Thailand and The World Economy
P-ISSN: 2630-0931
E-ISSN: 2651-0529
Homepage : https://www.tci-thaijo.org/index.php/TER
Vol. 40, No.1, January - April 2022 Page [109-124]

Usage Pattern and Saving Behaviours of Self-Help Groups Banks Linkage Programme: A Study of Rural Uttar Pradesh

*Tanushree Gupta**
Amity Business School, Amity University Chhattisgarh, India

Received 11 September 2021, Received in revised form 9 December 2021,
Accepted 13 December 2021, Available online 31 January 2022

Abstract

On the basis of consumption patterns and saving behaviour, the current study attempts to estimate the financial performance of SHGs in terms of credit-assessed households. The survey has been chosen by the state of Uttar Pradesh. Following that, the Rajeev Gandhi Mahila Vikas Pariyojana (RGMVP) made a conscious choice. A total of 450 households were chosen from villages in the Faizabad and Sultanpur districts. According to the findings of the study, credit-assessed households use SHG credit for both income and non-income generating activities. However, because the amount of SHG credit is insufficient to generate income, it is mostly used for non-income purposes. Furthermore, while saving behaviour is an issue, credit-assessed households are using SHG credit to save although they will use the money for medical needs later.

Keywords: SHGs, Uttar Pradesh, Credit, Faizabad, Sultanpur, Rajeev Gandhi Mahila Vikas Pariyojana.

JEL Classifications: C83, D14, E21

***Corresponding author:** Amity University Chhattisgarh, Raipur, MANTH (KHARORA), State Highway 9, Raipur - Baloda Bazar Rd, Raipur, Chhattisgarh 493225 , India
E-mail: tgupta@rpr.amity.edu

┼ This paper was presented in 6th International Conference on 'Drivers of Global Economic Recovery' organized by Maharaja Agrasen Institute of Management Studies (MAIMS), Delhi (India) in partnership with the Faculty of Economics, Thammasat University, Thailand, and Waljat College of Applied Sciences, Oman on April 23, 2021.

1. Introduction

The ultimate goal of microfinance is to provide an opportunity for poor and deprived people to become self-reliant. It is an essential tool to reduce poverty and the dependency of poor people on informal sources of finance (Islam, Nguyen and Smyth, 2014). There are two main issues in front of the poor people while they are availing loan from the formal sources of finance or formal financial market. First, the issue of collateral i.e., the poor people usually do not have any assets pledged to the lenders as collateral. While in the formal financial market collateral is prerequisite to avail loan, and poor people cannot avail loan from formal financial market as they are unable to give collateral. Second, formal financial market provides loan only for income generation activities; agriculture, small business etc. However, poor people also necessitate money for consumption purposes; health, marriage, education, food etc. To fulfil their consumption purpose, they are bound to take loans from informal sources of finance (Aslam and Azmat, 2012). To abbreviate these problems of poor people in the loan availing process from formal financial market, microfinance is playing an imperative role. Microfinance is combating poverty by providing financial services to the deprived section of the society without any collateral. It provides loans for the income generating activities and for the consumption purpose as well to reduce the burden of informal lending from the poor .

Self Help Group Bank Linkage Programme (SHGBLP) is the best possible effort to connect the poor to the formal financial market (Banks) through Self-help groups (SHGs). In SHGBLP Commercial banks, cooperative banks, regional rural banks, NGO, NBFC etc. can play the role of Self-Help Promoting Institutions (SHPIs) and evaluate the SHGs on the basis of their schedules of meeting, lending policies, regularity of savings, repayments rates, and once the SHPIs have completely satisfied, then they link SHGs with banks. Basically, SHPI acts like a promoter to SHGs so that the linkages between SHGs and banks can be possible. The lending of banks to SHGs is collateral free and based on their saving ratio. The first loan of banks to SHGs is ten thousand, and once the timely repayment of first loan is made, the loan amount can be up to 25000 to 200000, and the repayment period would be 3 to 5 years. The popularity of SHGBLP has grown because of the assistance of credit and saving facilities to poor households, through which they diversify their income generation, fulfill their consumption purposes and reduce their dependency on informal sources of finance. Therefore, it is imperative to examine the usage pattern of the participants of SHGBLP to find out whether the programmes are providing credit for the rural development and up to what extent it has reduced the dependency of poor people on the informal sources of finance. In spite of the usage pattern, the other issue which needs to be addressed is the impact of microcredit of SHGBLP on its participants in terms of the financial outcomes (income, savings, expenditures etc.) and non-financial outcomes (decision making, education etc).

Several studies related to the evaluation of microfinance are being conducted in India and worldwide, especially in developing countries; Nigeria, Ethiopia, Africa, Latin America etc. But there is an absolute dearth of literature in India on impact evaluation and usage patterns at household level and in a comprehensive manner, but in international level, there are some comprehensive studies conducted on impact evaluation and usage pattern (Hossain, 1988; Ravallion 2000; Pitt and Khandker, 1996; Khadker, 2003; Adams, 1992; Roglay, 1997; Morduch, 1999; Hulme and Mosley, 1996; Diagne and Zeller, 2001).

In the above context, the present research is all about examining the usage pattern of microcredit in SHGBLP and its impact on the participants. It also addresses the following questions; i) Does participation in SHG affect household's dependence of

informal credit agencies?, ii) Does SHGBLP equally affect SHG members?, iii) Does group maturity affect usage pattern? , iv) Does participation in SHGBLP affect income, savings and expenditure of households?, v) Does participation in SHGBLP affect the decision-making capacity of women regarding utilization of loan?

