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Cost Components of Interest Rate Charged By Indian Self Help Groups Financed By Not-For Profit Microfinance Institutions

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1. Introduction

The microfinance programs have expanded the frontiers of institutional finance to bring the poor, especially women, into the formal or semi-formal financial system. The programs have widened the access to financial services and equipped them to fight against poverty through the formation of microfinance groups[2]. Among the many distinguished features of microfinance, compared with traditional credit system, the interest policies represent one of the most controversial areas of concern in the microfinance industry. Thus, setting optimal rates of interest is one of the complex tasks for microfinance groups. Naturally, these institutions need to charge high interest rates to cover their costs if they are to attain financial sustainability. However, on the other hand, very high rates of interest will hamper the poverty-reducing target of microfinance. High interest rates (high repayments) will extract a good part of the poor people's wealth accumulated through the microfinance programme. Eventually, interest rates can simply make microfinance services unaffordable and financially exclude the poor from the microfinance services.

In fact, many studies contend that the microfinance industry should give loans at more favorable rates of interest than traditional credit because it is offered to disadvantaged people. However, some studies claim that the beneficiaries of microfinance are not sensitive to interest rate because their access to credit is very high (Harper, 1998; Torre and Gianfranco, 2006). Apart from these contrasting issues on rates of interest, the present concern is to determine how the pricing of loan is

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[2] The term microfinance groups in India is generally used to refer to unregistered groups of 10 to 20 members (some time it will be even less than 10 member groups) involved primarily in savings and credit activities. The members save periodically in the group and the savings are lent out to members who require loans at a fixed rate of interest. SHGs are in small size, group of poor people and promoted by external agencies, they obtain loans from banks or MFIs. Over 90 per cent of these groups have only women members

decided in the microfinance industry. What, precisely, are the factors that determine the level of interest rates in microfinance groups? Hence, it is necessary to identify the indicators and variables that have to be considered in fixing the rates of interest in microfinance.

In this backdrop, the present study identifies the basic factor that determines interest rate at the microfinance groups. To explore the wide range of issues in determining the rate of interest in microfinance, the subsequent section of this paper brings out a comprehensive review of the various aspects that determine interest rates in the microfinance industry.

2. Review of Literature

Though the microfinance sector, by definition, caters the needs of economically disadvantaged, there is a degree of support for the view that microfinance providers should charge interest rates that will make the lending programme sustainable in the long run (Adams and Von Pischke, 1992; Yaron, 1992). Further, sustainability enables operations on a greater scale and with broader outreach of financial services to larger segment of the population. With demand for microfinance far exceeding supply, sustainability and subsequent increase in outreach of microfinance program are important objectives (Shankar, 2006). In this scenario, pricing or determining the rate of interest for the loans is an important aspect of loan product design. Effective pricing of financial services may largely determine the short and long term sustainability of program. Over the course of the last two to three decades, there have been several different theories on how microfinance program should set prices. The 'donor-centered' (poverty lending) models of microfinance programs set interest rates at an extremely low levels. The institutions that followed these practices faced the risk of erosion of loan funds and discontinued loan services if donations were interrupted. The emergence of 'financial sustainability' (institutionalists) models demonstrated that microfinance program can reach a large numbers of borrowers with an improvement in their wellbeing provided institutions are viable. An essential requirement for financial viability is that prices charged for financial services meet all operational and financial costs of the institution. Thus, a balance must be reached between what clients can afford and what the lending institution needs to cover all the fixed and variable costs.

There is an inherent trade-off in pricing of financial services. When the price of lending services goes up, the demand for loans falls. However, it is widely believed that demand for financial services among poor borrowers is highly inelastic — that is, a relatively large increase in interest rates tends to cause a relatively small reduction in demand for loans. The inelastic demand for micro loans has been well documented and explains one of the golden rules of microfinance – 'access is more important to small borrowers than costs' (Harper, 1998). If the organisation does not charge a high interest rate, it will be difficult to continue in business, which is highly detrimental to both the borrower and the community. Higher interest rates are necessary to cover the

administrative costs of small loans made at locations near the borrowers (Smith and Eric, 2007). Generally, the poor households are willing and able to pay interest rates for loans that fully cover the costs of lenders. A frequently heard argument to support this policy is that poor households are not very sensitive to higher interest rates, but they look for easy and timely access to credit services.

Before continuing this debate, it is important to learn the concept of interest rate. In simple words, the interest rate is the price or cost of money. As a price it is made up of a number of components as far as the lender is concerned. It is the means through which the lender: (i) pays for the cost of the funds that are borrowed or deposited (cost of capital); if these are from savings (deposits), then the savers are likely to expect returns to cover inflation and maintain the value of their savings; (ii) recovers the service cost (cost of administration); staff salary and maintenance of office, transport and stationary that are necessary to provide that services; and (iii) Covers losses resulting from default (cost of default) on loans (Johnson and Rogaly, 1997). However, from the borrower's perspective interest rate is the amount that the borrower pays in addition to the principal sum to compensate the lender for the use of money or capital. Generally, it is expressed as a proportion of the average outstanding principal over a period of time.

