

---

## **Economic Performance of Self Help Groups in Karnataka with Special Reference to Venkatelahalli in South India**

**N. Nagaraj,\* M.G. Chandrakanth,\* David Acker,\*\* P.G. Chengappa,†  
H.R. Shruthi,\* C.G. Yadava\* and Ramesh Kanwar‡**

### INTRODUCTION

In India, the first Self Help Group (SHG) emerged in 1985, with the initiative of the Mysore Resettlement and Development Agency (MYRADA), a non-governmental organisation (NGO) for promotion of self-help affinity groups; watershed, water and wasteland management; forestry; community management of sanitation and drinking water, housing and habitat; improvement of primary school education; technical skills for school dropouts; microenterprise generation; preventive health care and HIV/AIDS prevention programme. By 1986, there were 300 SHGs in MYRADA's projects. A SHG is a group of about 10 to 20 poor women or men, from a similar class and region, forming a savings and credit organisation by pooling financial resources in order to extend loans to the members at low interest with far fewer procedural hassles. 'Savings first' is the prime ethic of SHG. The National Bank for Agriculture and Rural Development (NABARD), Reserve Bank of India (RBI), leading NGOs, and multilateral agencies like the International Fund for Agricultural Development, included SHG as strategic component to mitigate poverty by incorporating this approach in their annual plans since the emergence of SHGs. NABARD initiated an action research project in 1989 where grants were provided to other NGOs for initiating SHGs. In 1990, RBI accepted the SHG strategy as an alternative credit model and NABARD launched the SHG-Bank Linkage Programme in 1992 to lend directly to SHGs for capacity building and innovation, to create an enabling environment.

### SHGS IN KARNATAKA

Between 1984 and 1985, MYRADA promoted SHGs, referred to at that time as Credit Management Groups, with a focus on management of credit. The concept of each member depositing a small amount of savings with the group soon followed, as

---

\*Professor, Professor and University Head, Research Fellows, Department of Agricultural Economics, University of Agricultural Sciences, Bangalore – 560 065, \*\*Associate Dean, College of Agriculture and Life Sciences, Iowa State University, Ames, Iowa, †Vice Chancellor, University of Agricultural Sciences, GKVK, Bangalore and ‡Professor, Department Chair of the Agriculture and Biosystem Engineering, Iowa State University, Ames, Iowa, respectively.

The assistance rendered by A.N. Chetana H.S. Ravi, Shri Sanjiv Gurikar, Shri Umesh Pradhani in conducting the study and analysis is acknowledged.

did the establishment of a system of regular meetings, book keeping and records, and collective decision-making. A study by Puhazhendhi and Satyasai (2000) highlighted the role of NABARD in infusing the confidence to mainstream the SHG-Bank Linkage Programme in 1996 with NABARD's normal lending activity. This programme has grown to become an impressive microfinance initiative.

The economic performance of SHGs is crucial for their sustainable future. Further identification of factors which contribute to economic performance of SHGs is crucial for developing strategies for sustenance of SHGs. In this study the economic performance of SHGs is analysed with the following specific objectives: (i) To analyse the growth of SHGs and in micro credit utilisation in Karnataka and in India, (ii) To develop indicators of economic performance of SHGs and (iii) To estimate the relative contribution of factors contributing to economic performance of SHGs.

### *Description of Study Area*

Over the past four years, the University of Agricultural Sciences, Bangalore (UASB), India, in co-operation with Iowa State University (ISU), U.S.A., has participated in an action research project, funded by USAID, in Southern India. This action research project was carried out in a village, Venkatenahalli which is located in a rural district of Karnataka State near Bangalore. It is located 900 metres above MSL and receives annual rainfall in the range of 650mm. The daytime temperature typically reaches 35 to 42 degree celsius. The major crops grown under rainfed conditions are finger millet, maize, redgram, cowpea and green gram. Horticultural crops like tomato, potato, carrot and mulberry are raised using irrigation. Livestock common to the area include cattle, buffalo, sheep, goats and poultry.