2. Literature Review

There is a plethora of studies which discuss the impact of microfinance in the international level like a study conducted in Sub-Saharan Africa to evaluate the impact of microfinance with respect to financial outcomes and non-financial outcomes. The result of the study shows the positive effect on financial outcome ; client's income, savings, expenditures, and assets creation are higher than the non-clients in different stratum of the society. While the non-financial outcomes are concerned, the results show that microcredit positively affects health investment and food security, which include health care investment and child care insurance expenditure by the participants of the microfinance programme; microcredit positively affects education as participants spend their loan amount on their children's education. As a result, there has been a decrease in the use of child labours. Women empowerment is also positively affected by the programme because women use the share of microcredit. In contrast, some of the studies show the negative aspects of financial and non-financial outcomes. And some studies explain that microfinance is not reaching to the ultra-poor of the society, the interest rates are high towards female participants of the programme, and it leads to the income inequality and poverty. However, some studies found the diverse impact of microcredit upon the non-financial outcomes. For instance,, the studies of Adjei (2009) and Calderon (2008) set up the positive impact of microcredit on education. In contrast, the studies of Brannen (2010), Gubert, Roubaud (2005) showed the negative impact on education, while the study of Nanor (2008) divulged the positive and negative impact on education.

In Sri Lanka, Hossain and Silva (2012) also revealed the impact of microfinance on financial outcomes i.e., impact on income and savings. They? suggested that participation in microfinance programmes increases the household income and is helpful in poverty reduction. As far as savings are concerned, the savings of the poor households who are the participants of microfinance tend to be higher as compared to the non-participants (Silva, 2012).

Mahabub Hossain (1988) also defined the impact of microfinance on financial outcomes (household income) and non-financial outcomes (food and clothing). Hossain compared the welfare clients of Grameen by eligible non-clients of bank in Grameen villages and also in non- Grameen villages and found that the average household income of Grameen bank's clients is 43% more than the non-clients in non-Grameen villages and 28% more than the eligible non-clients of Grameen villages. Other than these findings, Hossain also found that the per capita income expenditure on food of Grameen members is 8% higher than that of non-members of Grameen banks. Other than this, they spend 35% more on food and 32% more on clothing than non-clients of Grameen banks. Hossain (1988), Khandker (2005) also evaluated the impact of microfinance on its outcomes in Sri Lanka and found that every 100 taka increase in the credit of women clients leads to an increase in household expenditure of more than 20 takas. Results also showed that poverty in all villages decreased by 17 % to 18%. Besides , 13% declined in non-participating villages.

Also in Danyore , microfinance affects positively on income and the level of consumption, and health and education of the household. The study shows the increased level of income, increase in consumption expenses, and enhancement in spending on

health and increase in education expenditure. Over all, the results are positive impact on income and consumption level of the households and positively affect the health and education expenditure. However, between health and education, microfinance has a lower impact on education than on health (Khan, 2014).

Ethiopia also witnesses the significant impact of microfinance upon the poor households the standard of living. The largest MFI of Ethiopia, ACSI Amhara Credit and Savings institution signified the optimistic impact of microfinance on its clients in its working area, Amhara region, Ethiopia, and the result were quite good. , 20% of clients or borrowers of ACSI had owned business before joining the ACSI while 80% of clients had no business before joining,which means ACSI is doing a great and appreciable work upon credit and contribution in the development of SMEs and businesses. 85% clients had their savings and 15% had not. On the other hand, for the savings of the last 2 years, 70% had increased in savings, 20 % clients had decreased and 10% had the same . After joining the ACSI programmes, there were the increase of income of the clients , enhancement in the living standard, improvement in the status of health, education, housing, employment, nutrition, clothing, and consumption level (Chirkos, 2014). In Ghana as well, microfinance affects the rural households with respect to profit in business and level of income, which means 56.8% of households in the Nandom district of the north western part of the upper west region of Ghana quoted that microcredit is a reason for the increment in their level of production, 46.8% of households realise the growth in profit and level of income, and 29.5% indicated enhancement in income level and profit (Kotir and Odoom, 2009).

Also in Bangladesh, ,microfinance is very successful. In Bangladesh, MFIs are performing better compared to the commercial banks. As a result, 73% of the increment in income of all households, especially in rural ones, with the existence of financial services, the increment of above 50% in the level of consumption of all households with the extended model of MFIs and the level of social welfare also increased by 258% with the extended model. Besides , in the basic model which comprises only banks, in that model, households earned 4 % of the total income, and in the extended model, the share of poor households in total income increased by 29%, which enhancement in household's income and decrease in income inequality were possible (Mahajabeen, 2008). The basic reasons behind income inequality are no credit access to the poor, market imperfections and market failure. But microfinance is the best tool for assessing the credit to the poor. Besides , it enhances the productivity and the social development of the countries. So, the microfinance is essential for the financial development, economic growth, enhancement in social welfare and all these things lead the lower income inequality. Furthermore, microfinance can help the households to overcome the problems of credit constraint and provide the opportunity of employment and income generation (Hulme and Mosely, 1996 Hermes, 2014). According to the World Bank, development of financial market led the economic development and decrement in income inequality (World Bank 2001). Kai and Hamori 2009 also supported ??? the fact that financial development evidence a decrease in income inequalities, but to increase the financial deepening or development, microfinance acts as a tool because microfinance provides credit access to poor households and also help in decreasing income inequality. It is evidenced that every 1 % increase in the financial development will lead to decrement in the levels of income by .31%. According to Ahlin and jiang (2008), microfinance provides the opportunity to enhance income to the poor with the help of employment generation. Hence, microfinance provides its support to the income inequality. Pit and Khandker (1998) revealed in their study that microfinance has a positive impact on income inequality. Ghana also evidenced that 43.2% of households in Lawra –Nandom district of the north western part of upper west region of Ghana indicated enhancement in welfare (Kotir and Odoom, 2009).