The theory of interest has taken different dimensions. According to classical economists, an economy eventually maintains equilibrium when the rates of interest and the demand for loans equate the supply of loanable funds. If it deviates from this equilibrium, market forces will operate to restore the equilibrium rate of interest. However, later Keynes criticised the classical theory of interest rate and showed that the rate of interest is determined by the quantity of money supplied and demand for money.

In microfinance, interest rate is the primary source for the financial sustainability of the program. The interest rate that the borrower pays to the institution should ideally compensate the risks associated with lending and the costs of delivering the services (Sa-dhan, 2004). Generally, the interest rates of in the program are way above that of the formal financial institutions and below that of the informal sources[3] (Shylendra, 2006). However, there are variations across the regions and institutions. The variations in the rate of interest are largely influenced by the cost of capital, transaction cost, and costs involved in the delivery of credit and credit-plus services. Nevertheless, the cost of delivering services is highly influenced by the prevailing market conditions, institutional structures, approaches, and their efficiency in managing the resources. Further, for a microfinance program to be a sustainable entity along with a competitive rate of interest on (lending) loans, it should be efficient in raising resources (capital) from the market at a competitive rate of interest and

3 Bank to SHG lending rate 12 per cent to 13.5 per cent. MFI to SHG lending rate 15 to 24 per cent and Moneylenders to Traders/individual 36 per cent to 120 per cent (Mahajan and Ramola, 2004).

maintain economics of scale in its operations. Therefore, the rate of interest in microfinance program is a key determinant of financial sustainability and wider outreach of microfinance services (Christen, 1997).

Economists working on microfinance have focused mainly on innovative contracts that mitigate adverse selection and moral hazard in credit markets, both of which are particularly important when lending to poor households without collateral. The application of new credit contracts has led to surprisingly high loan repayment rates. However, high repayment rates are not sufficient to drive the microfinance revolution. The success of microfinance depends on the commercialisation of microfinance lending. This hinges as much on the ability to contain costs and to price products at interest rates that are high enough to generate financial sustainability. Once sustainability is achieved, microfinance can expand with minimal external support.

The vision for microfinance constitutes a radical break from past practice. In the 1970s and 1980s, the usury laws restricted interest rates on loans to low levels. The caps were often combined with directives as to who should get subsidised loans and for what (Adam *et al.*, 1984). Even otherwise, where the interest rate caps allowed positive real interest rates, they were seldom high enough to permit banks to cover costs. As a result, lending to the poor was heavily subsidised and monopolised by state-run banks driven by the belief that requiring the poor to pay more would undermine rural development. In addition, subsidised resources too often went to non-poor households and the political elite. The financial products tended to be of low quality with limited quantity of financial resources.

Donors who are shaping microfinance products and policies have spent much effort in making the argument that raising interest rates is not likely to dissuade creditworthy borrowers. This assertion stems from two ideas. The first is that the marginal returns to capital diminish with scale. If that is so, poor borrowers who are starved for capital ought to have high marginal return on their investments and ought to be willing to pay high interest rates. The second idea is that poor households already pay a lot to moneylenders. The poor households can keep moneylenders in business only if they charge less on loan. Thus, it is tacit that the poor households need access to timely credit, but not at cheap or subsidised rate. The poor households are so insensitive to interest rates that the standard practice is to set fees high enough for institutions to generate profits, cutting donors out of the loop after a short period of start-up subsidies (CGAP, 1996; Armendariz and Morduch, 2005). In this perspective, microfinance can readily expand its outreach to serve the currently financially excluded poor households. What poor people need are authentic, durable sources of income. They should not borrow for their businesses unless the loans, including interest, give the net result of boosting their income. This has become the guiding principle to determine fair interest rates for microloans (Smith and Eric, 2007).

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3. Analytical framework

The microfinance market in India represents one of the more recent developments that enable poor households to access credit and non-credit services through various new institutional arrangements. In these markets, very small (micro) loans, savings and insurance services are extended through the group approach to the poor households, particularly women. In the process of delivering the microfinance services various formal (NABARD, SIDBI, commercial banks), semiformal (MFIs) and informal institutions (SHGs, JLGs) play a facilitator or promotional or intermediary role. In general, the flow of credit starts from the formal institutions (development banks and commercial bank) to semi-formal institutions (MFIs) to informal institutions (SHGs) and then finally delivered to the group members. In the process of flow of finance from one institution to the other, various types of direct and indirect costs are involved. Hence, it results in diverse levels of rate of interest for loans across institutions (MFIs/SHGs). For example, banks extend loans (the money that is generated through deposit from public or borrowings) to the MFIs at the market rate of interest. MFIs will lend this money at a higher rate of interest (which includes all costs plus some mark ups) to the SHGs. Finally, the SHGs will lend at an even higher rate of interest (that includes all costs plus some margin or mark up) to its members. In this course of financial intermediation, commercial banks follow standard market norms (monitored and regulated by RBI) in deciding the rate of interest. However, in the case of MFIs, there are no standard (market) norms (from external institutions) to fix the rate of interest for loans. It will be true even in the case of microfinance groups when it lends to its members. Hence, it is clear that the MFIs and the SHGs have *autonomy* in fixing the rate of interest on their loans. Generally, what ever the mission of the MFIs/SHGs is, the rate of interest must take into account all the costs that they incur in order to avoid giving loans on unsustainable terms. To get a clear understanding of how interest rates are determined at the MFIs and SHGs level, we have developed an analytical framework that is presented in Figure: 1.