### *Methodology*

As mentioned earlier, the University of Agricultural Sciences, Bangalore, in collaboration with Iowa State University jointly implemented the action research project on sustainable technologies for improving the livelihoods of farmers from 2003 to 2006 in Venkatenahalli in Devanahalli taluk of Bangalore rural district, Karnataka. Here, the percentage of population living below poverty line is relatively high and income security is relatively low. As part of the project, income generating activities were supported to supplement household income and to provide a safety net in times of economic stress. In consultation with villagers, pilot income generating activities such as dairying, rearing ornamental fish and rearing sheep and goats were introduced with the idea that if they are successful they could be scaled up to benefit other villages. For this study, in Venkatenahalli four SHGs were selected based on their performance, namely, Nandini (Group I), Keertini (Group II), Chandrodaya (Group III) and Arunodaya (Group IV). A total of 64 members of SHGs of which 18 from Group I, 18 from Group II, 12 from Group III and 16 from Group IV formed the

sample from whom field data were collected by personal interviews for the year 2008-09.

### *Gap in Research*

There were no studies for developing simple economic indicators to reflect the performance of SHGs, which are useful in their evaluation for further improvement. This study is a modest attempt towards this direction highlighting the real growth of SHG lending per family using secondary data and for developing indicators of economic performance of SHGs. The secondary data on growth of SHG lending are for Karnataka State and India. The primary data are drawn from the joint action research project of Iowa State University and the University of Agricultural Sciences, Bangalore referred to above.

## RESULTS AND DISCUSSION

### *Improving Access to Credit: Growth of SHGs in India*

A cursory examination of the data on the temporal growth of SHGs (Table 1), reveals that in real (nominal) terms, the loan per SHG increased from Rs. 11,860 (Rs.11,765) in 1992 to Rs. 32,800 (Rs. 64,157) in 2005 achieving the growth of 9.5 (15.3) per cent. The loan per family increased from Rs. 698 (Rs. 692) in 1992 to Rs. 2187 (Rs. 4,277) in 2005 with a growth of 11.1 (17) per cent. Thus, the growth performance of SHGs in terms of improving access to credit is impressive at around 10 per cent in real terms on both per SHG and per family basis (Figures 1 and 2).

