(69)
	Wage		31(31)
11	Land holding (in Cents)		
	Below 25		79(79)
	25-50		4(4)
	50-75		8(8)
	75-100		5(5)
	Above 100		4(4)

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

From Table 4.1 it was revealed that most of the respondents (48 per cent) were belongs to the age group of 50-60 years. It is followed by age groups 40-50 years (33 per cent), 30-40 years (9 per cent) and 60-70 years (7 per cent). Only 3 per cent of respondents belongs to age category 70-80 years. Thus we can found that most of the members in the JLG were middle aged.

Majority of respondents were females (62 per cent). It is due to the fact that the JLG promoted by Kudumbashree were exclusively for women.

As regards to marital status of respondents majority of them (94 per cent) were married. It may be due to the reason that out of economic necessity of the family, married women and men join in JLGs as members to avail the micro credit facility and also to involve in the agricultural activities to augment their family income.

Fifty seven per cent of the sample respondents were belong to Hindu religion and remaining from Christian community.

About 46 Per cent of respondents belongs to General category. It was followed by OBC category (41 per cent). Thirteen percent of the respondents were from SC category.

Education empowers JLG members to make use of available avenues for solving their problems, experimenting and adopting new technologies, schemes and support. Majority of the respondents (66 per cent) had education up to High school level. Thirty one percent had Plus Two level of education. About 16 per cent were educated up to primary level. Thirteen present have 10th level of education. Merely 2 per cent were graduates.

Majority of the respondents (69 per cent) were self-employed. The rest 31 per cent constitutes individuals employed in Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

Most of the respondents (83 per cent) were from BPL households and remaining 13 per cent were from APL households. The results truly reflect that low income people were the main constituents of JLGs.

Majority of the respondent's monthly income were below ₹10000. Twenty per cent of the respondents were from income group ₹ 20000-30000. About 12 per cent of the people falls in the income class ₹ 10000-20000. Only few (5 per cent) respondents have income above ₹ 30000.

About 69 per cent of the respondents depends on agriculture as their major source of income. Daily wages was the primary source of income for remaining 31 per cent of the respondents.

Most of the respondents (79 per cent) have land holding below 25 cents. Only 4 per cent have landholding above 1 acre. As majority of the respondents have small and fragmented holdings by forming JLGs, they were taking up land on lease. As a result they enter the programme as cultivators as opposed to agricultural labour and there by enjoying access and control over the means of production and access to formal credit.

4.2 Effectiveness of group lending on Socio- economic empowerment of JLG members

The First objective of the study was to assess the effectiveness of group lending on Socio- economic empowerment of JLG members. This study developed an Index to find the socio-economic empowerment of JLG members by choosing various indicators based on past studies. In this research 17 major dimensions were measured to know socio-economic empowerment. In addition to that the study was also focussed on sub-indicators of each dimension. To know the effectiveness, information related to socio-economic situation of respondents before and after the JLG intervention were collected.

This particular research used recall method for getting information related to economic activities before and after joining the JLG programme. To minimise bias from respondents, cross questions were asked for further verification and consistency of the answers given by them. Wilcoxon signed- rank test was used to analyse the effectiveness of group lending by comparing pre and post JLG situations. The results were presented in the following sections.

4.2.1 Effectiveness of group lending on Economic empowerment of JLG members

Economic empowerment refers to the process of obtaining collective bargaining for economic gains, control over means of production, involvement in decision-making regarding economic aspects. The farmers were considered to be empowered, when their economic conditions have become better and their production has been increased. The review of past literature has shown that organising rural farmers into groups has provided an effective institutional mechanism for their empowerment.

For the purpose of the study Economic empowerment was measured using eleven variables. Among these 11 variables 5 variables are quantitative variables and remaining were qualitative variables. The variables such as Monthly Household Income, Monthly Household Expenditure, Monthly Household Savings, Household Assets and Days employed in a month were measured quantitatively. For the construction of Economic empowerment index these variables were categorised into different classes. Then scores ranging 1 to 5 were assigned to various classes. That is least score was given to lowest class and highest score for uppermost class. The remaining variables were measured using relevant scales based on previous literature and expert's opinion. A detailed analysis of each of these variables were given below.

4.2.1.1 Monthly Household Income

Household Income refers to the combined income of all members of a Household. The Household income of JLG members before and after joining JLG were depicted below.

4.2 Monthly Household Income of JLG members

Monthly Household Income(₹)	No. of respondents	
	Before joining JLG	After joining JLG
Below 15000	16(16)	1(1)
15000-25000	60(60)	25(25)
25000-35000	16(16)	44(44)
35000-45000	7 (7)	21(21)
Above 45000	1(1)	9(9)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

Table 4.2 shows the monthly Household Income of respondents before and after joining JLG. It was evident from the table that monthly Household Income of respondents has been increased after joining the JLGs. It was understood from the above table that in the income group of less than ₹15000 the number of respondents were more before joining the JLGs. After joining the JLGs their number decreased, it means that they moved to higher income group after joining the programme. In all other income groups, the number of respondents increased after joining the JLGs. This was in line with the findings of Gyau (2014) that group farming can improve the income of its beneficiaries.

4.2.1.2 Monthly Household Expenditure

Household Expenditure is the amount spending made by resident households to meet their everyday needs, such as food, clothing, housing (rent), energy, transport, durable goods, health costs, leisure, and miscellaneous services. The monthly expenditure pattern of JLG members were illustrated in the following sections.

Table 4.3 Monthly Expenditure on Food

Monthly Expenditure on Food	No. of respondents	
	Before joining JLG	After joining JLG
Below 10000	10(10)	2(2)
10000-20000	46(46)	17(17)
20000-30000	38(38)	49(49)
30000-40000	5(5)	28(28)
Above 40000	1(1)	4(4)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

Table 4.3 shows monthly expenditure on food before and after joining JLG. Before Joining JLG about 50 per cent of the respondent's food expenditure was below ₹20000. But after joining JLG about 70 percent of the respondents have monthly expense food above ₹20000. Hence it was evident from the table that there was improvement in expenditure on food after joining JLG.

Table 4.4 Monthly Household Expenditure on Electricity

Monthly Expenditure on Electricity	No. of respondents	
	Before joining JLG	After joining JLG
Below 300	60(60)	17(17)
300-600	29(29)	55(55)
600-900	5(5)	5(5)
900-1200	5(5)	15(15)
Above 1200	1(1)	8(8)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

Table 4.4 shows monthly household expenditure on electricity. Before Joining Joint Liability Groups about 60 per cent of the respondents have electricity charges below ₹300. During post JLG situation the respondents having electricity charges below ₹300 reduced to 17 per cent. After joining Joint Liability Groups about half of the respondents have electricity charges between ₹300-600. Similarly there was increase in number of respondents in above 1200 and 900-1200 expenditure category. Hence it can be concluded that after joining JLGs there were increment in electricity charges.

Table 4.5 Monthly Expenditure on Education

Monthly Expenditure on Education	No.of respondents	
	Before joining JLG	After joining JLG
Below 1000	74(74)	48(48)
1000-2000	12(12)	14(14)
2000-3000	10(10)	16(16)
3000-4000	1(1)	13(13)
Above 4000	3(3)	9(9)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

Table 4.5 shows the monthly expenditure on education. Before joining Joint Liability Groups majority of the respondents (74 per cent) had monthly expenditure on children's education below ₹ 1000. After JLG intervention there was increment in number of respondents having spending above ₹1000. Only 3 per cent have educational expense above ₹4000 during pre JLG period. But due to the participation in JLG it was increased to 9 per cent. Hence it can be concluded that after Joint Liability Groups intervention there were significant increase in spending on education.

Table 4.6 Monthly Expenditure on Health

Monthly Expenditure on Healthcare (₹)	No.of respondents	
	Before joining JLG	After joining JLG
Below 1500	80(80)	47(47)
1500-3000	17(17)	45(45)
3000-4500	1(1)	2(2)
4500-6000	1(1)	5(5)
Above 6000	1(1)	1(1)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

Table 4.6 shows the Monthly Expenditure incurred by respondents on Healthcare. Before joining Joint Liability Groups the Monthly Expenditure on Health care of majority of members (80 per cent) was below ₹1500. But after joining Joint Liability Groups there were improvement in spending in healthcare. This can be understood from the shift in expenditure from lower class to higher expenditure classes. After joining JLG the number of respondents having monthly income between ₹ 1500-3000 were increased from 17 per cent to 45per cent. There was no change in number of respondents in above 6000 expenditure class.

Table 4.7. Monthly Expenditure Clothing

Monthly Expenditure on Clothing (₹)	No.of respondents	
	Before joining JLG	After joining JLG
Below 1000	39(39)	14(14)
1000-2000	41(41)	36(36)
2000-3000	14(14)	36(36)
3000-4000	1(1)	6(6)
Above 4000	5(5)	8(8)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

Table 4.7 shows the monthly expenses incurred by the respondents for clothing before and after joining Joint Liability Groups. Before joining JLG, 38 per cent have spending on clothing below ₹1000 but after joining the programme the spending of respondents were increased. The percentage of respondents in expenditure category below ₹1000 and ₹ 1000-2000 were decreased compared to pre Joint Liability Group situation. As a result the percentage of respondents in other three class were improved a lot.