In addition to the above-mentioned, there are studies of impact evaluation conducted worldwide. In India , there is a plethora of studies on impact evaluation; for example, a study conducted in Manipur that signifies the positive impact of microfinance on its participants; an improvement in the economic status (income of the households, expenditure, savings, loan and type of housing) of the SHG members after joining microfinance and an improvement in socio empowerment (social awareness, confidence, skills, evaluating different facilities and services for the public) after joining SHG (Ramananda Singh and Dhaneshwar Singh, 2012). In Orissa, a study has conducted to evaluate the impact of microfinance on income level. 160 households got selected from 16 villages with the help of stratified random sampling technique (80 from the target group and 80 from the control group) and as per the results, there was a positive impact of microfinance on the income of the households. The household income of the target group is higher than the control group by 26.31% (Rout, Das, Ranasingh and Behera, 2015). Other than that, the tribal members of Lakhimpur district of Assam have also verified the improvement in their level of income and living standard after the participation in microfinance programmes (Das, 2016).

Apart from the impact evaluation studies, there are several studies which have been conducted on the usage pattern of microcredit worldwide and even in India ;for example, in Bangladesh, microfinance is financing the non-farming activities rather than the farming activities due to high repayment ratio and rules related to the eligibility for land (Pellegrina, 2011). In Pakistan, microfinance is definitely for the poor or needy families. 24% of the borrowers utilised the loan for the start of a new business. 38% used the loan amount for the establishment of their own businesses. 14% gave the loan to their husbands or the heads of the family. 3% used the loan to repay another loan while 16% used the loan for the purpose of consumption (Mahmood, 2011), In Ethiopia, 60% of the microfinance amount is dedicated to the farm activities which is the main source of income generation, and the rest ,40%, is invested in petty trading (Belwal, Tamiru and Singh, 2011), In Kolkata, India, 90% of the sample households used their store credit for consumption because the very important use of finance for poor households is consumption smoothing. Microfinance is a paradigm that is globally accepted as providing the financial services to the poor households of a country so that they can reap the economic benefits like income generation, savings, asset accumulation, consumption expenditure, and improved decision making (Mishra, 2006 and Carter, 2007). Here, the complete focus is driven towards asset creation and assessing the impact of SHGBLP on asset creation on the borrowers of the programme. Asset creation is an important variable for analysing the impact of microfinance programme because we can examine the socio-economic status of the households, and it also provides us the information about the poverty level of the household. And that is why we have chosen asset creation as one of the variables to assess the impact of SHGBLP. Through the available literature regarding the impact assessment of asset creation upon the borrowers, we can identify why assets accumulation is an important determinant of the impact evaluation. For instance, the studies found that generally, in the pre and post comparison of the programme, the value of assets of the borrowers increased by 73%. NCAER also recorded the growth in the average value of assets by 40% during the pre and post comparison. NABARD also found the same outcome in its study of the impact assessment of the three states. The results show that SHG participation leads to the increase value of assets, by 45%. Similarly, Rural Financial Access Survey also recorded the growth in asset value. During the survey, the researchers found that after the SHG participation, there was a hike of 59% in the asset accumulation of the borrowers, especially in Tamil Nadu where the value of assets had appreciated by 71% because of the participation in SHGBLP, as in South India is dense with the presence of microfinance programmes (NCAER, 2008; Basu, 2006; EDA Rural System, 2006;

Swain, 2012; Puhazhendhi and Satyasi, 1999). There are also some recent studies which explored the significance of SHGs in terms of saving behaviour and consumption patterns. According to the recent studies, the initiatives associated with SHGs enhanced the levels of savings of credit assessed households. (Ban et, al, 2020). Besides, bBanks have also played an important role in encouraging SHG members to save more because it is recommended that banks offer savings accounts for Federations of SHGs at the village, Gram Panchayat, Cluster, and the higher levels. These accounts might be classified as 'Association of Persons' savings accounts. The Reserve Bank of India's Know Your Customer (KYC) norms for signatories of such accounts, as defined from time to time (RBI, 2022). Saving behaviour is a key component of SHGs because saving leads to income generation, and it is an indicator of its members' economic optimism (Vishwanath, 2021). Lending programmes of SHGs are anticipated to expand households' financial conditions by depressing the cost of servicing prevailing debt and intensifying access to loans for consumption-smoothing and productive investment (Hoffiman, Rao, Surendra, Datta, 2021) Apart from saving behaviour, the second most important concern is the consumption patter of credit assessed households. The majority of SHG members save and subsequently spend their savings on medical issues, food consumption, and health considerations. As a result, the consumption pattern is nearly identical (Batra, 2020).

3. Methodology/ Data

3.1 Methodology

To evaluate the impact of microcredit on savings behaviour, we have applied Average Treatment Effect on Treated Model (ATET) through Propensity Score Matching (PSM) and Principal Component Analysis (PCA).

3.1.1 Propensity Score Matching

The prime objective of PSM is to find out the balanced sample for the treatment group based on the propensity scores . In the present study, PSM is applied to evaluate the impact of SHGBLP by comparing the average outcome of those households (participants) who are availing loans from the programme (treatment group) to those households (non-participants) who are not availing the loans (control group) (Luan and Bauer, 2016 and Katchova, 2013). For this comparison, PSM is the best econometrics technique to separate?? the perfect control group from the treatement group. PSM provides the propensity scores to the control observations and treatement observations based on their homogeneity.