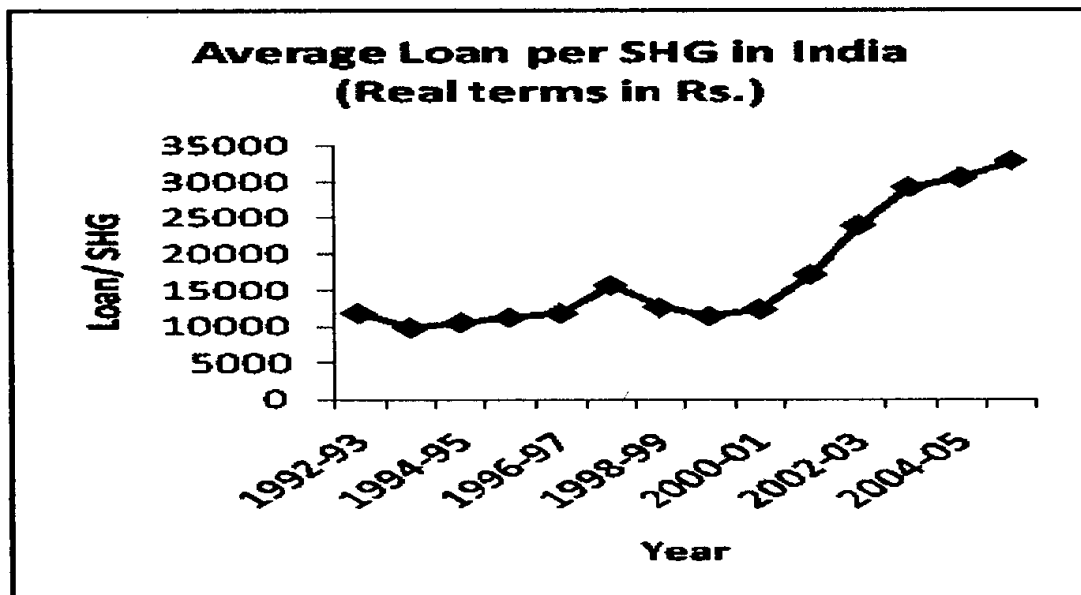


Figure 1. Trend in Average Loan Per SHG (Real Terms) in India

TABLE 1. GROWTH IN SHGS, SHG LOANS IN INDIA

Year (1)	No. of SHGs credit linked (2)	Increase in No. of SHGs compared to previous year (3)	Bank loan (Rs. lakh) (4)	No. of families assisted (5)	Average loan/SHG in current prices (Rs.) (6)	WPI with 1993-94=100 (7)	Average loan /family in current prices (Rs.) (8)	Average loan per family in real terms (9)	Average loan per SHG in real terms (10)
1992-93	255		30	4335	11765	99.2	692	698	11860
1993-94	365	143.1	36	6205	9863	100	580	580	9863
1994-95	1502	411.5	179	25534	11917	112.6	701	623	10584
1995-96	2635	175.4	361	44795	13700	121.6	806	663	11267
1996-97	3841	145.8	578	65297	15048	127.2	885	696	11830
1997-98	5719	148.9	1192	97223	20843	132.8	1226	923	15695
1998-99	18678	326.6	3330	317526	17828	140.7	1049	745	12671
1999-2000	81780	437.8	13590	1390260	16618	145.3	978	673	11437
2000-01	149050	182.3	28789	2533850	19315	155.7	1136	730	12405
2001-02	197653	132.6	54554	3360101	27601	161.3	1624	1007	17112
2002-03	255882	129.5	102231	3754874	39952	166.8	2723	1632	23952
2003-04	361731	141.4	185550	4586000	51295	175.9	4046	2300	29161
2004-05	518173	143.2	296180	7774000	57159	187.3	3810	2034	30517
2005-06	482589	93.1	309613	7238835	64157	195.6	4277	2187	32800
Growth rate					15.3		17.0	11.1	9.5

Note: The data in first six columns is obtained from NABARD. The data on WPI is obtained from the Ministry of Commerce and Statistics.