Table 4.8 Monthly Expenditure on Entertainment

Monthly Expenditure on Entertainment (₹)	No.of respondents	
	Before joining JLG	After joining JLG
Below 500	66(6)	16(6)
500-1000	22(22)	44(44)
1000-1500	8(8)	23(23)
1500-2000	1(1)	13(13)
Above 2000	3(3)	4(4)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

Table 4.8 shows the respondent's monthly expenditure on entertainment. Before participating in Joint Liability Groups about 65 per cent of the members have entertainment expenses below ₹500. However their expenditure on entertainment had increased after becoming a part of Joint Liability Group. The increment was more in ₹500-1000 expenditure class.

Table 4.9 Monthly Expenditure on Function

Monthly Expenditure on Function (₹)	No.of respondents	
	Before joining JLG	After joining JLG
Below 1000	58(58)	25(25)
1000-2000	30(30)	46(46)
2000-3000	9(9)	25(25)
3000-4000	1(1)	2(2)
Above 4000	2(2)	2(2)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

From Table 4.9 we can find that 58 per cent of the respondents monthly spending on function was below ₹ 1000. But after joining the programme only 25 per cent have spending below ₹1000. The percentage of respondents have spending between ₹1000-2000 increased from 30 to 46 per cent. Therefore it was inferred that there were increment in spending of members in other expenditure compared to pre JLG situation.

Table 4.10 Other monthly expenditure of respondents

Other monthly expenditure (₹)	No. of respondents	
	Before Joining JLG	After Joining JLG
Below 500	92(92)	66(66)
500-1000	6(6)	22(22)
1000-1500	0	8(8)
1500-2000	0	1(1)
Above 2000	2(2)	3(3)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

Table 4.10 shows other monthly expenditure of Joint Liability Groups. Other monthly expenditure of respondents include transportation expenses, social expenses etc. About 92 per cent of the respondents have expenditure below ₹500 before joining the programme. But after becoming a Joint Liability Group member their spending has increased and only 66 per cent respondents remained in the lowest expenditure category.

It was found that there were increment in monthly Household expenditure on Food, Electricity, Education, Health, Clothing, Entertainment, Functions after joining JLG compared to Pre JLG situation. The reason for this increase in expenditure might be the improvement in standard of living, change in Clothing, Food habits of members as a result of increment in income.

4.2.1.3 Savings

The incremental income can not only enhance the expenditure of the family but also increased the savings of the family. For poor people, saving was very essential for meeting their unexpected financial needs. Savings play a vital role in building poor people's confidence. It can act as a social safety net for the poor in the developing countries. Because, poor people were the most vulnerable to various risks and yet the least protected against the consequences of these risks. JLGs can also act as a medium for promoting the habit of saving among the vulnerable section of the society. Savings in the context of the study covers the money set aside by JLG members as well their family members. Different forms of savings, such as chits, Post office savings or savings with rural co-operatives and savings in Bank were considered in measuring savings of the respondents.

Table 4.11 Monthly Savings of JLG members

Monthly Savings (₹)	No.of respondents	
	Before joining JLG	After joining JLG
Below 1500	88(88)	57(57)
1500-3000	4(4)	15(15)
3000-4500	0	14(14)
4500-6000	6(6)	7(7)
Above 6000	2(2)	7(7)
Total	100	1000

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

From the Table 4.11 it can be understood that the savings made by respondents increased significantly after JLG formation. The major avenues for savings for JLG members in study arena were Chits, deposits with Post Office and Bank. Most of the respondents have savings with JLG even though JLG is a group formed for obtaining credit. During pre JLG situation the majority of respondents (88 per cent) had savings below ₹ 1500. But by participating in JLG programme the members savings have increased .There were no respondents have saving between ₹ 3000-4500. But after joining the programme 14 per cent have savings between ₹ 3000 to 4500.Similarly increase can be seen in other categories also. The reason for increase in savings of the respondent can be the due to the increase in income through JLG activity, the encouragement of thrift through JLG and availability saving schemes.

4.2.1.4 Household assets

Household assets of the respondents generally means jewellerys, gas stove, Fridge, Mixer Grinder, Two wheelers, TV, radio and other electronic devices. Household assets served as status symbols in the village. Assets of the respondents was measured in terms of money value of the assets at the time of interview and before they joining the JLGs.

Table 4.12 Household assets of JLG members

Household Assets (₹)	No.of respondents	
	Before Joining JLG	After Joining JLG
Below 20000	11(11)	5(5)
20000-40000	38(38)	25(25)
4540000-60000	37(37)	45(45)
60000-80000	11(11)	17(17)
Above 80000	3(3)	8(8)
Total	100	1000

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

From table 4.12 it was clear that the monthly household assets of respondents were increased after joining JLG. This was because of the fact that after joining JLG they had opportunity to save, get additional income and through the savings and profit obtained they could afford to purchase some consumer durables, livestock and some household assets.

4.2.1.5 Days employed in a month

More often the microfinance programme through JLGs targets rural poor especially small and marginal farmers to provide them with opportunities for self-employment activities. JLGs provides self-employment opportunities not only to JLG members but also create employment opportunities for their family members to be engaged in various income generating activities undertaken by the group. Self-employment empowers these poor people by providing financial independence and alternative source of social identity. Table 4.13 shows the number of employment days per month of the JLG members before and after joining the JLG.

Table 4.13 Days employed in a Month

Days employed in a Month	Before Joining JLG	After Joining JLG
Nil	21(21)	0(0)
5-10	14(14)	23(23)
10-15	0(0)	7(7)
15-20	2(2)	1(1)
Above 20	63(63)	69(69)
Total	100	100

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to total

It was evident from the Table 4.13 that 21 percent of the JLG members were unemployed before joining the programme. This implies that JLG approach was able to create larger employment opportunities with the use of group lending. The days of employment for those who are employed were also increased after joining JLG. The increase in number of days of employment can be a reason for increased household income and saving. Many members were engaged in agriculture activities with other group members after joining JLGs. Therefore, they became more economically independent and contributing significantly to their household income.

4.2.1.6 Economic Decision making ability of respondents

Economic decision making ability of respondents show their involvement in decision-making regarding economic aspects of their daily life. The economic decision making ability of JLG members were examined by constructing decision making ability index. For the construction of this index, JLG members were asked to rate Nine given statements on a five point scale i.e. To a great extent, Much more, Somewhat, Very little and Not at all. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. The score of all the respondents for each statement were summed up to arrive at the total score. The total score obtained by each statement was then divided by the maximum possible score for that statement to obtain the decision making ability

index for that particular economic aspect. The scores of the all statements have been summarised to form the composite index for economic decision making ability index.

Table 4.14 Economic decision making ability of JLG members

Particulars	Index	
	Before joining JLG	After joining JLG
Purchase of assets	67.8	84.4
Sale of assets	63.6	79.8
Transfer of assets	63.8	80.2
Raising of Loan	71.12	86.6
Repayment of Loan	73	88.4
Savings	72.6	90.4
Investments	71.6	87
Donations and Presentation	80.2	91.18
Construction and improvement of Housing facility	72	87.4
Composite Index	70.64	86.22

Source: Compiled from primary data

Table 4.14 shows the decision making ability of respondents with respect to various economic aspects before and after joining JLG. Out of all types of decisions the respondents have highest ability in taking decision regarding donations and presentation before and after joining the programme. After joining the programme the decision making ability of respondents regarding donations and presentation were increased greatly (91.18 per cent). In addition to this respondents have high decision making power regarding savings. The decision making ability of respondents in all other areas of economic aspects were improved after their participation in the programme. The majority of sample respondents opined that their decision making power has increased in purchase, sale and transfer of assets, construction and improvements in housing facility, raising and repayment of loans of the family and their

investment. The overall decision making ability index of respondents were increased from 70.64 to 86.22. This was the clear indication of effectiveness of JLG on the economic decision making ability of its members.

4.2.1.7 Access to asset

Poor people's access to, use of and control over assets and other productive resources were essential to ensure their right to equality and to an adequate standard of living. These resources help to ensure that these people were able to provide for their day-to-day needs and those of their families. Asset is operationally defined as an economic resource which has value of ownership and can be converted into cash. Asset access was operationally defined as the ability of the respondent to make use of a particular asset on their own whenever they require.

For the construction of access to asset index respondent's access to 3 kinds of assets were measured. The respondent's access to each asset were measured in a five point likert scale. i.e. Excellent, Good, Satisfactory, poor and Extremely poor. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1. The score of all the respondents for access to each type of asset were summed up to arrive at the total score. The total score obtained for each asset was then divided by the maximum possible score for that asset to obtain the accessibility index for that particular asset.

Table 4.15 Access to asset of JLG members

Particulars	Index	
	Before joining JLG	After joining JLG
Land / Dwelling	64.8	78.2
Farm assets	51.8	76
Household assets	71	86.2
Composite Index	62.53	80.13

Source: Compiled from primary data

Table 4.15 shows access to asset of respondents before and after joining JLG. Among different assets the respondent's accessibility to farm assets was very low during the

pre JLG situation. But after joining JLG they were increasingly taking up agriculture activities hence their accessibility to farm assets were increased greatly. Repeated loans availed through JLGs enabled members to invest in productive equipment's and which enabled them to scale up farming activity through the lease of additional plots. The respondents have highest accessibility to household assets before and after joining JLGs compared to other classes of assets. The access to land was increased from 64.8 to 78.2. The overall asset access index was increased from 62.53 to 80.13 after joining Joint Liability Group.

4.2.1.8 Control over assets

Asset control was operationally defined as the power or authority of a person to decide about a particular asset with regard to its selling/ buying/ transfer or mortgage. Here Control over assets was measured using a five point likert scale ie. To a great extent, Much more, Somewhat, Very Little and Not at all. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. Then indices were developed for measuring the control over land, farm assets and Household assets of respondents during pre and post JLG situation. After that a composite index was also developed. These results were given below.