Figure 1 shows the flow of loans or funds and interaction of the various financial intermediaries. The banks (domestic apex financial institutions, such as the NABARD, SIDBI, RMK, FWWB, and commercial banks) are the initial lenders to the MFIs at market rate of interest. Generally, for capital the MFIs will approach commercial banks for a loan. Based on the lowest rate of interest and other costs, the MFIs will go for large loans from commercial sources. As the profitability of microfinance is established, the incentive to accumulate equity capital to leverage more funds from the banking system grows stronger (Ghate, 2007). Nevertheless, lending to the MFIs is an easier task for the banks than lending to the groups or members because the loan amounts will be very small and the transactions costs will be very high. However, bulky on-lending to MFIs will reduce the transaction costs for the banks. As per the RBI norms, commercial banks lending to MFIs or SHGs is considered as priority

sector lending.[4] Hence, banks can also fulfill the norms of the RBI by lending to MFIs.

It is apparent from Figure 1 that in the first level MFIs will incur various types of costs in availing the loan from the bank/s. There may be administrative costs in approaching the banks, requirement of bond papers, visiting or traveling costs, fees, and commissions involved in availing the funds. Similarly, another major component is the market rate of interest paid to the bank(s) for the loan. Once, the MFIs have enough funds for on-lending to the groups, they start screening loan applications (the credit demand) from SHGs. In the screening process, MFIs will follow their own norms or criteria in delivering the loans to the groups and will incur costs in the process. Groups fulfilling the MFIs' requirements will be allotted credit based on their ability to repay it. In this process, MFIs will incur costs like, administrative, traveling, stationary, and bank charges at the time of on-lending to the SHGs. Hence, the MFIs will incur costs before loan disbursement by the banks, at the time of disbursement from the bank, and before and at the time of on-lending to the groups. All these costs and (marginal) risks in lending to the SHGs and some margin or mark up to maintain future business, will determine the rate of interest on loans given by MFIs.

At the second level of financial intermediation, the funds (micro loans) will flow from MFI to the SHG. At this level, the members of microfinance groups have no meaningful physical collateral and heavily credit constrained. Microfinance loans are characterised by three indispensable features: (i) loans are short-term,, relatively small and availed without physical collateral, but structured with social collateral; (ii) the loans are extended typically to a group, whose size can range from five (in the Grameen model) to twenty (in the SHGs) with group members jointly liable for default by any member; (iii) loans carry frequent interest payments (weekly in many cases) and significant administrative expenses are incurred to ensure delivery of loans to remote villages and for collection of payments (Cheung and Sundaresan, 2006).

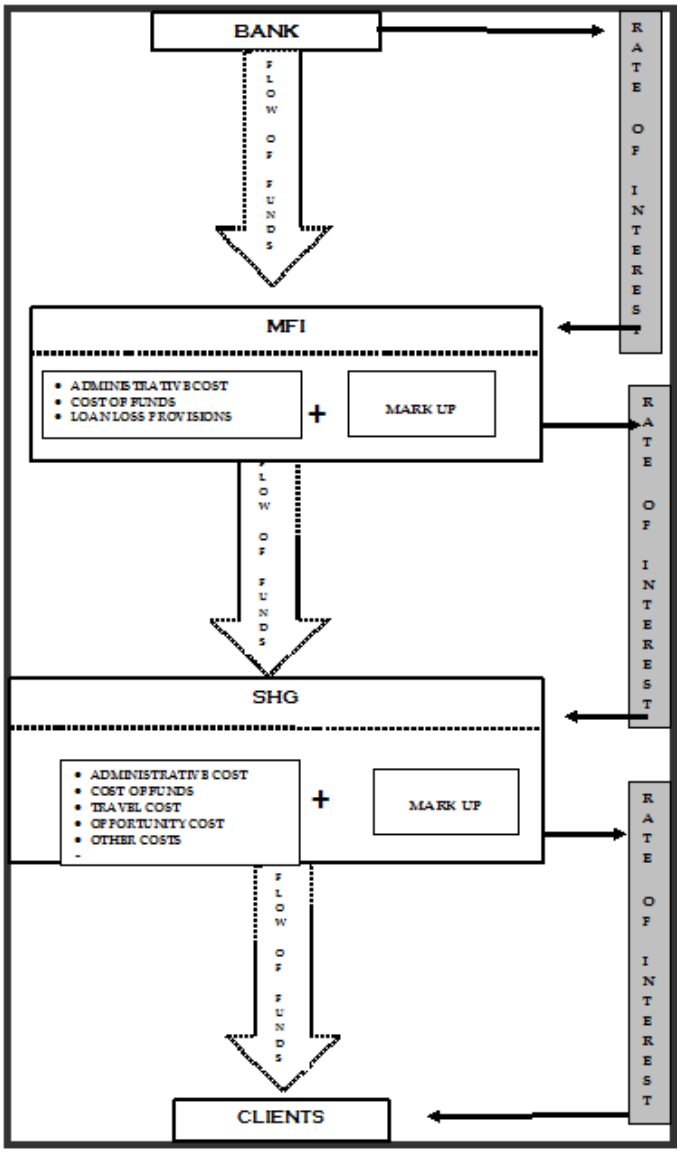
Therefore, in the second level, SHGs will incur administrative costs like cost on selection, monitoring and enforcing of the borrower[5], cost of the loan application, cost of hired staff for writing the books of accounts, group auditing cost and cost of stationary; the travel cost – visit to the bank office and the field office of the MFI; the opportunity cost – the time forgone in getting the loan (travel), the cost of funds (included of fees and commissions), and other cost like the hospitality to the NGO staff or the bank staff or the MFI staff. Based on all these cost to the SHGs and with some margin to maintain the group as well as to build the corpus fund for the group, it