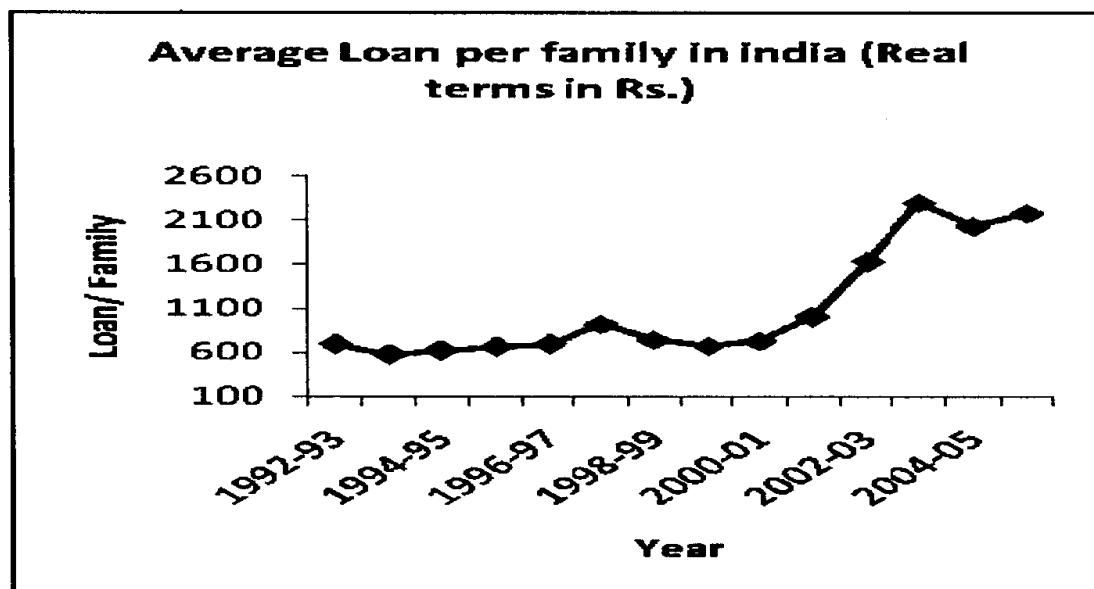


Figure 2. Trend in Average Loan Per Family (Real Terms) in India

### *Improving Access to Credit: Growth of SHGs in Karnataka*

In Karnataka, growth of SHGs over time (Table 2) indicates that in nominal (real) terms, the loan per SHG increased from Rs. 13,560 (Rs. 11,151) in 1995 to Rs.36,871 (Rs.18,850) in 2005 achieving the growth of 10.8 (4.1) per cent. In relative terms, the growth performance of SHGs in terms of improving access to credit in Karnataka is below that of India (Figures 1, 2 and 3).

TABLE 2. GROWTH IN SHGS, SHG LOANS IN KARNATAKA

Year (1)	No. of SHGs credit linked (2)	Increase in no. of SHG's compared to previous year (3)	Bank loan (Rs. lakh) (4)	Wholesale price index (WPI) with 1993-94=100 (5)	Avg. loan /SHG in current prices (Rs.) (6)	Average Loan per SHG in Real terms in (Rs.) (7)
1995	316	-	42.9	120.2	13560	11151
1996	1034	327.2	143.0	125.6	13830	10872
1997	1425	137.8	206.0	131.3	14456	10886
1998	2008	140.9	297.3	138.9	14804	10522
1999	2974	148.1	473.6	143.8	15925	10960
2000	4829	162.4	1017.6	152.8	21073	13534
2001	6395	132.4	1452.0	160.7	22705	14076
2002	14425	225.6	2426.2	164.7	16820	10084
2003	20987	145.5	4539.6	173.4	21630	12297
2004	35912	171.1	10227.4	184.9	28479	15205
2005	54814	152.6	20210.4	193.7	36871	18850
Growth rate					10.8*	4.1*

Source: The first four columns are obtained from NABARD; The WPI is obtained from the Ministry of Commerce and Statistics, New Delhi; \*Significant at 1 per cent level.