Table 4.16 JLG members control over assets

Particulars	Index	
	Before joining JLG	After joining JLG
Land / Dwelling	61	77.4
Farm assets	50.2	72.4
Household assets	65.2	82.8
Composite Index	58.8	77.5

Source: Compiled from primary data

Table 4.16 shows the control over assets of respondents in pre and post JLG situation. The respondents have less control over farm assets compared to control over Land and Household assets. The respondents have highest control over Household assets. The corresponding Index were increased from 65.2 to 82.8. The index of control over farm assets also increased from 50.2 to 72.4. Control over land was increased from 61 to 77.4 per cent. The overall control over asset index was increased from 58.8 to 77.5 due

to participation of JLG. This indicated that group lending through JLG have impact on increasing its participant's control over their assets.

4.2.1.8 Access to resources and services

Access to resources referred as the right to use resources by the individual. The different kinds of resources were income, savings, credit, farm resources, and household resources. The various services considered in this research were agricultural extension services, financial services, marketing, extension and technology. The respondent's access to each resources or services were measured in a five point likert scale. i.e. Excellent, Good, Satisfactory, Poor and Extremely poor. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1. The score of all the respondents for access to each type of resources or services were summed up to arrive at the total score. The total score obtained for each resources and services was then divided by the maximum possible score for that resources/services to obtain the accessibility index for that particular resource or service. The indices for access to various resources and services were depicted in following table.

Table 4.17 JLG members access to resources and services

Particulars	Index	
	Before joining JLG	After joining JLG
Access to income	71	91.4
Access to savings	70	88.6
Access to credit	70.2	89.6
Household resources	70.6	88.2
Access to Farm resources	51	81.4
Access to markets	32	64.2
Access to agricultural extension services	27.6	56.2
Access to rural financial services	46.2	88.6
Access to technology	24.2	60.6
Composite Index	51.42	78.75

Table 4.16 shows the respondents access to various resources and services. The member's access to income were increased greatly due to their participation in JLG. The access to income index were increased from 71 to 91.4 .This because of the fact that majority of the people were unemployed and engaged in less income generating activities before joining the programme.

JLG also have impact on increased access to their saving, credit, household resources. Prior to JLG financing, most tenant farmers and share croppers interviewed were unable to avail a loan from a formal financial institution. This was mainly because of the difficulties in providing the necessary documents required by banks and also due to the lack of collateral. But after joining the programme many of the people have got increased access to rural financial services as a result the index was increased from 70.2 to 89.6.

JLGs served as a conduit for its members for technology transfer, facilitated access to market information and assisted in carrying out activities like soil testing, training, health camps and assess input requirements, etc. Hence respondents' access to market, extension services and technology were increased due to the programme. The members were very satisfied with the provision of the required backward and forward linkages in production and marketing provided through their Federation of JLGs or through their promoting institutions like Kudumbashree or the farmers club. After taking loans from the banks through JLGs, many farmers stopped distress sale of their produce, got a higher price due to negotiation with traders as a group. This observation was in line with findings of studies by Sajesh (2013) and Quaim (2010).That is through collectivisation in agriculture farmers were got access to technology, extension services providers, access to resources including knowledge, increased bargaining power, access to new markets like supermarkets and food chains compared to before.

The overall accessibility index was increased from 51.42 to 78.75 as a result of JLG intervention. More interferences were required to enhance the JLG member's access to technology, extension services and markets.

4.2.1.8 Control over resources

Control over resources was operationally defined as the power to decide whether and how a resource can be used. Here Control over resources was measured using a five point likert scale ie. To a great extent, much more, Somewhat, Very Little and Not at all. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. Then indices were developed for measuring the control over various kinds of resources during pre and post JLG situation. After that a composite index was also developed .The indices developed for assessing the respondent’s control over various resources in pre and post JLG situation were depicted in the following table
 Table 4.18 JLG members control over resources

Particulars	Index	
	Before joining JLG	After joining JLG
Control over use of income	68.2	87.4
Control over savings	66.4	86.2
Control over borrowings	69	88
Control over spending	64	83.8
Farm resources	52.2	79.6
Household resources	61.6	85
Composite Index	63.56	85

Source: Compiled from primary data

Table 4.18 shows the control of resources of respondents before and after joining JLG. The respondents have highest control over their borrowing compared to other categories of resources before joining JLG and the control was less in case of farm resources. The control over all the resources were increased after joining the JLG. The control over income became high after joining JLG. The composite index was increased from 63.56 to 85 after joining JLG.

4.2.1.9 Quality of Life

Quality of life is the overall level of well-being or welfare of a person taking into account both monetary and non-monetary factors. Standard indicators of the quality of life include not only wealth and employment but also the built environment, physical and mental health, education, recreation and leisure time, and social belonging. For the construction of this quality of life index, JLG members were asked to rate 8

given statements on a five point scale i.e Highly satisfied, Satisfied, Moderately satisfied, Dissatisfied and Highly Dissatisfied. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. The score of all the respondents for each statement were summed up to arrive at the total score. The total score obtained by each statement was then divided by the maximum possible score for that statement to obtain the index for that particular indicator. Later composite index for quality of life were calculated. The indices for quality of life were depicted in following table.

Table 4.19 Quality of Life of JLG members

Particulars	Index	
	Before joining JLG	After joining JLG
Food security at home	83.6	93.8
Drinking water availability	86.6	95.2
Clothing needs	84.4	95.2
Hosing needs	83.4	93.6
Employment security	79.6	93.8
Medical facility	81	94
Financial security	76.2	92.8
Growth and Development	66.6	93.6
Composite Index	80.17	94

Source: Compiled from primary data

Table 4.19 shows Quality of Life of members. Through the participation in JLG the respondents achieved high financial security and growth compared to pre JLG period. Because many of them were home makers and employed at lesser wage rate before joining JLG. With the support of family members they achieved food security at home by cultivating organic vegetables and fruits. As a result the food security index increased from 83.6 to 93.8. Many of the members reported that they got enough agriculture produce to meet their family requirements. The increased income through JLG activity satisfied clothing, housing and healthcare needs of members. The index value of all the indicators of Quality of life was above 90 after joining JLG. The overall index for Quality of life was increased from 80 to 94. Hence it was inferred that the quality of life of respondents increased after they join JLG.

4.2.2 Effectiveness of group lending on Indicators of Economic empowerment

Wilcoxon signed- rank test has been used for assessing the effectiveness of group lending on various indicators of economic empowerment

Table 4.20 Effectiveness of group lending on indicators of Economic empowerment

Sl. no.	Particulars	No.of Ranks (N)			Z value	P value
		Negative ranks	Positive ranks	Ties		
1	Monthly Household Income	-	82	18	-8.518	0.000
2	Monthly Household Expenditure	-	100	-	-8.683	0.000
3	Savings	-	37	63	-5.425	0.000
4	Household assets	-	47	51	-5.735	0.000
5	Employment Days in a month	-	21	78	-3.628	0.000
6	Economic Decision making ability	2	78	20	-7.740	0.000
7	Access to asset	-	88	12	-8.347	0.000
8	Control over asset	3	83	14	-7.438	0.000
9	Access to resources and services	-	100	-	-8.693	0.000
10	Control over resources	-	90	10	-8.352	0.000
11	Quality of life	-	89	11	-8.216	0.000

Source: Compiled from primary data

It is observed from the Table 4.20 that in case of all indicators of economic empowerment Z value is found significant at 1 per cent level of significance. Therefore, it can be concluded that there was significant change in all economic indicators after joining the programme. The number of positive ranks for each of the economic empowerment indicators lends credence to the significance difference as shown by the Z values. Hence it was concluded that group lending through JLG was effective in empowering its beneficiaries economically.

Many members involve in agriculture activities with other group members after joining SHGs. Therefore, they were now economically independent and contribute to their household income. As a result there were increase in monthly household income.

The results of Wilcoxon signed rank test was also found significant in case of household expenditure. Hence it was inferred that there was no significant difference in monthly household expenditure before and after joining JLG were rejected. The average monthly saving of the JLG member were also increased due to involvement in JLG programme. Since Z value is significant at 1 per cent level. Similarly there was significant improvement in number of days of employment of JLG members after joining the programme.

The reason might be the easy access to credit through JLG provided the opportunities for undertaking income generating activities by the respondents. This could have resulted in the increase in the employment opportunities at the household level. Therefore JLG have assisted the members to generate more employment through self-employment activities and by availing of micro-finance in post-JLG situation.

The asset holding of JLG members were also increased during the post JLG situation. Similarly Wilcoxon signed rank test results also showed that the group lending through JLGs also had direct impact on economic decision making ability, access to asset, control over asset, access to resources and services, control over resources and quality of life of JLG members.

Wilcoxon signed rank test was used to examine the effectiveness of group lending on overall economic empowerment index by comparing pre and post JLG situation.

4.2.3 Effectiveness of group lending on Economic empowerment Index

Economic empowerment was thought to allow people from weaker sections of the society to think beyond their immediate daily survival and to exercise greater control over both their resources and life choices. For the purpose of the study, economic empowerment index was calculated using the aggregate score of economic parameters such as household assets, household income, household expenditure, household savings, days employed in a month, economic decision making ability, access to asset,

control over asset, access to resources and services, control over resources and quality of life of the JLG members. The economic empowerment index of JLG members and the result of the Wilcoxon signed rank test for measuring the effectiveness were presented below.