3.1.2 Principal Component Analysis

To evaluate the impact of microcredit on the treatment group in comparison with the control group in terms of income and asset creation, we have categorised the sample into different poverty categories, i.e., Poor, Less Poor and Medium Poor because it is the best way to analyse the economic status of the households (Luan and Bauer, 2016 and Filmer and Pritchett, 2011). Despite that, we have evaluated the impact of microcredit on the basis of the credit volume, i.e., microcredit that has been borrowed by the participants of the SGBLP, to identify the effects of microcredit that has been borrowed by the participants of SHGBLP. For the computation of relative poverty category, we have applied Principal Component Analysis (PCA).

Table1: Descriptive Statistics (PCA)

Variable	Mean	Std. Dev.	Min	Max
Clothing	0.99333	0.08151	0	1
Enough Food	0.95667	0.20395	0	1
Access to School	0.78333	0.41266	0	1
House Type	0.63667	0.48176	0	1
Lighting	0.24333	0.42981	0	1
Toilet	0.00667	0.08151	0	1
Per Capita Asset	131635	83552.1	4785.71	642425
Per Capita Income	28337.7	21400.6	4166.67	150000

Source: Computed from Survey Data

We have selected those indicators by which we can assess the economic status of the households; clothing and food are the basic indications about the status of the households. Through clothing and food, we can assess whether or not households have an easy access to food , and whether or not households are spending money on their clothes . We have chosen schools so that we can gather the information whether the households are capable of providing the schooling for their children, or because of the financial crisis, they cannot afford schooling for their children. We have chosen house type, lighting, and toilet facilities because these are basic amenities that a household must have. If they are not having it, it indicates that they belong to the very low economic status. (Table 1).

Table 2: Poverty Category

Poverty Category	Range of Poverty Scores		Mans of Poverty Scores
	Lower Bound	Upper Bound	
Poor	-2.437595	-0.7381958	-1.361753
Less Poor	-0.7270964	0.381517	-0.26471
Medium Poor	0.3838424	6.689588	1.626463

Source: Computed from Survey Data

3.2 Data

3.2.1 Selection of state

The basic objective of the present study is to assess the usage pattern and savings behaviour of microfinance programmes on poor households in the backward region of the country. To meet this objective, Uttar Pradesh (UP) has been chosen for the survey, as UP is one of the states of India where poverty ratio is high (29.43 %), overcrowded, and because UP holds 60.4% share of the country's agricultural sector, the majority of the population still depend on this sector.

3.2.2 Selection of microfinance programme

After the selection of the state, another step of our research design is to select an appropriate microfinance programme that is running in Uttar Pradesh. Therefore, we have purposively selected Rajeev Gandhi Mahila Vikas Pariyojana (RGMVP) which is running since 2002 under the Rajeev Gandhi Charitable Trust. The selection of the programme (RGMVP) follows two criteria, i.e., the microfinance programme must be running in the rural areas, and the participants of the programme should be women. The basic objective of RGMVP is to provide credit and saving facilities to poor households, to alleviate poverty, to raise social capital in terms of nurturing the SHGs across the under developed

regions of UP, to raise the income generating activities of poor households, to enhance the income of small and marginal farmers, to improve the education of the children, and to empower women.

3.2.3 Selection of villages and districts

Two districts of Uttar Pradesh, i.e., Sultanpur and Faizabad are purposelyselected because of the expansion of the RGMVP. Both districts are in the Eastern region of UP which is intense in poverty and dominated by the scheduled caste population. The population of the scheduled caste is also higher in both districts. In Sulatnpur, the percentage of scheduled caste population to the total population is 22.25%, and in the case of Faizabad, the percentage is 22.59% (Census 2001). The major reason behind the selection of eastern region is because it is the poorest and less developed part of UP. In the Eastern UP, 80% of the 140 million population fit in to the rural poor. This region of the state also is likewise plagued by the life expectancy, mortality rates of newborn child and bigoted traditions regarding with the caste system (Human development report, 2008). Sultanpur and Faizabad districts both are largely engaged in agricultural activities. The total holdings of Sultanpur and Faizabad in agriculture are 586000 and 322000, while the agriculture labourers of Sultanpur and Faizabad are 81000 and 129000 (Statistical Diary Uttar Pradesh, 2011). After the selection of the districts, we have selected two blocks that are Harringtonganj and Milkipur from Faizabad, and Dhanpatganj and Baldiram form Sultanpur. Then, we have selected 25 villages based on the concentration of the SHG of RGMVP; 15 villages from Harringtoganj, 3 villages from Milkipur, 6 villages from Dhanpatganj and 1 village form Baldiram.

3.2.4 Selection of households

50 SHGs have been chosen from each studied district, and from each SHG, we have chosen three members. As a result, we have interviewed 150 members households in each district, and these members are our treatment group. To assess the impact of RGMVP on participating households, we need to compare it with the set of households (control group) who are not availing any services from RGMVP but belong to the same homogeneous background. Therefore, we have chosen 75 households from the same districts (Faizabad and Sultanpur) as our control group. We have interviewed 150 households from both districts. A total of 450 households are chosen from the selected villages of Faizabad and Sultanpur district; 300 participating households as our treatment group, i.e., 150 households from each district, and 150 non-participating households as our control group, i.e., 75 households from the same districts who belong to the same homogeneity. The selection of the participants (treatment group) and non-participants (control group) was based upon 2:1 ratio, i.e., 300 households from the treatment group and 150 households from the control group.