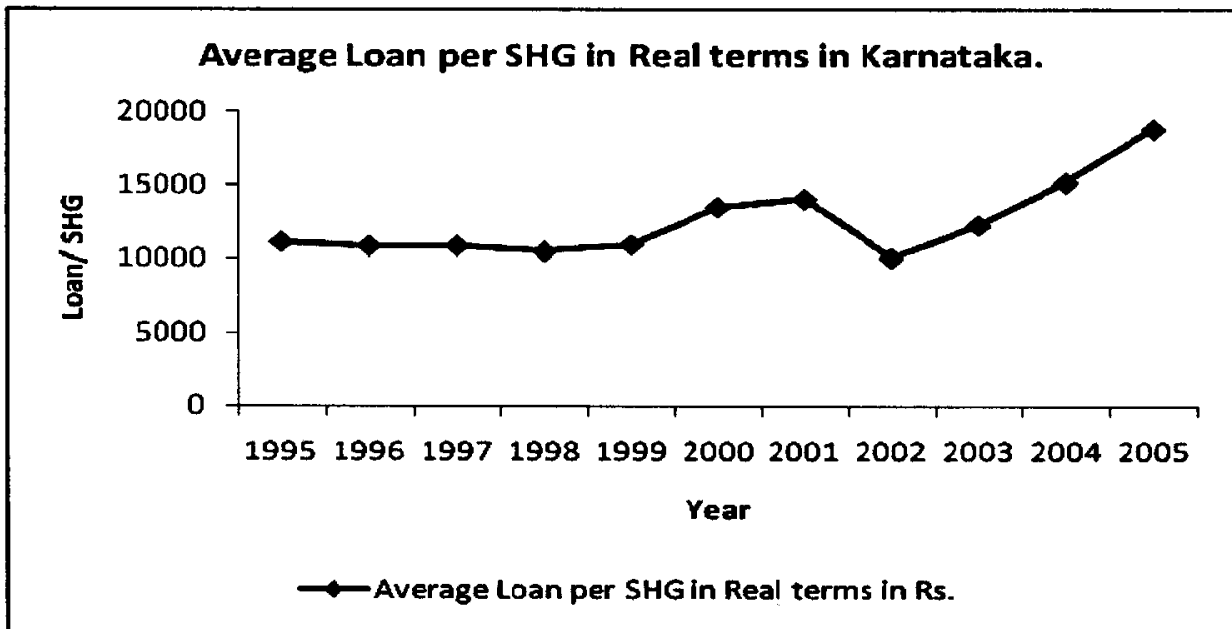


Figure 3. Trend in Average Loan Per SHG (Real Terms) Over the Years in Karnataka

The commercial bank loan per SHG ranges from Rs. 39,032 to Rs. 46,383 depending upon the financial institution to which the SHG is linked, with little difference in 2006. However, the refinance per SHG has a wide variability from Rs. 2,687 by commercial banks to Rs. 36,740 in Regional Rural Banks (RRBs) (Table 3).

TABLE 3. SHG CREDIT LINKAGE PROGRAMME IN KARNATAKA (2006)

Particulars (1)	Commercial Banks (2)	Regional Rural Banks (3)	Co-operative Banks (4)
No. of SHG's	78520	83383	63025
Bank Loan (Rs. lakh)	36420.85	38413.39	24600.61
Bank loan per SHG	46383	46068	39032
Refinance(NABARD)(Rs. lakh)	2110.75	30635.08	14175.50
Refinance per SHG	2687	36740	22491

Source: [www.nabard.org](http://www.nabard.org)

### Activity-wise Linkage

Considering the SHGs sponsored by commercial banks, by (i) NGOs, (ii) NGOs and formal institutions and (iii) NGOs and other financial intermediaries, the largest share (53 percent) constituted those sponsored by commercial banks in Karnataka (Table 4).

TABLE 4. MODEL-WISE CREDIT LINKAGE OF SELF HELP GROUP AS ON 31 MARCH 2006

Model (1)	Description (2)	No. of SHG's credit linked (3)	Percentage of share (4)
I	SHGs formed and financed by commercial banks	118852	53
II	SHGs formed by NGOs and formal agencies, directly financed by commercial banks	70182	31
III	SHGs financed by banks using NGOs and other agencies as financial intermediaries	25894	16
Total		214928	100

Venkatelahalli village has a geographical area of 135 hectares, with a population of 888, of whom 298 are male and 590 are female, with a lopsided sex ratio of 0.5 male per female and a low literacy level of 21 per cent (Table 5). Total land holding in the village is 58 hectares. The village has 140 households with four women SHGs comprising 64 members with IGAs (Income Generating Activity) such as ornamental fishery, dairy, goat and sheep rearing, sericulture, preparation of value added products of crops, petty businesses and making leaf plates. Most of the farmwomen support family agricultural activities and the women of landless families take up agricultural labor work for their livelihood. The SHG members are keen to adopt new IGAs.

TABLE 5. GENERAL INFORMATION OF VENKATENAHALLI VILLAGE (2008-09)

Population	888
Males	298
Females	590
Sex ratio	0.50
Number of households	140
Literates	186 (21 per cent)
Geographical area (ha)	135
Land holding (ha)	58
Average land holding per household (ha)	0.07

Source: Department of Rural Development and Panchayath Raj, Karnataka.

### *Profile of SHGs*

The savings deposited per member per week was around Rs. 10 in the selected SHGs. This resulted in savings increasing from Rs. 8,640 to Rs. 19,200 per year per SHG. Wherever the savings option was 'fixed' the savings were lower, compared to improved savings in SHGs where the option was 'flexible'. In all SHGs, the members met on Sundays regularly at 8 PM and they all maintained good records indicative of transparency in their financial dealing (Table 6).