Table 4.21 Economic empowerment Index of JLG members

Particulars	Economic empowerment index
Before Joining JLG	58.76
After Joining JLG	92.26

Source: Compiled from primary data

Table 4.21 reveals that the economic empowerment index increased after joining the microfinance. The index increased from 58.76 per cent to 92.26 cent showing improvement in economic status of most of the sample Joint Liability Group members.

Hypothesis testing using Wilcoxon signed rank test was also carried out to examine the significant impact of group lending on economic empowerment index by comparing before and after JLG situation. The result of the hypothesis testing is presented below.

Null hypothesis (Ho): The median difference in Economic empowerment index of members before and after joining the programme was Zero

Alternative hypothesis (Ha): The median difference in Economic empowerment index of members before and after joining the programme was not Zero

Table 4.22 Effectiveness of group lending on Economic empowerment

Sl.no	Particulars	No.of Ranks (N)			Z value	P value
		Negative ranks	Positive ranks	Ties		
1	Economic empowerment	-	100	-	-8.684	0.00

Source: Compiled from primary data

From table 4.22 it can be found that the Z value was significant at 0.01 level, hence the above null hypothesis was rejected and alternative hypothesis accepted. That is the

median differences between the pairs of observation was not zero. The number of positive ranks for economic empowerment index lends credence to the significant difference as shown by the Z values. Hence, it can be concluded that there was significant improvement in overall economic empowerment index of respondents after joining the JLG programme.

4.2.4 Effectiveness of group lending on social empowerment

It was evident from review of previous research that group lending not only helped in improving the economic condition of the JLG member, it also helped JLG members to improve their social status and recognitions in the societies. The social impact of group lending on JLG members were studied using parameters like self confidence level, ability to take decision, social awareness and social responsibility, skill development, access to facilities and social decision making ability . Indices and Wilcoxon signed rank test was used for assessing the effectiveness of group lending on social empowerment of its members.

4.2.4.1 Self-confidence of JLG members

To assess the self-confidence level, details related to JLG member's confidence in facing financial crisis, confidence of meeting official people and confidence for participating in social events were collected. For the construction of self confidence index, JLG members were asked to rate 3 given statements on a five point scale i.e. To a great extent, Much more, Somewhat, Very little and Not at all. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. The score of all the respondents for each statement were summed up to arrive at the total score. The total score obtained by each statement was then divided by the maximum possible score for that statement to obtain the index for that particular statement. Later a composite index for self-confidence was computed. The indices for self-confidence were depicted in following table.

Table 4.23 Self-confidence of JLG members

Particular's	Before joining JLG	After joining JLG
Confidence of facing financial crisis	65.4	93.6
Confidence of meeting official people	67.8	95.4
Confidence for participating in social events	73.8	94.4
Composite Index	69	94.47

Source: Compiled from primary data

Table 4.23 shows the confidence level of JLG members before and after joining JLG. Confidence for participating in social events was high compared to other two indicators of self confidence. Similarly the confidence of facing financial crisis was too low. After joining JLG the respondent's confidence of facing financial crisis was increased from 65.4 to 93.6. There were significant improvement in respondent's confidence of meeting official people. The index value for this particular indicator was highest compared to other two. As a result of joining the programme the overall confidence of JLG members were increased from 69 to 94.47.

4.2.4.2 Social awareness and recognition

Social awareness was the ability to comprehend and appropriately react to broader problems of the society. Here 4 indicators were used to assess the Social awareness of JLG members. For the construction of Social awareness and recognition index, JLG members were asked to rate 4 given statements on a five point scale i.e. To a great extent, Much more, Somewhat, Very little and Not at all. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. The score of all the respondents for each statement were summed up to arrive at the total score. The total score obtained by each statement was then divided by the maximum possible score for that statement to obtain the index for that particular statement. Later a composite index for was Social awareness and recognition computed. The indices for Social awareness and recognition were depicted in following table.

Table 4.24 Social awareness and recognition of JLG members

Particulars	Index	
	Before joining JLG	After joining JLG
Recognition in community	60	90.8
Awareness on various Govt. schemes	61.2	92.2
Respect in the family	75.4	92.2
Ability to take up social issues	50	85.2
Composite Index	61.65	90.1

Source: Compiled from primary data

Table 4.24 reveals that after joining JLG the social recognition of JLG member has increased from 60 to 90.8. The respondent's awareness level on various Government schemes were increased from 61.2 to 92.2. The respect in the family also increased greatly after participating in the programme. The index was increased from 75.4 to 92.2. Before joining JLG the respondents ability to take up social issues was too low. But due to JLG intervention their ability was increased. Due to the improvement in sub components the overall social awareness and recognition index was increased from 61.65 to 90.1.

4.2.4.3 Participation in social activities

The JLG member's participation in social activities were assessed in terms of their Participation in Grama Sabha and public events, their Contribution to community /social needs, involvement as organiser for various events and participation as volunteer to various events. The participation in JLG also enhance the participation in community and social events. For the construction of participation index JLG members were asked to rate 5 given statements on a five point scale i.e. To a great extent, Much more, Somewhat, Very little and Not at all. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. The score of all the respondents for each aspect of participation were summed up to arrive at the total score. The total score obtained by each aspect was then divided by the maximum possible score for that aspect to obtain the index for that particular aspect of participation. Later a composite index for

participation was computed. The indices for participation in social activities were depicted in following table.

Table 4.25 Participation in social activities

Particulars	Index	
	Before joining JLG	After joining JLG
Participation in Grama Sabha	70	95.4
Participation in public events	54	90.4
Contribution to community/social needs	42.6	75.8
Organiser for various events	37	68
Volunteer in case of contingencies	32.2	63.4
Composite Index	47.16	78.6

Source: Compiled from primary data

Table 4.25 shows that the index for participation of members in Grama Sabha highest before and after joining JLG .The participation in public events increased from 54 to 90.4.The respondents contribution to community /social needs such as Road construction, Drinking water, Sanitation, Medical facilities etc. increased after joining the programme. After joining JLG respondents started to organise various events like Onam Chantha, Cattle market, loan write off mela, Festivals in Temple/Church/ Mosque etc. The members also encourage to act as volunteers in case of contingencies as a result of JLG intervention. The overall Participation Index was increased from 47.16 to 78.6 due to JLG membership

4.2.4.3. Skills

Skill building was a powerful tool to empower individuals and improve their social acceptance. Many authors reported that there were significant increment skills of individual due to the participation in JLG. The main types of skill acquired by members by organising in groups were communication skills, information skills, and negotiation skills, skills for Book keeping and accounting, technical skills as well as leadership skills. For the construction of this index, JLG members were asked to rate 6 given statements on a five point scale i.e. Excellent. Good, Satisfactory, Poor and Extremely poor. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively.

The score of all the respondents for each statement were summed up to arrive at the total score. The total score obtained by each statement was then divided by the maximum possible score for that statement to obtain the index for that particular statement. Later a composite index for skills was computed. The indices for self-confidence were depicted in following table.

Table 4.26 Skills of JLG members

Particulars	Index	
	Before joining JLG	After joining JLG
Communication skills	76.4	96.8
Information skills	56.6	86.4
Customer ship/negotiation skills	54.8	85
Financial skills (Book keeping and accounting)	60	88.4
Occupational skills/technical skills	60.8	89.2
Leadership skills	57.6	89.8
Composite Index	61.03	89.26

Source: Compiled from primary data

Table 4.26 shows the improvement in skills of respondents before and after joining JLG. Respondents have highest communication skills compared to other social skills. The members have low negotiation skills in comparison to other skills. After JLG intervention many members reported increase in their skills. The negotiation skill which was too low compared to other skills was increased from 54.8 to 85. In addition to this many of the respondents reported improvement in their technical, leadership, financial and informational skills due to participation in the programme. Many members reported that through JLGs they got an opportunity to attend technical training and this resulted in their skill up gradation and confidence level. This can be seen in the increment in skill development index of respondents. The overall index on social skills was increased from 61.03 to 89.26 as a result of JLG programme.

4.2.4.4 Access to Facilities/services

For the construction of access to Facilities index, JLG members were asked to rate 6 given statements on a five point scale i.e. Excellent, Good, Satisfactory, Poor and Extremely poor. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. The score of all the respondents for each facility/service were summed up to arrive at the total score. The total score obtained by each facility/service was then divided by the maximum possible score for that facility/service to obtain the index for that particular facility/service. Later a composite index for Access to facility/service was computed. The indices for facility/service were depicted in following table.

Table 4.27 JLG members access to Facilities/Services

Particulars	Index	
	Before joining JLG	After joining JLG
Medical facilities	83.6	94.8
Hygienic sanitation facilities	86.8	95.8
Drinking water	88.2	97
Nutritious food	85	95.4
Access to basic facilities provided by Panchayat (supply of production implements, machineries and irrigation facilities)	79.6	94.6
Access to developmental Schemes	55	91.6
Composite Index	79.7	94.87

Source: Compiled from primary data

Table 4.27 shows that there was significant improvement in access to facilities/services due to participation in JLG. After joining JLG the basic requirements of the respondents such as food, drinking water, sanitation and healthcare was improved significantly. The accessibility to developmental schemes was very low and the access to sanitation facilities were high during both the situations. After joining JLG the respondent's access to basic facilities offered by Panchayat was increased from 79.6 to 94.6. The

overall accessibility index was increased from 79.7 to 94.8. which means the respondents have very high access to facilities/services.