4 RBI Circular on Priority Sector Lending – RBI/2006-2007/191 RPCD.No.Plan.BC 37/04.09.01/2006-2007 (www.rbi.org)

5 The selection, monitoring and enforcement costs in this study was calculated through the monetary cost of total meeting time devoted in the meetings, particularly for the selection, monitoring and enforcing the borrowers, time spent on maintaining the attendance of the member, and loan and savings accounts

will lend to the member with rate of interest that will cover all the costs of the group and with some margin.

Figure 1: Flow of Funds and Rate of Interest Determination



Source: Authors' Framework

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4. Survey Design and Data

The data have come from a survey of 106 women SHGs in ten villages in the state of Karnataka, India. Five of the villages were supported by Sri Kshethra Dharmasthala Rural Development project (R.) (SKDRDP) Dharmasthala, Dakshina Kannada and the other five were supported by Sangamithra Rural financial Services (SRFS) Mysore. The rationale behind the selection of Sanghamithra is that it is the only Non-for Profit Company MFI registered under the Indian Companies Act, 1956 and working in the state for more than ten years with wide experience in microfinance services in the state of Karnataka. Sanghamithra MFI is also extends its micro-financial services in the neighbouring states like Tamil Nadu and Andhra Pradesh. However, the motivation behind the selection of SKDRDP an NGO-MFI was that it is the largest (by reaching the number of poor people and loan outstanding) NGO-MFI working in the field of microfinance in the state of Karnataka. SKDRDP an MFI is also reaching the poor with many non-financial services to the poor, through the development of micro-enterprise units, health care and sanitation facilities, literacy programme, etc.

To study the determinants of rate of interest in SHGs, a multi stage sampling technique was used in the selection of the units. Accordingly, at the first stage, Mysore district from the operational area of Sanghamithra MFI and Dakshina Kannada district from SKDRDP MFI is selected purposively. Selection of the district was done keeping in view that it should satisfy the two criteria viz., (i) cover (formed/linked to the MFI) the maximum number of SHGs and rural poor households and (ii) the district should be the first operational area so that we have matured groups and members for the study. The second stage of sampling is the selection of taluks. There are two taluks, viz., T. Narasipura taluk and Belthangady from Sanghamitra and SKDRDP operational areas were selected by using the same criteria that was used for the selection of districts. The third stage of sampling covered the selection of villages. From each taluk, the village list was prepared with number of SHGs formed/linked to the MFI. Consequently top five villages having highest number of SHGs and members were selected from each taluk. The five villages from Belthangady taluk are Bandaru, Kokkada, Neriya, Machina and Padangady and Hykanoor, Helavarahundi, Talakadu, T.Bettahalli and Vatal from T.Narasipura taluk were selected for the study. The fourth stage of sampling involved the selection of SHGs. In the each selected village, the currently MFI linked SHG list was prepared. Accordingly, from each village 25 per cent of SHGs were selected randomly. In all, 106 SHGs (53 SHGs from each taluk) were randomly selected from ten villages. The sample of SHGs by MFIs and taluks and villages is presented in the Table 1. The interview schedule (Questionnaire) was prepared and data on basic details of the group, like, age of the SHG and its size, savings, number of loans or loan cycles, cost of funds, operational costs, opportunity costs, travel cost and other cost involved were collected from the SHGs.

Table 1: The Sample SHGs across MFIs, taluks and villages

Sl. No	Name of the MFI / Taluk	Name of the village	Total No. of SHGs linked to MFI	Sample SHGs Selected for study
1	SRFS /T. Narasipura	Hykanoor	45	11(20.8)
2	-do-	Talakadu	46	11 (20.8)
3	-do-	Vatal	47	11 (20.8)
4	-do-	Helavarahundi	40	10 (18.9)
5	-do-	T Bettahalli	41	10 (18.9)
Total				53 (100)
6	SKDRDP/Belthangady	Bandaru	49	12 (22.6)
7	-do-	Kokkada	45	11(20.8)
8	-do-	Machina	35	9 (17.0)
9	-do-	Neriya	42	10 (18.9)
10	-do-	Padangady	47	11 (20.8)
Total				53 (100)
Grand Total			437	106

Note: Figures in parentheses denote percentage to the total number of sample SHGs in particular taluk
Source: Primary Survey