TABLE 6. PROFILE OF SELF- HELP GROUPS IN VENKATENAHALLI

Name of SHG (1)	Group I (Nandini) (2)	Group II (Keertini) (3)	Group III (Arunodaya) (4)	Group IV (Chandrodaya) (5)
Savings deposited (Rs. /week)	10	10	10	20
Savings per SHG (Rs. per year)	8640	8640	5760-11520	15360-19200
Savings option	Fixed	Fixed	Optional	Optional
Level of documentation*	Good	Good	Average	Average

Note: \*Based on the maintenance of group documents which includes Attendance register, minute book, Savings and loan disbursement register, etc.

### *Socio-Economic Status*

In the action research conducted, three IGAs were facilitated for SHG members: dairy, ornamental fishery and sheep and goat keeping. It was found that 53 per cent of SHG members borrowed for these IGAs from the SHG. The average age of members was around 37 years. The level of illiteracy was 68 per cent in the group with low net income per rupee borrowed compared to 20 per cent in the group with high net income per rupee borrowed for the IGA. The household income realised from those members who did not borrow for IGA, those who realised a net income of Rs. 2 per rupee borrowed for IGA and those who realised a net income of more than Rs. 2 per rupee borrowed for IGA ranged from Rs. 20,000 to Rs. 27,000 per year. The land holding was a modest 0.5 hectare per family (Table 7).

TABLE 7. SOCIO-ECONOMIC STATUS OF MEMBERS OF SHGS IN VENKATENAHALLI

Particulars (1)	Members who did not borrow for IGA (2)	Members realising net income of Rs. Two per rupee borrowed for IGA (low) (3)	Members realising net income > Rs. Two per rupee borrowed for IGA (high) (4)
Members (percentage)	30 (47)	24 (38)	10 (16)
Age (years)	36.39	37.02	37.00
Education (per cent)			
(i) Illiterate	34	68	20
(ii) Primary	28	4	0
(iii) Higher Primary	17	12	50
(iv) High school	10	12	20
(v) Intermediate	7	0	10
(vi) Degree	3	4	0
(vii) Post graduate	0	0	0
Family size (No.)	5.26	5.75	5.5
Household income Rs./annum)	20,531	25,000	27,361
Area (ha /family)	0.50	0.56	0.41

The SHGs who were borrowing frequently were also found to be repaying the loan promptly (Table 8). The interest rate charged to SHG loans by the Bank was modest (10.5 per cent). The amount borrowed ranged from Rs. 25,000 to Rs. 50,000 per SHG (Table 8). The lending of SHG loan commenced from the recent year



onwards in all SHGs. For the SHG borrowing, the transaction costs existed and varied from Rs. 150 to Rs. 500 per loan, which the SHG had to incur while getting loan from the commercial bank, despite the fact that the bank finds it relatively easier to lend to SHGs.

TABLE 8. ANNUAL SAVINGS, BORROWINGS AND LENDINGS OF EACH SELF HELP GROUP IN VENKATENAHALLI

Year (1)	Savings (2)	Lendings (3)	Borrowings* (4)	(Rs.) Status of loan (5)
<b>Nandini (Group I)</b>				
2004	9120	No lending	-	
2005	19800	12000	25000	Repaid
2006	28700	20000	-	
2007	36980	15000	50000	8000
2008	45400	100000	-	
<b>Keertini (Group II)</b>				
2004	9120	No lending	-	
2005	19800	12000	25000	Repaid
2006	28700	20000	-	
2007	36980	15000	50000	8000
2008	45400	100000	-	
<b>Chandrodaya (Group III)</b>				
2000	12480	No lending	-	
2001	24960	18000	-	
2002	28040	12000	-	
2003	32120	14000	-	
2004	34800	30000	-	
2005	22880	12000	30000	Repaid
2006	20521	35000	-	
2007	32521	8000	-	
2008	30921	18000	-	
<b>Arunodaya (Group IV)</b>				
2000	8320	No lending		
2001	16640	10000		
2002	17640	10000		
2003	18440	14000		
2004	30440	12000		
2005	29960	35000	30000	Repaid
2006	38980	10000		
2007	28980	15000	50000	24800
2008	76800	45000		

\*Amount of loan borrowed from Canara Bank, Vijayapura.