4.2.4.5 Decision making ability

The power to take decisions was extremely important from the view point of empowerment of marginal sections of the society because it was often seen that their voice was not properly listened. Review of previous research shows that JLG movement have asserted a dignified position of its members in the family as well as in the society. As a result their decision making power has immensely enhanced not only in their family but also in the society. Hence the improvement in decision making ability of respondents were analysed by comparing pre and post JLG situation. For the construction of Decision making ability index, JLG members were asked to rate five given statements on a five point scale i.e. To a great extent, Much more, Somewhat, Very little and Not at all. The opinions of members were assigned the scores of 5, 4, 3, 2 and 1 respectively. The score of all the respondents for each statement were summed up to arrive at the total score. The total score obtained by each statement was then divided by the maximum possible score for that statement to obtain the decision making ability index for that particular social aspect.

Table 4.28 Decision making ability of respondents

Particulars	Index	
	Before joining JLG	After joining JLG
Day to Day activities	79.4	92.8
Health	80.6	93.4
Sanitation	82.2	93.6
Hygiene	84.2	94.2
Education of Children	74.6	88.2
Participation in Social activities	80.4	95
Composite Index	80.23	94.53

Source: Compiled from primary data

Table 4.28 shows that the decision making ability of respondents were high in case of participation in social activities and lowest in case of education of children. The index value of decision regarding day to day activities, health, sanitation and hygiene were increased above 90 after joining JLG. The respondent's decision making ability had increased in all areas under study. This can be understood by the improvement in decision making index from 80.23 to 94.53.

4.2.5 Effectiveness of group lending on indicators of social empowerment

After examining the change in all the indicators of social empowerment Wilcoxon signed rank test was employed to know the effectiveness of group lending on each of these indicators. The results were depicted in the table below.

Table 4.29 Effectiveness of group lending on indicators of social empowerment

Sl. No.	Particulars	No.of Ranks (N)			Z value	P value
		Negative ranks	Positive ranks	Ties		
1	Self confidence	-	95	5	-8.529	.000
2	Social awareness and recognition	-	99	1	-8.685	.000
3	Participation in social activities	-	99	1	-8.658	.000
4	Skills	-	96	4	-8.521	.000
5	Access to Facilities/services	-	87	13	-8.120	.000
6	Decision making ability	-	55	45	-6.483	.000

Source: Compiled from primary data

Table 4.29 shows the results of Wilcoxon signed rank test for each sub-parameters chosen for measuring social empowerment of members of JLGs, it is observed that p-value in all cases were less than 0.01. Therefore the corresponding Z value was significant at 1 per cent level of significance. The number of positive ranks for each social indicators lends credence to the significant difference as shown by the Z values. Hence it was concluded that there was significant difference in social empowerment of members before and after joining JLGs. Therefore, there was significant increase in the

self confidence level, social awareness, participation, access to facilities and decision making ability of members after joining the JLG programme.

4.2.6 Effectiveness of group lending on social empowerment index

Social empowerment was understood as the process of developing a sense of autonomy and self-confidence, and acting individually and collectively to change social relationships and the institutions and discourses that exclude poor people and keep them in poverty. Poor people’s involvement in microfinance groups can contribute to social empowerment by improving their skills, knowledge and self-perception. There for social empowerment index of respondents before and after joining JLG was used to assess the effectiveness of group lending on social empowerment. The parameters used for calculating the social empowerment index for the purpose of the this particular research includes self confidence level, skills, social awareness and recognition, ability to access various public facilities and services and decision making ability.

Table 4.30 Social empowerment index

Particulars	Social empowerment index
Before Joining JLG	67.17
After Joining JLG	90.29

Source: Compiled from primary data

Table 4.30 shows the Social empowerment index of Joint Liability Group members before and after Joining JLG. The Social empowerment index before joining JLG was 67.17. But after joining JLG it was increased to 90.29. Therefore it can be concluded that group lending through JLG increased the social empowerment of participants.

Wilcoxon signed rank test was used to ascertain the effectiveness of group lending on social empowerment index of JLG members after joining the programme. The result of Wilcoxon signed rank test was shown below.

Null hypothesis (H₀): The median difference in Social empowerment index of members before and after joining the programme was Zero

Alternative hypothesis (H_a): The median difference in Social empowerment index of members before and after joining the programme was not Zero.

Table 4.31 Effectiveness of group lending on Social empowerment index

Sl.no	Particulars	No.of Ranks (N)			Z value	P value
		Negative ranks	Positive ranks	Ties		
1	Social empowerment index	-	100	-	-8.684	0.00

Source: Compiled from primary data

Table 4.31 shows the change in Social empowerment index using Wilcoxon signed rank test. Since Z value is found significant at 1 per cent level, the above null hypothesis was rejected and alternative hypothesis was accepted. The number of positive ranks for social empowerment index lends credence to the significant difference as shown by the Z values. Therefore, it can be concluded that there was significant improvement in overall social empowerment index of JLG members after joining the programme.

4.2.7 Effectiveness of group lending on socio-economic empowerment index

The combined social-economic empowerment index was the average weighted index of economic empowerment index and social empowerment index. This index measures the overall socio-economic empowerment of JLG members and the study on change of this index helps in determining the socio-economic impact of JLG programme on its participants.

Table 4.32 Socio-economic empowerment index

Particulars	Socio-economic empowerment index
Before Joining JLG	61.92
After Joining JLG	91.52

Source: Compiled from primary data

Table 4.32 exhibits combined Socio-economic empowerment index of Joint liability Group members. In pre JLG situation the combined socio-economic index was 61.92. But due to the participation in JLG the index value increased to 91.52. Thus, it can be inferred that group lending had impact on socio economic empowerment of Joint liability Group members.

However, in order to confirm this improvement in socio-economic empowerment index, a hypothesis testing was done using Wilcoxon signed rank test. The result of hypothesis testing is shown below.

Hypothesis testing:

Null hypothesis (Ho): The median difference in Socio-economic empowerment index of members before and after joining the programme is Zero

Alternative hypothesis (Ha): The median difference in Socio-economic empowerment index of members before and after joining the programme is not Zero

Table 4.33 Effectiveness of group lending on Socio-economic empowerment index

Sl.no	Particulars	No.of Ranks (N)			Z value	P value
		Negative ranks	Positive ranks	Ties		
1	Socio-economic empowerment index	-	100	-	-8.682	0.000

Table 4.33 shows the results of Wilcoxon signed rank test. Since Z value was significant at 1 per cent level, the above null hypothesis was rejected and alternative hypothesis was accepted. The number of positive ranks for socio economic empowerment index lends credence to the significant difference as shown by the Z values. Thus, it can be concluded that there was significant improvement in socio- economic empowerment index of Joint Liability Group members after joining the microfinance programme. Therefore it can be concluded Group lending through JLG was effective in improving socio-economic empowerment of its members.

4.3 Comparison of socio- economic empowerment between members of JLGs promoted by Kudumbashree and Farmers club

Kudumbashree brought in NABARD’s concept of joint liability groups (JLGs) in collective farming in 2009. This resulted in making NABARD’s scheme of interest subsidy available to groups engaged in collective farming. This initiative by Kudumbashree reduced the interest rate of farm loans effectively to 2 per cent, as

NABARD provided 5 per cent interest subsidy on loans taken by JLGs. The process of JLG formation starts with the Kudumbashree community network identifying and assessing cultivable fallow land in the area of the concerned local body. Once the land was identified they have to be formed JLGs consisting of four to ten Neighbour Hood Group (NHG) members. The members were from the same NHG or from different NHGs. Each JLG is controlled by the Area Development Society (ADS) to which the members belong. The JLG has to select its president and secretary and apply for registration to ADS on the prescribed format. The membership of JLG members in NHGs has to be testified by the president or secretary of respective NHG. There were periodic monitoring by ADS and Community Development Society (CDS) office bearers. There were monthly progress reporting from JLG secretary to the CDS through ADS. The FFCs (Farmers' Facilitation Centres) established under Mahila Kisan Sashaktikaran Pariyojana (MKSP) now play role in supporting and monitoring farming activities.

While dedicating NABARD to the nation, on 5th November 1982 , the then Hon'ble Prime Minister of India launched "Vikas Volunteer Vahini (VVV)" programme to propagate the five principles of "Development through Credit". The VVV programme was revisited and renamed as Farmers' Club Programme (FCP) in 2005. Farmers' Clubs were grassroots level informal forums of farmers. Such Clubs were organised by rural branches of banks with the support and financial assistance of NABARD for the mutual benefit of the banks concerned and the village farming community/rural people. The Farmers club were organising JLG in the grassroots level. They also cultivate in fallow lands in their area of operation. Many farmers club have weekly markets to sell the agricultural produce of their members as well as non-members.

The second objective of the study was to compare the socio economic empowerment of members of JLGs promoted by Kudumbashree and Farmers Club. For this purpose Mann- Whitney U test was employed. The mean difference in ranks of various indicators of socioeconomic empowerment were tested to know the difference in

empowerment between JLG members of these two Joint Liability Group Promoting Institutions.