5. Empirical Results

The microfinance sector is witnessing steady growth. There has been significant progress in terms of expansion across regions and outreach. With growth, the sector is experiencing increased diversity in terms of operating models, legal forms, outreach to clients, local contexts, and regional imbalances (Sa-dhan, 2007). This diversity leads to differential rates of interest across the MFIs and SHGs. The determination of interest rate at the SHG level is analysed by using the information on administrative costs: selection, monitoring and enforcement of the borrowers (it was collected through the time spent in the group meetings multiplied by the prevailing wage rate in particular village), payment for hired staff for writing the accounts, auditing, and purchase of the stationery. The information on cost of funds was gathered through the rate of interest and fees and commissions paid by the SHG to the MFI on loans obtained. It is observed through the average loan amount multiplied by the average

rate of interest of the MFI. The information on traveling cost was colleted through the monetary cost incurred to visit the bank branch and MFI field office to avail information on loan, submission of application, follow-up, receiving of the cheques, and repayments. The opportunity cost of loan was calculated through the time spent on travelling in availing the loan. It was determined by estimating the value of the time the borrower spent away from his work. Care was taken to exclude visits to town not associated with the loan. The cost of each workday was calculated at the prevailing market wage rate for workers in the village. The other cost included the hospitality provided to the field officers, cost of documentation and bond papers/securities were used in getting the loan.

Generally, the costs associated with the loan, like, administrative, opportunity, travel, and other costs will vary across the SHGs and regions. It will also lead to variation in the rate of interest. In this background, the subsequent part of the analysis will bring out the influence of various cost factors in the determination of the rate of interest charged by SHGs.

Table 2 shows that the frequency distribution of SHGs by number of loans and loan amount across the taluks. The loan amount was classified under four sections, based on distribution. The first quartiles (less than 25 quartiles) less than Rs.93,000, second (25 to 50 quartiles) Rs.93001 to Rs.1,70,000, third (50 to 75 percentile) Rs.1,70,001 to Rs.2,52,000 and fourth (more than 75 quartiles) more than Rs.2,52,001. In Belthangady taluk, 98 per cent of the SHGs had borrowed more than two times from the MFIs. Majority of them had borrowed more than four times from MFIs. However, in T. Narasipura taluk, many SHGs had borrowed less than three times from the MFIs. Only 7.5 per cent of the SHGs had borrowed five times from Sanghamitra MFI.

It is also clear from the Table that from the total sample (106 SHGs) more than 75 per cent of SHGs had borrowed more than Rs. 93000 from the MFIs and still 25.5 per cent are SHGs were in the fourth quartile. In Belthangady taluk alone 30.2 and 15.1 per cent SHGs were in the third and fourth quartile, respectively, and a marginal number of SHGs were in the first quartile (17 per cent) in Belthangady taluk. In T. Narasipura taluk, 35.8 per cent of SHGs were in the last quartile and another 32.1 per were in the first quartile. It shows that there are equally extreme ends of very low and very high loan borrowings from MFIs. The reason behind this uneven distribution is that the SHGs linked to Sanghamitra are from different SHPIs. It was observed that the Stree Shakthi or Swayamsidda groups were poorly managed and they had borrowed very little from the MFIs. It was also observed that as the average loan amount increases the cost of the funds also increases. The average amount of borrowings will directly influence the cost of funds borrowed from the MFIs.

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Table 2: Distribution of SHGs by Number of Loan and Loan Amount Borrowed from MFIs

SHGs in Taluk's	No. of loans borrowed from MFIs	Total amount of loan per SHG (in Quartiles)			
		< 25 quartiles	25 to 50 quartiles	50 to 75 quartiles	> 75 quartiles
		Less than Rs. 93000	Rs. 93001 to Rs. 170000	Rs. 170001 to Rs. 252000	More than Rs. 252001
Belthangady	1	--	--	--	--
	2	--	1 (5)	--	--
	3	5 (55.6)	11 (55)	3 (18.8)	--
	4	4 (44.4)	7 (35)	8 (50)	1 (12.5)
	5	--	1 (5)	5 (31.2)	7 (87.5)
	Total (N=53)	9 (100)	20 (100)	16 (100)	8 (100)
T. Narasipura	1	8 (47.1)	--	--	--
	2	8 (47.1)	2 (20)	--	--
	3	1 (5.9)	8 (80)	5 (71.4)	5 (26.3)
	4	--	--	2 (28.6)	10 (52.6)
	5	--	--	--	4 (21.1)
	Total (N=53)	17 (100)	10 (100)	7 (100)	19 (100)
Total	(N=106)	26 (24.5)	30 (28.3)	23 (21.7)	27 (25.5)

Note: Figures in parentheses denote percentage of total SHGs in particular taluk
Source: Primary Survey

The average loan amount disbursed by the SHGs in Belthangady and T.Narasipura taluk had increased over a period of time. The average loan amount disbursed by the SHGs in Belthangady taluk increased from Rs.16,796.23 to Rs.1,26,746.52 between the first and seventh year of its operation. However, in T.Narasipura taluk the average loan amount disbursed by the SHGs increased from Rs. 18,325 to Rs.1,91,638.16 between the first and the sixth year. It is also apparent from the Table that in the initial years the amount of credit disbursed to the members was comparatively small. It was a

minimum of Rs. 2,000 and a maximum of Rs. 82,000 in Belthangady and minimum of Rs. 3,000 and maximum of Rs. 80,000 in T. Narasipura taluk. However, over the years the credit disbursed has increased many folds. At the time of fieldwork, the minimum amount of credit disbursed was Rs. 30,000 and maximum of Rs. 3,13,805 in Belthangady taluk and minimum of Rs. 30,000 and maximum of Rs. 31,28,000 in T. Narasipura taluk. It shows that the SHGs are working like a *'mini bank'* in the rural areas with improved access to credit services.