### *Purpose of Participating in SHG Activities*

In order to analyse the opinion of SHG members regarding their participation, the sample SHG members were asked about the various facilities they availed. The Garrett's ranking method used (Nagaraj *et al.*, 2008) indicated that their first intention to participate in SHG is to save and only with that motivation they became

members of SHG. The other reasons were their intention to obtain a loan, to overcome financial problems, and to undertake IGAs (Table 9).

TABLE 9. PARTICIPATION IN SHG AND ECONOMIC IMPACT (GARRETT'S RANKING)

Participation (1)	Garrett score (2)	Ranking (3)
To save	67.16	1
For availing loan	57.88	2
For overcoming financial problems	52.38	3
For undertaking income generating activities	43.40	4
For gainful employment	39.28	5
To improve socio-economic status	38.88	6

The members highlighted that the loan from SHG resulted in modest rise in their income, in addition to improved knowledge and awareness (Table 10).

TABLE 10. OPINIONS REGARDING ECONOMIC IMPACT OF SHG (GARRETT'S RANKING)

Impact (1)	Garrett score (2)	Ranking (3)
Rise in income	75.7	1
Knowledge and awareness	59.1	2
Improved social status	58.2	3
Rise in standard of living	57.5	4
Rise in material possession	44.0	5
Improved clothing	34.7	6
Change in food habits	21.0	7

### *Factors Shaping Economic Performance of SHGs*

The economic performance of SHG is useful for SHGs, to introspect on their relative efficiency in lending to its members. A simple measure of *economic performance of a SHG* is the *net income per rupee of borrowing by SHG members* and is estimated by dividing the total net return obtained by all the members of a SHG in a year by the borrowings of all the SHG members in a year. Since most of the borrowings by members are small amounts and are to meet the operational expenses, as a protective loan, the borrowings are not amortised, but taken for the current year. Thus, an SHG with higher net return per rupee borrowing is performing economically better than another SHG with lower net return per rupee of borrowing.

This 'economic performance' of SHG is hypothesised to depend upon a set of explanatory variables using a multiple linear regression model. Here the Economic Performance (in Rs./year) is estimated to depend on age of the borrower, social group (dummy variable of 1 = if member belongs to SC/ST (Scheduled Caste /Scheduled Tribe) and 0 otherwise), number of years of schooling, training related to IGA and agriculture received (dummy variable of 1= if training received, 0 = otherwise), Land holding (ha), family size (number) and the IGA (dummy variable of 1 = dairy and/or

other activities, 0 = otherwise). The IGA can include for instance farmers who have dairy alone, to which a dummy variable value of 1 is assigned. For farmers with other IGAs such as ornamental fishery alone, or ornamental fishery and goat keeping, or goat keeping alone, a dummy variable value of 0 is assigned in order to capture dairy as an important IGA.

The results (Table 11) indicated that the economic performance of SHG has been significantly influenced by education, training offered to members and the type of IGA chosen. The overall fit was good as indicated by the impressive adjusted  $R^2$ . The average net return per rupee of amount borrowed from SHG for IGA is Rs. 1.48. Thus, the intercept of 0.37 is modest and is also not significant. The number of years of schooling - an indicator of level of literacy, training of SHG members and dairying as an IGA have emerged as a crucial and vital explanatory variable in shaping the economic performance. Those who received training realised a net return per rupee of borrowing of Re. 0.81, while those who did not receive training, realised a net return of Re. 0.37, thus highlighting the importance of training. Similarly, as the education (years of schooling) increases by one year, the economic performance increases by Re. 0.285 significantly.