4.3.1 Comparison of economic empowerment between members of JLGs Promoted by Kudumbashree and Farmers club

To know the difference in economic empowerment between two groups comparison was made across all the indicators of economic empowerment using Mann- Whitney U test

Table 4.34 Comparison of economic empowerment between members of JLGs promoted by Kudumbashree and Farmers Club

Sl. no.	Particulars	Mean rank		M	Z	P value
		Farmers Club	Kudumbashree			
1	Monthly Household income	52.94	48.06	1128	-8.92	0.372
2	Monthly Household Expenditure	70.04	30.96	273	-6.739	0.000
3	Savings	53.14	47.86	1118	-1.012	0.311
4	Household assets	66.40	34.60	455	-5.817	0.000
5	Employment Days in a month	59.24	41.76	813	-3.689	0.000
6	Economic Decision making ability	71.38	29.62	206	-7.427	0.000
7	Access to asset	70.61	30.39	244.5	-7.078	0.000
8	Control over asset	70.83	30.17	233.5	-7.212	0.000
9	Acess to resources and services	32.09	68.91	329.5	-6.358	0.000
10	Control over resources	70.90	30.10	230	-7.276	0.000
11	Quality of life	70.14	30.86	268	-7.550	0.000
	Economic empowerment index	72.28	28.72	161	-7.509	0.000

Table 4.34 exhibits the mean rank and test statistics of the economic empowerment of JLG members on the basis of their JLG promoting institution. The Mann Whitney U test results shows that there was no significant difference between members of Kudumbashree promoted JLGs and Farmers Club in case of monthly household income and savings at 1 per cent level of significance. There were significant difference in all other economic indicators between two groups. Hence members of farmers club promoted JLGs were highly empowered in respect of household expenditure, household assets, employment days in month, economic decision making ability, access to asset, control over asset, access to resources and services, control over resources and quality of life

The test static for economic empowerment was significant at one per cent this indicates that that there were difference between economic empowerment of members of Joint Liability Groups promoted by Kudumbashree and Farmers Club. The mean rank of economic empowerment of respondents in Farmers Club promoted JLGs was 72.28 and that of Kudumbashree JLG members was 28.72.Hence it can be inferred that members of farmers club promoted JLGs were more economically empowered compared to that of Kudumbashree JLGs.

4.3.2 Comparison of Social empowerment between members of JLGs Promoted by Kudumbashree and Farmers club

To know the difference in social empowerment between members of JLGs Promoted by Kudumbashree and Farmers club comparison was made across all the indicators of social empowerment using Mann -Whitney U test. Comparison of social empowerment between members of JLGs promoted by Kudumbashree and Farmers Club.

Table 4.35 comparison of social empowerment between members of JLGs promoted by Kudumbashree and Farmers Club

Sl. No	Particulars	Mean rank		U	Z	P value
		Farmers Club	Kudumbashree			
1	Self confidence	65.23	35.77	65.23	-5.839	0.000
2	Social awareness and recognition	71.99	29.01	175.5	-7.685	0.000
3	Participation in social activities	68.55	32.45	347.5	-6.271	0.000
4	Skills	66.78	34.22	436.	-5.713	0.000
5	Access to Facilities/services	61.79	39.21	685.5	-4.372	0.000
6	Decision making ability	67.42	33.58	404.0	-6.360	0.000
	Social empowerment Index	71.07	29.93	221.5	-7.119	0.000

Table 4.35 shows the mean rank and test statistics of Mann-Whitney U test for the social empowerment of JLG members on the basis of their JLG promoting institution. The Mann -Whitney U test results for all the social indicators of empowerment shows that there was significant difference between members of Kudumbashree promoted JLGs and Farmers Club in case of all social aspects at one per cent level of significance. The mean rank for members of JLGs promoted by farmers Club in case of all social aspects were found to be higher compared to that of members of Kudumbashree promoted JLG. Hence it was concluded that the members of Farmers club promoted JLGs were highly empowered in respect of self-confidence, social awareness and recognition, participation in social activities, skills, access to facilities/services and decision making ability compared to members of Kudumbashree JLGs.

The mean rank of Social empowerment index of farmer's club members (71.07) was more than mean rank (29.93) of Kudumbashree JLG members. The Mann-Whitney U test results for Social empowerment index was significant at 1 per cent level this indicates that there were difference between Social empowerment of members of Joint Liability Groups promoted by Kudumbashree and Farmers Club.

4.3.3 Comparison of socio- economic empowerment between members of JLGs Promoted by Kudumbashree and Farmers club

The Mann -Whitney U test was used for comparing the socio- economic empowerment between members of JLGs Promoted by Kudumbashree and Farmers club

Null Hypothesis (Ho): There was no significant difference in mean ranks of members of JLGs Promoted by Kudumbashree and Farmers club with respect to Socio-Economic empowerment.

Alternative Hypothesis (Ha): There was significant difference in mean ranks of members of JLGs Promoted by Kudumbashree and Farmers club with respect to Socio-Economic empowerment.

Table 4.36 Comparison of Socio-economic empowerment between members of JLGs promoted by Kudumbashree and Farmers Club

Particulars	Mean ranks		U	Z	p-value
	Farmers Club	Kudumbashree			
Socio-economic empowerment index	72.75	28.25	137.5	-7.670	0.000

Table 4.36 shows that Z statistics was significant at one per cent level. Hence null hypothesis was rejected and alternative hypothesis was accepted. Which indicates that there was significant difference in socio-economic empowerment between members of Farmers club promoted JLGs and members of Kudumbashree JLGs. The mean rank of Socio-economic empowerment of respondents in Farmers Club promoted JLGs was

72.75 and that of Kudumbashree JLG members was 28.25. Hence it can be concluded that members of farmers club promoted JLGs have high socio-economic empowerment compared to that of Kudumbashree JLGs. This was because of the fact that the Farmers clubs were providing various services especially marketing facilities to their members. Hence many of the members get fair price and continuous market for their products compared to Kudumbashree JLGs.

4.4 Constraints experienced by JLG members

A constraint is considered to be any factor that limits an individual from enjoying the intended result of a particular Programme. The limiting factors faced by JLG members were identified by reviewing past research. Further, all the identified constraints were categorised into four groups: structural, operational, managerial and empowerment constraints.

To test the agreement among the ranking of the identified constraints, Kendall's coefficient of concordance was used. It establishes the extent of disagreements and agreements among responses.

The null and alternate hypotheses were stated as follows:

Ho: there is no agreement among JLG members concerning the ranking of the constraints in the order of increasing severity

H1: there is agreement among JLG members concerning the ranking of the constraints in the order of increasing severity

Table 4.37 Structural Constraints experienced by JLG members

Sl.No	Structural Constraints	Mean of ranks	Rank
1	Poor relation with concerned functionaries.	5.53	6
2	Lack of village level worker to assist in group management activities and adoption of technologies.	5.20	5
3	Unaware of importance of collective action in agriculture.	4.71	2
4	Lack of awareness on roles and responsibility of group members.	5.04	4
5	Deviation of few members from the group adoption practices prescribed by Joint Liability Group Promoting Institution(JLGPI)	4.79	3
6	Lack of empowered leaders	4.22	1
7	Few people dominate in group	5.54	7
8	Lack of active participation of group members	6.26	8
9	Lack of training programmes on reducing cost of cultivation	6.93	10
10	Lack of training programmes on thrift and saving	6.81	9
	Kendall's Coefficient of Concordance(W)		0.153

Table 4.37 reveals that the most severe structural constraints experienced by the members was lack of empowered leaders. Then unaware of importance of collective action in agriculture is the next most important constraints. The deviation of few members from the group adoption practices prescribed by Joint Liability Group Promoting Institution (JLGPI), lack of awareness on roles and responsibility of group members, Lack of village level worker to assist in group management activities and adoption of technologies also act as other major constraints. The lack of training programmes on cost of cultivation and thrift were the less severe operational constraints. The Kendall's coefficient of concordance reveals that 15 per cent of the respondents have agreement with the ranking of constraints

Table 4.38 Operational Constraints experienced by JLG members

Sl. No.	Operational constraints	Mean of ranks	Rank
1	Lack of information on market prices	5.73	8
2	Middlemen exploitation in marketing	5.79	9
3	Delay in disbursement of credit	4.97	6
4	Uncontiguous land area.	5.59	7
5	The activities of JLGs were not really according to the needs and interest of beneficiaries	4.50	2
6	The quantum of work generated is not sufficient	4.63	3
7	The programme activities get adversely affected during peak agriculture season	4.71	5
8	Lack of coordination among beneficiaries	4.70	4
9	Irregular and insincere group leaders	4.40	1
Kendall's Coefficient of Concordance(W)		0.070	

Table 4.38 depicts that the most severe constraint experienced by the JLG members was irregular and insincere group leaders and less severe one is the middlemen exploitation in marketing. The second severe constraint is that ‘the activities of JLGs are not really according to the needs and interest of beneficiaries’. Lack of market information was also a least severe constraint. The value of Kendall's Coefficient of Concordance (W) was 0.070 which is close to zero hence it was found that there were no perfect agreement among respondent in ranking operational constraints.

Table 4.39 Managerial constraints experienced by JLG members

Sl.No.	Managerial constraints	Mean of ranks	Rank
1	No permanency in getting inputs	2.68	4
2	No exposure in Record maintance	2.42	2
3	Unskilled group members	2.25	1
4	Poor monitoring and technical guidance	2.66	3
Kendall's Coefficient of Concordance(W)		0.044	

From table 4.39 it was revealed that unskilled group members was the most severe managerial constraints.it was followed by no exposure in record maintance and poor monitoring and technical guidance. The least severe constraints was no permanency in getting inputs. The value of Kendall's Coefficient of Concordance (W) was 0.044 there for it can be concluded that there were no agreement among respondent in ranking managerial constraints.