4. Estimated Results

4.1 Usage Pattern

The prerequisite before the evaluation of the usage pattern of microcredit among the participants of the SHGBLP is to gather the information about the awareness of sources of finance . Table 3hows the positive outcome regarding the awareness of the sources of loans. There are 60.39% of members of new SHGs who are aware of the different sources of loans, including formal and informal sources, followed by the middle-aged SHGs (58.03%) and old SHGs (46.67%). That connotes a good indication about the awareness of sources of loans in rural areas because in rural areas there is a wide deficiency in the

knowledge of financial services. All members of the groups extensively recognised the SHGs, cooperative banks, and banks as the formal sources of finance, excluding JLG and MFI. While in the informal sources of finance group, members are extensively aware of the landlords and moneylenders. Awareness of sources of finance is very essential, but the selection of a source is purely based upon the reasons, i.e., the reasons why the households have chosen a particular source of finance. There are two major reasons behind the selection of sources of finance. First, a close location of the sources because generally the members of the SHG group are females, and sometimes they have to face the restrictions of the family; they do not have permission to go out of the house without any male members Because of that, it becomes very difficult for them if it is a long distance. The second reason is an easy procedure. The reason is that households that belong to rural and poor backgrounds are generally not aware of the paper work and legal requirements. They usually choose those financial services where the procedures are easy, and they can complete it without any difficulties.

Despite the awareness and reasons behind the selection of sources of finance, the usage pattern of microcredit that are availed by the SHG members from SHG internal credit and banks is also essential to know. To evaluate the usage pattern of microcredit, we have taken five loan cycles of the SHG members. There are two reasons behind the selection of these five loan cycles. First, to assess whether there is any difference between the amount of microcredit that is availed from SHG internal credit and banks as time passes. And the second is to analyse the usage pattern of the SHG members, i.e., how the group members are going to invest the loan amount of their first cycle. Whether they are investing in agriculture, health, or business-related activities, and how they will use their loan amount from the next loan cycle that they will avail from SHG's internal credit and banks. Tables 3,4,5,6 show that households participants of SHGBLP are investing their loan amount (Bank credit and SHG lending) in income generating activities. In their four loan cycles, they are investing 53% to 95% of their loan amount in income generating activities; in agriculture activities, for instance, purchase agriculture machinery and other inputs for agriculture, in productive assets, purchase stock, livestock such ascows, goats, buffalos for animal husbandry. Some participating households are investing their loan amount in purchasing the stock for tie small business. They purchase stock for their grocery shop, tea stall, tailoring shop etc.

Apart from the income generating activities, the participants also investing the microcredit in non-income generating activities; education, health, marriage, and festivals etc. But compared to the income generating activities, the investment in non-income-generating activities is less This is a positive indication because the prime objective of SHGBLP is not only providing the financial assistance to the deprived section of the society, but also reducing the dependency of poor people on informal lending so that they can rid of the vicious circle of debts. The poor who have taken loans from the informal sources for income generation were in a better position compared to those households who have taken loans for non-income generating activities. The investors in non-income generating activities did not have any returns on their loan amount but they need to repay their loan amount. And this will lead them towards the multiple borrowings. SHGBLP breaks this cycle, and now poor households are availing loans from the SHGBLP to invest in non-income generating activities. That is good sign because at least the poor households are availing loan from the SHGBLP and their dependency on informal sources of loan is reducing significantly. SHGBLP is fulfilling its objectives of providing financial assistance to the deprived section of the society and reducing the dependency in informal sources of loans. In contrast , the separate results of the usage pattern of SHG credit and bank lending show the mix results of investing their loan amount in income generating activities and non-income generating activities (Table 3 & 4).

Table 3: Average Amount of Loan-by-Loan Cycle

SHG Category	Loan Cycle	SHG Credit	Bank Loan	% of SHG in each loan cycle (SHG Credit)	% of SHG in each loan cycle (Bank Credit)
New SHG		Amount	Amount		
	1	9797.872	8554.545	14.41	22.17
	2	13371.43	5814.286	19.67	15.07
	3	14586.21	5955.882	21.45	15.44
	4	15115.38	5227.273	22.23	13.55
	5	15115.38	13031.25	22.23	33.77
Middle Age SHG	1	17187.5	11618.42	17.58	19.68
	2	19284.88	12351.85	19.72	20.92
	3	20253.25	12840	20.71	21.75
	4	20527.03	12463.41	20.99	21.11
	5	20527.03	9763.158	20.99	16.54
Old SHG	1	17000	15172.41	17.19	19.69
	2	19160.71	14805.56	19.37	19.22
	3	22020	17416.67	22.26	22.61
	4	20369.57	16617.65	20.59	21.57
	5	20369.57	13031.25	20.59	16.91

Source: Computed form Survey Data

Table 4: Usage of Loan (Bank+SHG)

Purpose	1st Loan	2nd Loan	3rd Loan	4th Loan	5th Loan
Start Business	4.26	0.38	0	0	0
Buy Agriculture Machinery/Inputs	42.18	53.56	12.4	77.38	100
Purchase Stock	0	1.53	0.78	17.86	0
Buy Livestock	5.97	2.75	0	0	0
Purchase Land	0.75	0	0	0	0
Total Income Generating/Productive Activities	53.16	58.22	13.18	95.24	100
Repay Old Debt	0	0	1.55	0	0
Health	21.56	24.25	8.79	0	0
Marriage	12.59	5.36	8.27	0	0
Other Festivals	0.05	0	0	0	0
Home Improvement	6.95	9.79	10.08	0	0
Education	5.02	2.37	0.52	4.76	0
Others	0.68	0	0	0	0
Total Non-Income Generating/Productive Activities	46.85	41.77	29.21	4.76	0