Table 3 and 4 also explains the rate at which the loans were disbursed to members. The average rate of interest in the SHGs of Belthangady taluk declined from 19.55 per cent to 14 per cent, between the first and seventh year of lending. It is apparent that the interest rate had declined for the SHGs in T.Narasipura taluk, from 38.49 per cent to 21.33 per cent. However, this rate is comparatively higher than the rate charged by the SHGs in Belthangady taluk. The Table also makes it clear that the range of interest rate charged by the SHGs in Belthangady was between 16 per cent and 24 per cent in the initial years and 14 and 15 per cent at the time of survey. However, the SHGs in T.Narasipura charged between 24 per cent and 60 per cent in the initial years and it declined to 18 and 30 per cent at the time of survey. In the field some of the microfinance members opined that they wanted to build a corpus fund for their SHGs, hence, they were charging higher rates of interest on loans to their members as compared to other SHGs. Hence, there are two important aspects in determining the rate of interest across the SHGs. Firstly, the various cost components, and secondly, the expected margin or mark up that is fixed by the members for the development of the common fund.

Table 3: Average Amount Disbursed by the SHGs and Average Rate of Interest in Belthangady Taluk

Loan Cycles	No. of Cases (SHGs)	Amount Disbursed by the SHG (Rs.)			Rate of interest per annum (percentage)		
		Average amount	Amount Range		Average rate of interest	Range of rate of interest	
			Minimum	Maximum		Minimum	Maximum
First	53	16796.23	2000.00	82000.00	19.55	16	24
Second	53	53384.06	9500.00	158500.00	19.85	16	21
Third	53	61248.11	4000.00	216050.00	17.43	15	18
Fourth	50	78145.00	13000.00	359010.00	16.26	14	18
Fifth	45	90978.53	20400.00	300000.00	15.91	15	17
Sixth	24	85267.08	26000.00	200000.00	14.75	14	15.5
Seventh	23	126746.52	30000.00	313805.00	14.50	14	15

Source: Primary Survey

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Table 4: Average Amount Disbursed by the SHGs and Average Rate of Interest in T.Narasipura Taluk

Loan Cycles	No. of cases (SHGs)	Amount disbursed by the SHG (Rs.)			Rate of interest per annum (percentage)		
		Average amount	Amount Range		Average rate of interest	Range of rate of interest	
			Minimum	Maximum		Minimum	Maximum
First	53	18325.00	3000.00	80000.00	38.49	24	60
Second	53	41407.55	8000.00	125000.00	31.32	24	48
Third	47	76696.81	10000.00	220000.00	26.04	24	48
Fourth	34	90294.12	24000.00	170000.00	24.55	21	36
Fifth	27	89425.93	9400.00	225000.00	22.93	18	32
Sixth	13	191638.16	30000.00	312800.00	21.33	18	30

Source: Primary Survey

It is obvious from the Table 5 that the average loan amount borrowed by the SHGs in T.Narasipura taluk was much higher than in Belthangady taluk. In the first year of borrowing, SHGs in Belthangady taluk obtained an average loan amount of Rs.21,150.94 and it increased to Rs.1,03,846.20 at the time of the survey (fifth year). However, the average loan amount borrowed by the SHGs of T.Narasipura increased to Rs. 25,566.04 to Rs. 1,57,500.00. Consequently, the average rate of interest paid by the SHGs for the loan to the MFIs had declined from 14.75 per cent to 11.04 per cent in Belthangady taluk and 16.08 per cent to 14.00 per cent in T.Narasipura taluk. However, the average fees and commissions paid for the loans increased as the average loan amount increased. The fees and commissions are paid as a percentage of loan amounts to the MFI. Generally, the MFI charges 1 to 2 per cent and some times more, based on the distance of the group from the credit office and the amount of the loan. The fees and commissions are collected or deducted by MFI at the time of disbursement of loan to the SHG. Generally, these costs or expenses are called as the service charges on the loan amount.

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Table 5: Average Loan Amount Borrowed by the SHGs from the MFI and Rate of Interest and Commission/Fees paid across Belthangady and T.Narasipura Taluk

Loan Cycles	No. of cases (SHGs)	Loan amount borrowed (Rs.)			Rate of Interest on loan (percentage)			Average fees and commission (Rs.)
		Avg	Min	Max	Avg	Min	Max	
Belthangady Taluk								
First	53	21150.94	5000	88000	14.75	12	16	280.57
Second	53	39433.96	5000	130000	13.83	12	15	397.17
Third	52	51500.00	5000	125000	12.31	12	14	401.92
Fourth	33	61818.18	12000	150000	11.92	11.50	14	472.73
Fifth	13	103846.20	15000	300000	11.25	11.25	14	856.38
T.Narasipura Taluk								
First	53	25566.04	15000	70000	16.08	14	17	241.13
Second	45	55222.22	25000	100000	15.71	14	16	476.14
Third	35	97314.29	30000	200000	14.51	13	16	710.00
Fourth	16	147187.50	50000	250000	14.11	12	15	1103.13
Fifth	4	157500.00	100000	200000	14.00	12	14	1250.00