Table 4.40 Empowerment constraints experienced by JLG members

Sl.No	Empowerment constraints	Mean of ranks	Rank
1	Less access to financial services	7.37	6
2	Irregularity in income	7.80	12
3	Less access to developmental schemes	6.83	1
4	Poor social recognition	7.90	13
5	Low decision making ability	7.77	11
6	No improvement in savings	7.64	10
7	Lack of confidence	7.35	5
8	Low social awareness	7.28	4
9	Less access to assets and resource	7.00	2
10	No change in social participation	7.37	7
11	No control over assets and resources	7.16	3
12	No change in family support	7.51	8
13	No change in social networking	7.62	9
14	No change in quality of life after joining the programme	8.42	14
15	No improvement in skills	7.37	6
	Kendall's Coefficient of Concordance(W)	0.021	

Table 4.40 shows empowerment constraints experienced by JLG members. The least severe empowerment constraint was no change in quality of life after joining the programme and the most severe constraint is the less access to developmental schemes.

The other severe constraints were less access to assets and resource, low decision making ability and low control over assets and resources. The value of Kendall's Coefficient of Concordance (W) was 0.021 which was close to zero hence it was found that there were perfect disagreement among respondent in ranking empowerment constraints.

The chapter assessed the effectiveness of group lending on socio economic empowerment of JLG members in Ernakulum district. It was found that Group lending through JLG had gone beyond the sole objective of ensuring timely and adequate credit. It addressed the credit plus requirements of beneficiaries .It has become an indispensable instrument for social and economic empowerment of its participant farmers. Participation in JLG resulted in employment generation, increase in income, savings. Group lending also increased the skills, decision making ability, self-confidence and social participation of the respondents. Even though the members in JLGs experience some structural, operational, managerial and empowerment constraints. Hence adequate arrangements were needed for stimulating the growth of JLGs. The relevant findings of this particular research was summarised in the ensuing chapter.

SUMMARY OF FINDINGS &
CONCLUSION

CHAPTER 5

SUMMARY OF FINDINGS AND CONCLUSION

The study ‘An economic analysis of lending through Joint Liability Groups (JLGs)’ has been undertaken with the objectives of assessing the effectiveness of group lending on the social and economic empowerment of the members and to compare the social and economic empowerment of members of JLGs promoted by Kudumbashree and Farmer’s Club and to identify the constraints if any experienced by members.

The study was based on primary data. A multi - stage sampling technique was used to select sample respondents. In the first stage, one blocks, out of the 14 blocks in Ernakulum district, Pampakuda Block was purposively selected. In the second stage, 50 JLGs was randomly selected based on the list obtained from the District Development Office, NABARD and District Mission, Kudumbashree comprising 25 JLGs each promoted by Farmers’ Clubs and Kudumbashree involved in the cultivation of crops. In the third stage, 2 members from the selected 50 JLGs were taken as sample respondents. Thus 100 JLG members constituted the sample respondents.

The data collected were analysed using Wilcoxon signed rank test, Mann- Whitney U test and Kendall’s coefficient of concordance (*W*) and indices such as social empowerment index, economic empowerment index and socio-economic empowerment index.

5.1 Major findings

The major findings of the study were summarised and presented under following heads

5.1.1 Socio economic profile of JLG members

5.1.2 Socio economic empowerment through JLG

5.1.3 Comparison of Socio economic empowerment between members of JLGs promoted by Kudumbashree and Farmers club

5.1.4 Constraints faced by JLG members

5.1.5 Suggestions

5.1.1 Socio economic profile of JLG members

- Socio economic profile of individual JLG members were analysed using variables like age, gender, marital status, religion etc.
- Most of the respondent were middle aged.
- Majority (62 per cent) of the respondents were females.
- All the respondents have formal education.
- As regards to marital status of respondents majority of them (94 per cent) were married.
- The low income people were the main pillars of JLG. Most of the respondents (83 per cent) were from BPL households.
- Majority of the member's monthly income falls below ₹ 10000. About 69 per cent of the respondents depends on agriculture as their major source of income. Remaining JLG members were daily wage earners.
- Most of the respondents (79 per cent) have land holding below 25 cents. The respondents were undertaking agriculture activities by taking land on lease.

5.1.2 Socio economic empowerment through JLG

- There were increase in monthly Household income, Household expenditure, monthly saving, as well as Household assets of respondents due to involvement in JLG programme
- The days of employment were increased due to JLG intervention.
- The overall decision making ability index of respondents related to economic aspects has increased from 70.64 to 86.22. Their ability was high in case of decisions about donations and presentations.
- The respondent's access and control over assets especially farm assets have increased after becoming a part of JLG.

- As a result of joining JLG the respondents enjoyed increased access to services and resources. Their access to income increased greatly
- The quality of life of JLGs were improved as a result of joining JLG. The Wilcoxon signed rank test results showed that the group lending through JLGs also had direct impact on economic empowerment of member's.
- The economic empowerment index was increased due to JLG intervention
- The confidence of JLG members in respect of facing financial crisis and meeting official people were increased greatly.
- The participation of respondents in JLGs increased their social awareness and recognition.
- The JLG played a key role in building skills among its participants.
- By participating in JLG programme the beneficiaries have achieved increased access to facilities and services.
- Through the participation in JLG the respondents attained high decision making ability in respect of their participation in social activities.
- The group lending through JLG increased the social empowerment of participants.
- Group lending through Joint Liability Group was effective in improving socioeconomic empowerment of its members.

5.1.3 Comparison of Socio economic empowerment between members of JLGs promoted by Kudumbashree and Farmers club

- There was no significant difference in mean ranking between members of Kudumbashree promoted JLGs and Farmers Club in case of monthly household income and savings
- The members of farmers club promoted JLGs were highly empowered in respect of household expenditure, household assets, days employed in a month, economic decision making ability, access to asset, control over asset, access to resources and services, control over resources and quality of life between two kinds of JLG members.

- The members of farmers club promoted JLGs were more economically empowered compared to that of Kudumbashree JLGs.
- The members of Farmers club promoted JLGs were highly empowered in respect of various social aspects
- The members of JLGs promoted by Farmers club have high socio-economic empowerment compared to that of Kudumbashree.

5.1.4 Constraints faced by JLG members

- The most severe structural constraint experienced by the members was lack of empowered leaders.
- The most important operational constraint experienced by the JLG members was irregular and insincere group leaders
- The unskilled group members was the most pressing managerial constraint
- The most severe empowerment constraint was the less access to developmental schemes.

5.1.5 Suggestions

- More training programmes were required for leadership development and skill development of JLG members.
- JLG promoting institution should ensure that the developmental schemes were accessible to all beneficiaries.
- JLG members need much exposure in record maintenance.
- Strict monitoring and technical guidance were needed for the groups for their efficient functioning
- The activities of JLGs should be planned according to the needs and interest of beneficiaries
- Many JLG members need more days of employment hence with the assistance of panchayat and JLGPIs should generate sufficient quantity of work.

Conclusion

Joint liability group was an effective instrument in empowering its members socially and economically. The initiative of JLGs brought relief to rural poor through collateral free credit to support and enhance sustainable livelihood practices of its beneficiaries. The potential of JLG has been harnessed in agriculture and allied activities to address the multiple constraints faced by small and marginal farmers at individual level. JLGs has taken up task of revitalising the farming culture in the state by mobilising marginalised sections of the society to take up agriculture through collective farming approach, which reduces the burden of farming to a greater extent. Collective farming through JLG had gone beyond the sole objective of ensuring timely and adequate credit. It has become an instrument of social and economic empowerment. Collective power of the groups, integration of local self-governments and proactive credit schemes have enabled even the landless people to take up farming .It resulted in increase in income and as a result the respect of members in their families and society were improved significantly. From a laborer destined to work for minimal wage, collective farming has transformed their members to 'effective producers'. Increased financial returns and sustainable employment opportunities have given them a sense of financial security and the much needed hope for the future. Even though many JLGs need imperative and urgent assistance for rejuvenation of their activities due to structural and operational constraints.

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**AN ECONOMIC ANALYSIS OF LENDING THROUGH
JOINT LIABILITY GROUPS**

By

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(2018-15-002)**

ABSTRACT OF THE THESIS

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ABSTRACT

Over a decade the initiative of Joint Liability Group (JLG) brought relief to rural poor through collateral free credit. In addition to this JLG acted as a catalyst for the expansion of assets and capabilities of poor people to participate in, negotiate with, influence, control, and hold accountable institutions that affect their livelihood. In Kerala, more and more agricultural lands were being diverted towards residential and commercial development. This, along with fall in agricultural prices and rising wages have made farming an unprofitable activity leading to a continuous fall in food production in the state. It was in this context that the Joint liability Groups in agriculture gains its significance. The farmers were emerging as key actors in this attempt to rejuvenate the agrarian economy. They were bringing back fallow land for agricultural production through their collective organisation. Slowly but surely, the connections between local livelihoods, local markets and local consumption could be revived (Mukherjee, 2009). Also grassroots action across the globe demonstrates that, the collectives of the poor can improve their well-being in ways that individual approaches cannot (Krishnan, 2012).

Hence the present study ‘An economic analysis of lending through Joint Liability Groups (JLGs)’ has been undertaken with the objectives of assessing the effectiveness of group lending on the social and economic empowerment of the JLG members and to compare the social and economic empowerment of members of JLGs promoted by Kudumbashree and Farmer’s Club and to identify the constraints if any experienced by members.