Source: Computed from Survey Data

Table 5: Usage Pattern of SHG Credit

Purpose	1 Loan			2 Loan			3 Loan			4 Loan			5 Loan		
	New SHG	Middle Age SHG	Old SHG	New SHG	Middle Age SHG	Old SHG	New SHG	Middle Age SHG	Old SHG	New SHG	Middle Age SHG	Old SHG	New SHG	Middle Age SHG	Old SHG
Start New Business	0	19.09	8.59		3.55	0	0	0	0	0	0	0	0	0	0
But Agriculture Machinery or Inputs	18.96	9.56	10.45	20.41	15.32	28.57	0	14.09	7.94	0	52.63	78.95	0	100	0
Purchase Stock	0	0	0	0	14.2	0	0	4.82	0	0	47.37	0	0	0	0
Buy Livestock	12.17	29.52	8.59	0	14.2	0	0	0	0	0	0	0	0	0	0
Total Income Generating/Productive Activities	31.13	58.17	40.51	20.41	47.27	28.57	0	18.91	7.94	0	100	78.95	0	100	0
Purchase Land	0	0	12.88	0	0	0	0	0	0	0	0	0	0	0	0
Repay of Old Debt	0	0	0	0	0	0	0		15.87	0	0	0	0	0	0
Health	18.79	11.35	10.13	38.78	11.54	30.61	100	14.85	4.76	0	0	0	0	0	0
Marriage	28.18	15.71	17.17	40.82	14.2	0	0	18.07	55.56	0	0	0	0	0	0
Other Festival	0	0.88	0	0	0	0	0	0	0	0	0	0	0	0	0
Home Improvement	12.81	9.91	14.17	0	14.2	40.82	0	36.13	15.87	0	0	0	0	0	0
Education	9.09	3.97	6.44	0	12.78	0	0	12.04	0	0	0	21.05	0	0	0
Others	0	0	11.59	0	0	0	0	0	0	0	0	0	0	0	0
Total Non-Income Generating/Productive Activities	68.87	41.82	59.5	79.6	52.72	71.43	100	81.09	92.06	0	0	21.05	0	0	0

Source: Computed from Survey Data

Table 6: Usage Pattern of Bank Credit

Purpose	1 Loan			2 Loan			3 loan		
	New SHG	Middle Age SHG	Old SHG	New SHG	Middle Age SHG	Old SHG	New SHG	Middle Age SHG	Old SHG
Start New Business	0	0	18.02	0	0	0	0	0	0
But Agriculture Machinery or Inputs	14.86	21.07	6.76	14.86	59.16	9.92	87.5	42.86	0
Buy Livestock	11.76	0	36.04	16.84	0	0	0	0	0
Total Income Generating/Productive Activities	26.62	21.07	60.82	31.7	59.16	9.92	87.5	42.86	0
Health	11.43	14.29	8.56	14.74	25.52	28.1	0	0	0
Marriage	39.2	0	0	29.47	0	24.79	12.5	0	0
Home Improvement	15.68	49.29	21.62	8.42	15.31	24.79	0	57.14	100
Education	7.06	15.36	9.01	6.32	0	12.4	0	0	0
Total Non-Income Generating/Productive Activities	73.37	78.94	39.19	58.95	40.83	90.08	12.5	57.14	100

Source: Computed from Survey Data

4.2 Savings Behaviour

The present study shows the clear difference between the borrowers of treatment group and control group regarding their savings. We have categorised the household savings into two categories, i.e., savings of male and savings of female, to investigate that whose saving level is higher, whether it is male which is predictable or whether it is female which is expected because of the p articipation in RGMVP.

The study shows that the savings in the treatment group is higher than the control group. The households in the trearment group use more diverse sources of savings; commercial banks, post office, cooperative banks, insurance policy, ornaments, grains, cash in hand, SHGs and JLG. The reason behind this diversity in the sources of savings is the participation in RGMVP because the members of the SHG groups are guided by the old members and trainers of the RGMVP about the different sources of savings to fulfil its prime objective of improved savings of the members. On the other hand, the control group has limited sources of savings; commercial banks, ornaments, grain and cash in handbecause they are not aware of the diverse sources of savings. With this, one thing is clear that through participation in SHGBLP, households are well versed with the different sources which they can enhance their savings and invest their some of savings in different income generating activities, and they can use their savings for any future contingencies.

In spite of the increased level of savings in the treatment group, the female participants are lacking behind in their savings in comparison to male. Male have their savings in the commercial banks, post office, cooperative banks, grain, and cash in hand. Female have their savings; in insurance policy because they are much concerned about their future, in ornaments that is predicted because usually female have ornaments as their savings, in SHGs because of the participation in SHGBLP, and these changes are significant as well. In the control group , males have higher savings level than female, and the difference is also significant (Table 7).

Table 7: Household Savings

Source	Treatment			Control			t-test (p-value)*
	Male	Female	Total	Male	Female	Total	
Commercial Banks	3192.52	1621.50	4739.25	2167.81	1488.36	3851.37	**
Post Office	5000.00	0	5000.00	0	0	0	
Cooperative Banks	1750.00	350.00	2100.00	0	0	0	
Insurance Policy	0	1500.00	1500.0 0	0	0	0	
Ornaments	196.67	16966.67	17186.67	80.54	13409.40	13369.13	***
Grain	12388.93	369.64	13436.79	21391.49	7.09	19675.18	***
Cash in Hand	950.56	740.07	1636.70	986.00	574.00	1560.00	
SHG	47.65	2226.52	2341.28	0	0	0	
JLG	0	2500.00	2500	0	0	0	
Others		2000.00	2000				

Source: Computed from Survey Data
Note1: *** Significant at 1%, ** Significant at 5%, *Significant at 10%
Note2: p value is only calculated for the total value of savings

4.2.1 Impact of SHG Credit on Savings: Result form PSM

To evaluate the impact on savings, we have used total savings and per capita savings. To examine the impact of microcredit on participants in the treatment group, we have chosen non-participants as a control group. As a result, Table 8 shows that both total savings and per capita savings are decreasing in comparison with the non-participants. Despite that, to examine the impact of microcredit on the SHG members on the basis of SHG age, we have chosen new SHGs as our control group. As a result, Table 8 shows that the old SHG and middle-aged SHG are decreasing their total and per capita savings in comparison with the new SHGs .