Note: Avg = Average; Min = Minimum and Max = Maximum

Source: Primary Survey

Table 6 presents the percentage of various components of costs that is factorized in the average rate of interest charged by the SHGs (lending to its members) across average loan amount. In determining the various factors, as a first step, the average lending rates of the SHGs are converted into the present money value and subsequently, from this total money value of interest rate the percentage of various costs are estimated. Further, by deducting all costs from the monetary value of rate of interest the percentage of margin was calculated. Table 6 reveals the percentage of average cost of funds factored in average rate of interest is relative very high as compared to any other forms of costs in SHGs. Further, the percentage of cost of fund covered in rate of interest is comparatively very high in Belthangady taluk (i.e., 70 to

75 per cent) than that in T.Narasipura taluk (46 to 51 per cent) across all quartiles[6] of average loan amount disbursed. It is apparent that the SHGs in T.Narasipura taluk are generating large portion of the margin (41 to 44 per cent) through micro lending.

The percentage of total margin factored in the rate of interest is very low (8 to 15 per cent) in the SHGs of Belthangady taluk. For the small amount of loan, the average administrative costs and average other costs are very high as compared to the lager amount of loan in both the taluks. Because, the progressive lending starts with small amounts, where the administrative cost and other costs for the SHG will be higher, as the loan amount grows it will be decreasing as a percentage to the total amount borrowed. This Table also makes clear that borrowing smaller amount of loan will be costlier to the members of microfinance groups.

The microfinance groups or SHGs work like low cost banks for the poor people in the rural areas, particularly for women. From the bank's point of view, financing to/through groups has not only reduced the transaction costs, but also improved recovery of loans substantially. In the case of an individual borrower, joint liability has reduced transaction costs on the loan by handling a group account instead of an individual account. Thus, availing the loan through the microfinance groups will uniformly allocate the costs of the loan across the borrowers based on their loan amount. In this context, the traveling cost, opportunity cost and other costs for the loan would also play a key role in determining the rate of interest in SHGs.

Opportunity cost is measured through the wage forgone by traveling to the MFIs or bank branches. Table 6 shows that the average opportunity cost is higher in SHGs of Belthangady taluk than that of T. Narasipura taluk. One of the main causes for such a difference is that the prevailing daily wage rate in Belthangady taluk is higher than that of T. Narasipura taluk and it has influenced the opportunity cost of loans. Longer the distance to the bank or field offices higher will be the opportunity cost. However, sometimes even zero travel cost could result in opportunity cost to the group

6 The Quartiles are generated based on the frequencies of the average loan amounts (Rs.) into less than 25 per cent as first quartile, 26 to 50 per cent as second quartile, 51 to 75 per cent as the third quartile, and more than 75 per cent is the fourth quartile.

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Table 6: Component of various Cost in Average Interest Rate of the SHG (lending to its members) across Average Loan Amount (in Percentage)

Average Loan Amount (in Quartiles)	No. of cases (SHGs)	Average Cost of Funds 1	Average Administrative Cost 2	Average Travel Cost 3	Average Opportunity Cost 4	Average Other Cost 5	Total cost (1+2+3+4+5) 6	Margin Generated
Belthangady **(N=53)**								
Less than Rs. 35000	16	69.86	11.03	1.40	1.67	7.71	91.67	8.33
Rs. 35001 to Rs.50000	18	75.48	5.68	0.68	0.84	4.33	87.01	12.99
Rs.50001 to Rs. 67000	13	72.81	6.57	0.99	1.10	4.78	86.25	13.75
More than Rs. 67001	6	75.40	4.16	0.53	0.71	3.55	84.35	15.65
T.Narasipura **(N=53)**								
Less than Rs. 35000	11	50.63	3.63	0.63	0.47	2.68	58.04	41.96
Rs. 35001 to Rs.50000	9	46.56	6.44	1.24	0.82	2.87	57.93	42.07
Rs.50001 to Rs. 67000	13	48.71	4.51	1.03	0.59	3.08	57.92	42.08
More than Rs. 67001	20	50.73	2.56	0.44	0.34	1.76	55.83	44.17
Total (Belthangady + T.Narasipura) **(N=106)**								
	27	60.37	9.16	1.34	1.32	5.74	77.92	22.08
Rs. 35001 to Rs.50000	27	64.78	5.88	1.00	0.93	4.21	76.81	23.19
Rs.50001 to Rs. 67000	26	63.05	4.66	0.66	0.65	3.51	72.53	27.47
More than Rs. 67001	26	56.42	2.93	0.46	0.43	2.17	62.41	37.59

Source: Primary Survey

It was observed from the field that either due to non-availability of transport or because of minimum distance (less than 5 KM), group members would walk to the bank/field office. Travel cost is comparatively higher in T. Narasipura than in Belthangady taluk. Due to scattered distribution of bank branches and distance to the MFI credit office, travel costs are higher in T. Narasipura. For example, the microfinance members of the Vatal village of T. Narasipura taluk have to travel 15 to 20 Kms to deposit/withdraw the group's money in a bank located in the taluk headquarters. However, in Belthangady taluk, the distance to the bank or MFI branch is easily approachable.