The study was based on primary data. A multi - stage sampling technique was used to select sample respondents. In the first stage, one blocks, out of the 14 blocks in Ernakulum district, Pampakuda Block was purposively selected. In the second stage, 50 JLGs were randomly selected based on the list obtained from the District Development Office, NABARD and District Mission, Kudumbashree comprising 25 JLGs each promoted by Farmers’ Clubs and Kudumbashree involved in the cultivation

of crops. In the third stage, 2 members from the selected 50 JLGs were taken as sample respondents. Thus 100 JLG members constituted the sample respondents. The data collected were analysed using Wilcoxon signed rank test, Mann Whitney U test, Kendall's coefficient of concordance (W) and indices.

To know the effectiveness of group lending on socio-economic empowerment of JLG members, information related to socio-economic situation of respondents before and after JLG intervention were collected. Seventeen indicators were measured to know socio-economic empowerment of members. The results of Wilcoxon signed rank test shows that group lending through Joint Liability Group was effective in improving the socioeconomic empowerment of its members.

The second objective of the study was to compare the Socio economic empowerment between members of JLGs promoted by Kudumbashree and Farmers club. For that purpose Mann Whitney U test was used. The Mann Whitney U test results shows that there were no significant difference between members of Kudumbashree promoted JLGs and Farmers Club in case of monthly household income and savings. The members of farmers club promoted JLGs were highly empowered in respect of Household expenditure ,Household assets, days employed in a month, economic decision making ability, access to asset, control over asset, access to resources and services, control over resources and quality of life between two kinds of JLG members. The Mann Whitney U test results for all the social indicators of empowerment shows that there were significant difference between members of Kudumbashree promoted JLGs and Farmers Club in case of all social aspects. By comparing combined socio economic empowerment index between two groups it has found that members of JLGs promoted by Farmers club were more empowered compared to that of Kudumbashree.

The constraints experienced by JLG members were classified into 4 categories such as structural, operational, managerial and empowerment constraints. To know the most severe and least severe constraint in each group ranking was done using Kendall's coefficient of concordance. The most severe structural constraint experienced by the members was lack of empowered leaders. The most pressing operational constraint

experienced by the JLG members was irregular and insincere group leaders. The unskilled group members was the most severe managerial constraints and the most severe empowerment constraint was the less access to developmental schemes.

The study therefore suggests that more efforts were needed from the parts of developmental agencies to further empower the members socially and economically. More training programmes were needed for leadership development and skill development of JLG members. In addition to this the JLG promoting institution should ensure that the developmental schemes were accessible to all beneficiaries.

ANNEXURE

Kerala Agricultural University
College of Cooperation, Banking & Management

Interview schedule for JLG member

(For academic purpose only)

Topic: An economic analysis of lending through Joint Liability Groups (JLGs)

Name of JLG:

Name of JLG promoting institution: Farmers Club/ Kudumbashree

I. Socio Economic Profile of respondent

1. Name of JLG member :
2. Phone Number :
3. Age :
4. Gender: Male/Female
5. Marital status: Married/Unmarried/Widow/Divorced
6. Religion: Hindu/Christian/Muslim
7. Social Category: General/SC/ST/OBC/OEC/
8. Educational status: Primary/high school/SSLC/Technical education/Plus two /Graduation /Post Graduation
9. Occupation: Self-employed/wage employed/Unemployed
10. Economic status : APL/BPL
11. Monthly income:
12. Source of income: Agriculture/Salary/Rent/Wage/Profit
13. Land holding (Cents): Own... Leased in... Lease out

II. Socio Economic Empowerment of JLG members

A. Economic empowerment of members Before and After Joining JLG

Note: Rate your response by assigning marks ranging from 0-100 for the statements given below based on your decision making ability, access and control over assets and resources and quality of life.

<p><u>Decision Making ability</u></p> <p>81-100 : To a great extent 61-80 : Much more 41-60 : Some what 21-40 : Very little 0-20 : Not at all</p>	<p><u>Access</u></p> <p>81-100 : Excellent 61-80 : Good 41-60 : Satisfactory 21-40 : Poor 0-20 : Extremely poor</p>
<p><u>Control</u></p> <p>81-100 : To a great extent 61-80 : Much more 41-60 : Some what 21-40 : Very little 0-20 : Not at all</p>	<p><u>Quality of life</u></p> <p>81-100 : Highly satisfied 61-80 : Satisfied 41-60 : Moderately Satisfied 21-40 : Dissatisfied 0-20 : Highly Dissatisfied</p>

Economic empowerment of members before and after joining JLG

Indicators of Economic empowerment	Before	After
1. Monthly Household Income (₹)		
2. Monthly Household Expenditure (₹)		
Food		
Electricity		
Education		
Healthcare		
Clothing		
Entertainment		
Functions/Festivals		
Others		
Total		
3. Monthly Savings(₹)		
4. Household Assets(₹)		

5 Days employed in a month		
6. Economic Decision making ability		
Purchase of assets		
Sale of assets		
Transfer of assets		
Raising of Loan		
Repayment of Loan		
Savings		
Investments		
Donations and Presentation		
Construction and Improvement of Housing Facility		
7.Access to Asset		
Land / Dwelling		
Farm assets		
Household assets		
8.Control over Asset		
Land /Dwelling		
Farm assets		
Household assets		
9.Access to Resources and Services		
Access to Income		
Access to savings		
Access to credit		
Household resources		
Access to Farm resources		
Access to markets		

Access to agricultural extension services		
Access to rural financial services		
Access to technology		
10. Control over Resources		
Control over use of income		
Control over savings		
Control over borrowings		
Control over spending		
Farm resources		
Household resources		
11. Quality of Life		
Food security at home		
Drinking water availability		
Clothing needs		
Hosing needs		
Employment security		
Financial security		
Medical facility		
Growth and Development		

B. Social empowerment of members before and after Joining JLG

Note: Rate your response by assigning marks ranging from 0-100 for the statements given below based on your Self-confidence, Social awareness and recognition, Participation in social activities, Decision making ability, Skills and Access to facilities/services.

<p>Self Confidence, Social awareness and recognition, Participation in social activities and Decision making ability</p> <p>81-100 : To a great extent 61-80 : Much more 41-60 : Some what 21-40 : Very little 0-20 : Not at all</p>	<p>Skills, Access to facilities/services</p> <p>81-100 :Excellent 61-80 :Good 41-60 : Satisfactory 21-40 : Poor 0-20 : Extremely poor</p>
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Social empowerment of members before and after Joining JLG

Social indicators	Before	After
1. Self confidence		
Confidence of facing financial crisis		
Confidence of meeting official people		
Confidence for participating in social events		
2.Social awareness and recognition		
Recognition in community		
Awareness on various Govt. schemes		
Respect in the family		
Ability to take up social issues		
3.Participation in social activities		
Participation in Grama Sabha		
Participation in public events		

Contribution to community /social needs (Road construction, Drinking water, Sanitation, Medical facilities)		
Organiser for various events (Onam Chantha,Cattle market, loan write off mela, Festivals in Temple/Church/Mosque)		
Volunteer in case of contingencies (flood, landslide etc.)		
4.Skills		
Communication skills		
Information skills		
Customer ship/negotiation skills		
Financial skills (Book keeping and accounting)		
Occupational skills/technical skills		
Leadership skills		
5.Access to Facilities/services		
Medical facilities		
Hygienic sanitation facilities		
Drinking water		
Nutritious food		
Access to basic facilities provided by panchayat (supply of production implements, machineries and irrigation facilities)		
Access to developmental Schemes		
6.Decision making ability		
Day to Day activities		
Health		
Sanitation		
Hygiene		
Education of Children		
Participation in Social Activities		

III. Constraints faced by JLG members

Sl. No.	Constraints	SA	A	MA	D	SD
A	Structural Constraints					
1	Poor relation with concerned functionaries.					
2	Lack of village level worker to assist in group management activities and adoption of technologies.					
3	Unaware of importance of collective action in agriculture.					
4	Lack of awareness on roles and responsibility of group members.					
5	Deviation of few members from the group adoption practices prescribed by Joint Liability Group Promoting Institution(JLGPI)					
6	Lack of empowered leaders					
7	Few people dominate in group					
8	Lack of active participation of group members					
9	Lack of training programmes on reducing cost of cultivation					
10	Lack of training programmes on thrift and saving					

B	Operational constraints					
1	Lack of information on market prices					
2	Middlemen exploitation in marketing					
3	Delay in disbursement of credit					
4	Uncontiguous land area.					
5	The activities of JLGs are not really according to the needs and interest of beneficiaries					
6	The quantum of work generated is not sufficient					
7	The programme activities get adversely affected during peak agriculture season					
8	Lack of coordination among beneficiaries					
9	Irregular and insincere group leaders					
C	Managerial constraints					
1	No permanency in getting inputs					
2	No exposure in Record maintenance					
3	Unskilled group members					
4	Poor monitoring and technical guidance					
D	Empowerment constraints					
1	Less access to financial services					
2	Irregularity in income					
3	No change in quality of life after joining the programme					
4	Less access to assets and resource					
5	No control over assets and resources					

6	No improvement in savings					
7	Lack of confidence					
8	Low social awareness					
9	Poor social recognition					
10	No change in social participation					
11	Low decision making ability					
12	No change in family support					
13	No change in social networking					
14	Less access to developmental schemes					
15	No improvement in skills					

Note: SA-Strongly Agree, A-Agree, MA- Moderately Agree,

D- Disagree, SD- Strongly Disagree