Table 8: Saving Impact on Treated and New SHGs

Type of Savings	ATT	S.E	t-statistic
Non-Participants households are control group			
Total Saving	-40400	8614.33	-4.693
Per Capita Saving	-9137.677	2007.268	-4.552
New SHGs are Control Group			
Total Saving	-50900	10473	-4.859
Per Capita Saving	-9137.677	1750.578	-5.22

Source: Computed from Survey Data

5. Conclusion & Policy Implications

Most members of SHG groups are aware of the different sources of loans such as SHG, banks, cooperative banks,and JLG. The study shows that most households have chosen SHGs and banks to avail financial facilities, and the major reasons behind this are; close location, easy procedures and no formal requirements. As a result, their dependency on the informal credit agencies has reduced significantly. To examine the usage pattern of the SHG credits, we have taken five loan cycles of the participating households to assess their usage pattern of the loan amount. We have taken five loan cycles to analyse whether there is any change in the usage pattern as time passes, or it remains the same. According to the composite usage pattern of SHG's internal lending and bank loans, the maximum

amount of loan and SHG's internal lending invested in the income generating activities, for example, buy agriculture inputs, buy livestock, purchase stock,and purchase land. From our sample, we found less evidence of participants who invested in the establishment of small businesses . Regarding the income generation, households also focused on the non-income generating activities like loan repayment, health, marriage, home repair, education etc. When we investigate the usage pattern on the basis of SHG groups, (New, middle and old SHG groups), we found the mixed results between the investments in income generating and non-income generating activities.

In our sample, we found that a major share of bank loan – lenders? and SHG's internal lending→ lenders? invested in buying agriculture inputs in all five loan cycles. And according to Average Treatment Effect on Treated Model, the households in the treatment group, i.e., those households who avail credit from SHGBLP have recorded the growth of what? Income? Spending? 3437.022 Rs. in comparison to those households who have not taken loans from SHGBLP. We have also measured the impact of income on the poverty category of the households and their loan size. And the result shows that on the basis of poverty categories, the poor are benefited in terms of their agriculture income because the households in the treatment group have shown the growth level of 41456.379 Rs. in comparison with the households in the control group?. While on the basis of the loan size, the households who have taken loans from 1000 to 10000 Rs. shown growth of 17547.404 Rs., and the households who have taken loans for more than 10000 Rs. have shown decline of 16600 Rs. While the households in the control group? , i.e., those who have not taken loan showed a decline in their agriculture income

As far as household savings are concern, there is not any significant impact on the savings. We have measured savings impacts on households in the treatment group? according to the average treatment effect on a treatment model. When we have taken *non-participant* households which are our control group ,the total savings and per capita savings of treated households have shown decline of 40400 Rs. in total savings and 9137.677 Rs. in per capita savings in comparison to the *participants*. When we have taken new SHG members as our control group, the result shows the decline in the total and per capita savings of the old SHG members and middle- aged SHG members compared to the new SHG members.

Thus, on the basis of findings of the study, following recommendations and policy suggestions are made to achieve efficiency in Self Help Groups. It has been observed that SHG members are unable to start small businesses with the amount of SHG credit because the amount is inadequate to start a business or micro enterprise. One solution to this problem is to increase the amount of SHG credits so that it can provide better assistance in the establishment of any type of businesses. As a result of this, members of SHGs can take out loans at the amount that they can afford to repay and enjoy the benefits of it. In addition, SHG groups' saving behaviour needs to be enhanced because the members of SHG have not been able to save. The reason for this is, once again, the minimal amount of SHG credits because the loans are small and the SHG members have been unable to save after using the funds for their requirements. As a result, the loan size should be increased so that SHG members can save after the amount of SHG credits have been used up.

References

Adams, D.W., & Von Pischke, J. D. (1992). Microenterprise credit programs: Déjà vu. *World Development, 20*(10), 1463-70.

Aslam, A., & Azmat, N. (2012). A study of collateral options for microfinance loans in Pakistan. Pakistan**:** Pakistan Microfinance Network. https://pmn.org.pk/wp-content/uploads/2020/04/A-study-of-collateral-options-for-microfinance-loans-in-Pakistan.pdf

Radu, B., Gilligan, Michael. J. & Matthias, R. (2015) Self-Help Groups, Savings and Social Capital: Evidence from a Field Experiment in Cambodia. *Policy Research Working Paper; No. 7382*, 174-200.World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/22466 License: CC BY 3.0 IGO.

Priya, B. (2006), Improving Access to Finance for India's Rural Poor. Directions in Development. *Washington, DC: World Bank.* © World Bank. https://openknowledge.worldbank.org/handle/10986/6927

Batra, V., Yadav, P., & Kumar, A. (2020), Impact of micro finance on household expenditure pattern of rural women borrowers: An empirical analysis. *International Journal of Social Sciences*, *9*(2), 57-, DOI:10.30954/2249-6637.02.2020.1.

Belwal, R., Tamiru, M., & Singh, G. (2011). Microfinance and Sustained Economic Improvement: Women small scale entrepreneurs in Ethiopia. *Journal of International Development*, *24*, S84-S99.