The magnitude of other costs – hospitality to field officers, documentation - in availing the loan also plays a significant role in determining the interest rate in SHGs.. The average other cost on loan was much higher in SHGs of Belthangady taluk than in T.Narasipura taluk. Thus, it is evident that the cost of funds plays a decisive role in the determination of interest rate charged by microfinance groups. Subsequently, the average administrative cost, the average of other costs and average travel and opportunity costs will determine the rate of interest on loan in SHGs. However, the SHGs not only covered the *full cost* of loans, but also were able to generate a margin in their financial intermediations.

Table 7: Description of the Independent Variables

Variable	Description	Expected Sign
Fc	Average Cost of borrowed funds or loan	+
Admn	Average Administrative cost of loan	+
Tc	Average Traveling costs on	+
Opc	Average Opportunity costs	+
Oc	Average Other costs	+
Mfi	1 = SRFS linked groups, 0 otherwise (SKDRDP)	+
Age2	1 = SHG having age of 3 to 6 years, 0 otherwise	+
Age3	1 = SHG having age of more than 6 years, 0 otherwise	+
Size2	1 = group size between 10 to 15 members, 0 otherwise	+
Size3	1 = group size more than 15 members, 0 otherwise	+

Econometric Model

To test the relative importance of the factors that determine the rate of interest in microfinance groups a linear regression model was estimated by using the Ordinary Least Square method. Regression of some selected independent variables will depict their association with the rate of interest and how much and how strong their influence in determining the interest rate in SHGs. The cost of funds, administrative cost, travel cost, opportunity cost, and other costs were taken as independent variables. Table 7 provides the expected relationship between the dependent variable and independent variables.

Estimated Equation

$$r = \alpha + \beta_1 Fc + \beta_2 Admn + \beta_3 Tc + \beta_4 Opc + \beta_5 Oc + \beta_6 Mfi + \beta_7 Age2 + \beta_8 Age3 + \beta_9 Size2 + \beta_{10} Size3 + \beta_{11} Oversus + ui$$

The result of regression analysis indicates that the cost of borrowed fund is positive and significant at 95 per cent level. It is apparent that an increase of one unit in the cost of borrowed fund will increase the rate of interest by 0.00030 units. The administrative cost on loan is positive and significant at 95 per cent level; it indicates that one unit increase in the administration cost increases the rate of interest by 0.0126 units. Further, the coefficients of travel, opportunity, and other costs (5 per cent and 1 per cent, respectively) are influencing the rate of interest positively and significantly at the group level. The groups linked to SRFS are determining the rate of interest by 7.697 units. The result demonstrates that there is positive association between the age and rate of interest determination in the groups. SHGs falling in Age group 2 influence determination of rate of interest by 3.58 units compared to SHGs of the Age group1. Similarly, Age group 3 influences the rate of interest by 2.89 units. The coefficient of Age group 2 and Age group 3 are positive and statistically significant at 99 and 95 per cent level. The size of groups also positively influence rate of interest. While comparing the smallest group (size1), the influence of size3 is comparatively high at 3.439 units in determining the rate of interest. Size3 is statistically significant at 95 per cent level. The R-Square value is 0.61, which means that 61 per cent of the variations in the rate of interest are explained by the included variables.

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Table 8: Determinants of Rate of Interest in Microfinance Groups Dependent Variable = *rate of interest on loan (r)*

Variable	Coefficient	Robust Std. Error	t. statistics
Constant	12.85*	1.264708	10.16
Fc	0.000301**	0.000143	2.10
Admn	0.01268**	0.004904	2.59
Tc	0.02543**	0.010812	2.35
Opc	0.02054**	0.012426	1.65
Oc	0.00836*	0.002494	3.35
Mfi	7.69727*	0.999162	7.70
Age2	3.58155*	1.180929	3.03
Age3	2.89151**	1.153366	2.51
Size2	0.95302	0.738134	1.29
Size3	3.43995**	1.341411	2.56
R^2	0.61		
N	106		
F (11,94)	29.30*		

Note: *, ** & *** Significant at 1, 5 & 10 per cent level, respectively.

6. Policy Recommendations And Conclusion

The microfinance sector has two significant objectives – to reach large sections of financially excluded poor and MFIs/SHGs should cover their cost of lending through an optimal rate of interest to attain sustainability. Hence, both the goals are important for a sustainable microfinance sector. The *cost of fund* and *other costs* associated in microfinance significantly influence the rate of interest and reducing these two costs would reduce the interest rate on loans. The competitive development of microfinance industry could reduce the fund cost to the microfinance groups. The groups need to reduce efficiently the *other costs* associated with writing and maintaining the

accounts, auditing, and hospitality offered, through innovative methods of lending. In determining the rate of interest in the microfinance sector, different schools of thinkers argue differently. The supporters of the *"Sustainability Approach"* believe that higher rate of interest is necessary to maintain the financial sustainability of the lending institution (for MFI or SHG). The followers of the *"Poverty Lending Approach"* argue that interest rate in microfinance is too high and it will take away all the benefits generated by the people. Hence, suitable pricing for the loan is the immediate need in microfinance sector.

Policy changes are required to address the issues of controlling the extreme rate of interest charged by the MFIs/SHGs on their loans or controlling the exploitative margin (surplus) on the loans disbursed. Hence, a cap on microfinance interest rate in India is essential for increased inclusion of the excluded.

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