Carter, M. (1988). Equilibrium credit rationing of small farm agriculture. *Journal of Development Economics*, *28*, 83-103.

Carter, M. (2007). What we can learn from assets based approaches to poverty. In C. Moser (ed), *Reducing global poverty: The case for asset accumulation* (pp. 51 -61). , University of Wisconsin, https://arefiles.ucdavis.edu/uploads/filer_public/ 2014/06/19/carter_brookings_final_paper.pdf

Chirkos, A. Y. (2014). The impact of microfinance on living standards, empowerment and poverty alleviation of the poor people in Ethiopia. A case study in ACSI . *Research Journal of Finance and Accounting*, *5*(13), 1-95.

Das, D. (2016). Microfinance and its impact on tribal communities. *Imperial Journal of Interdisciplinary Research*, *2*(1), 1-8

Diagne, A., & Zeller, M. (2001). Access to credit and its impacts in Malawi. *Research Report No.116*, 6-169, Washington DC, USA: International Food Policy (IFPRI).

EDZ Rural System. (2006). Self help groups in India: A study of lights and shades, *EDA Rural System*, 5-162, Gurgaon, India,

Hermes, N. (2014). Does microfinance affects income inequality?. *Applied Economics*, *46*(9), 1021-1034.

Hossain, M. (1988). Credit for alleviation of rural poverty: The Grameen Bank in Bangladesh. *Research Report 65*, 1-96, Washington, DC: IFPRI.

Hulme, D., & Mosley, P. (1996). *Finance against poverty (I) and (II)*. London, Routledge.

Islam, A., Nguyen, C., & Smyth, R. (2014). Does microfinance change informal lending in village economics? Evidence from Bangladesh. *Discussion Paper* No. xx, Monash University **,** Bangladesh**.**

Johnson, S., & Rogaly, B. (1997) *Microfinance and poverty reduction*. UK: Oxfam

Kai, H. (2009). Microfinance and inequality. *Research in Applied Economics, 1*(1), 1-12

Khan, N. A. (2014). The impact of microfinance on household income and consumption level in Danyore, Gilgit-Baltistan Pakistan. *International Journal of Academic Research in Economics and Management Sciences*, *3*(2), 180-195

Khandker, S. (2003). Micro finance and poverty: Evidence using panel data from Bangladesh. *Policy Research Working Paper* No. 2945. Washington, DC: World Bank.

Kotir, J., H., & Odoom, F. O. (2009). Microfinance and rural development: A Ghanaian perspective. *Journal of Developing Societies*, *25*(1), 85-105

Kumari, T., & Mishra, A. p. (2015). Self help groups and women's development: A case study of the Varanasi district, India. *Space and culture India, 2(4),* 35-47.

Mahajabeen, R. (2008). Microfinance in Bangladesh: Impact on Households, Consumption and welfare. *Journal of Policy Modeling*, *30*, 1083-1092.

Mahmood, S. (2011). Microfinance and women entrepreneurs in Pakistan. *International Journal of Gender and Entrepreneurship*, *3*(3), 265-274.

Morduch, J. (1999). The microfinance promise. *Journal of Economic Literature*, *37*(4), 1569-1614.

APMAS, (2017). Impact and Sustainability of Self Help Group Bank linkage programme in India" 1-7, *NABARD*.

Nathan, O.K., Mangadi, K. & Ola, A.N. (2014). The impact of microfinance on household's welfare in Botswana. *Bostwana Journal of Economies, 12*(1), 45-58.

Pellegrina, L. D. (2011). Microfinance and investment: A comparison with bank and informal lending. *World Development*, *39*(6), 882-897

Pitt, M. M., & Khandker, S. R. (1998). The Impact of group based credit programmes on poor households in Bangladesh: Does the gender of participants matter?. *Journal of Political Economy, 106*(5),958-996.

Pitt. Mark M., & Khandker, S. R. (1996). Household and intrahousehold impact of the Grameen bank and similar targeted programs in Bangladesh. *World Bank Discussion Papers* No. 320. Washington, DC: World Bank.

Puhazendhi, V., & Badataya, K. (2002). SHG-bank linkage programme for rural ooor: An impact assessment. Paper presented at seminar on SBLP at New Delhi .

Ravallion, M. & Pradhan, M. (2000). Measuring poverty using qualitative perceptions of consumption adequacy. *Review of Economics and Statistics*, *82* (3), 462-471.

Rout. R. K., Ranasingh, L. K., & Behera, S. (2015). Impact of microfinance on household income: Evidence from village level study in Orissa. *International Journal of Management & Economics Invention*, *1*(10), 436-441.

Silva, I. D. (2012). Evaluating the impact of microfinance on savings and income in Sri Lanka: Quasi-experimental approach using propensity score matching. Margin *The Journal of Applied Economic Research*, *6*(1), 47–74.

Singh, R. & Singh, D. (2012). Social impact of microfinance on SHG members: A case study of Manipur. *Prabandhan: Indian Journal of Management*, *5*(3), 2012.

Swain, B. R. (2012). The microfinance Impact, London, Routledge, 1-160,

Swain, B.R., & Varghese, A. (2009). Does self help group participation lead to assets creation?. *World Development*, *37*(10), 1674-1682.

Viswanath, P.V. (2021). Connectivity and savings propensity among Odisha Tribals. Sustainability, 13(2),1-15.

World Bank. 2001. The World Bank Annual Report 2001 :Volume 1. Year in Review. Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/ 10986/13933 License: CC BY 3.0 *IGO.*Hoffiman, V., Rao, V., Surenda,V., & Datta, U.(2021). Relief from usury:

Impact of a self-help group lending program in rural India. *Journal of development economics*, 148, 1-20 .