TABLE 11. FACTORS DETERMINING NET INCOME EARNED PER RUPEE OF AMOUNT BORROWED FOR IGA FROM SELF HELP GROUPS

Variable (1)	Coefficient (2)	Std. Error (3)	t- value (4)
Dependent Variable : Net income earned per rupee of amount borrowed for IGA from SHG			
Constant	0.37	0.289	1.304
Age (years)	0.009	0.006	1.499
Social group (SC/ST =1, Other castes =0)	0.068	0.109	0.627
Education (years of schooling)	0.285*	0.019	2.433
Training (Yes =1, No =0)	0.443*	0.169	2.626
Land Holding (ha)	-0.088	0.059	-1.493
Family Size (Number)	0.007	0.034	0.193
IGA (with dairy =1, without dairy=0)	0.414**	0.133	3.101
R-square		0.90	
Adjusted R-square		0.85	
n = 34 members of SHG			

Note: \* and \*\* indicate significance level at 5 and 1 per cent level respectively.

The economic performance of SHG indicates that they have catered to all social groups of all ages and family sizes as these explanatory variables are not significantly influencing the economic performance. However as the members of SHGs possess

little or no land, and as the economic performance is the reflection of the IGA, land has not emerged as a significant variable influencing the economic performance. Thus, education, training and the choice of IGA are playing a significant role in determining the economic performance of SHGs.

### *Relative Economic Performance of SHGs*

The four SHGs are compared with their economic performance of SHG (Table 12). Since the SHGs are the nodal units for the bank rather than the ultimate borrower, banks, which lend to SHGs, have to have a simple but effective measure of economic performance with which they can gauge the performance of SHGs. Thus, the simple measure developed above, as the net return realised by all the members per rupee of loan borrowed by all the members can also be used to compare the economic performance with other SHGs. Thus, considering this ratio, it can be observed that all

TABLE 12. AMOUNT BORROWED, UTILISED AND NET INCOME FROM IGAS IN SHGS IN VENKATENAHALLI

Name of the SHG (Group)	Income generating activity undertaken	Number (proportion) of SHG members undertaking the IGA	Number (proportion) of SHG members borrowing for the IGA	Amount (proportion) of borrowing per SHG member (Rs.)	Amount utilised for the purpose (per cent)	Net income per annum per borrower from IGA (Rs.)	Economic performance of SHG *
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Nandini (Group I)	Dairy	12 (52)	6 (43)	4500 (45)	70	8646	2.24
	Ornamental fishery	9 (39)	6 (43)	2417 (24)	90	2625	0.72
	Goatery	2 (9)	2 (14)	3000 (30)	100	3167	1.58
	Overall	23 (100)	14 (100)	3393			1.70
Keertini (Group II)	Dairy	10 (47)	5 (29)	6800 (46)	91	6960	1.02
	Ornamental fishery	7 (34)	6 (35)	2833 (19)	73	3066	1.08
	Goatery	7 (19)	6 (35)	5000 (34)	83	7167	1.43
	Overall	21 (100)	17 (100)	4765			1.18
Chandrodaya (Group III)	Dairy	7 (44)	1 (25)	6000 (50)	100	6000	1
	Ornamental fishery	6 (37)	2 (50)	2000 (17)	55	2250	1.13
	Goat keeping	3 (19)	1 (25)	4000 (33)	75	5000	1.25
	Overall	16 (100)	4 (100)	3500			1.10
Arunodaya (Group IV)	Dairy	5 (63)	4 (67)	5500 (58)	86	4895	1.94
	Ornamental fishery	1 (12)	0 (0)	-	-	-	-
	Goatery	2 (25)	2 (33)	4000 (42)	100	3750	0.93
	Overall	8 (100)	6 (100)	5000			1.00

Note: Economic performance is measured as \* Net return per rupee of borrowing by SHG members; Figures in parentheses indicate percentage to the total of respective groups. IGAs are not mutually exclusive.

SHGs are performing well, since they are earning a net return of at least Rs. 1 for every rupee they lent to the members. However, this realisation of economic performance cannot be totally attributed to the SHG loan. But, when viewed from the opportunity cost principle, there are no compelling reasons to disagree that, in the absence of SHG loan, such an impressive economic performance could not have been achieved.

The larger the measure the better is the economic performance of the SHG and thus, banks can lend higher amounts of credit to such SHGs which can further lend higher amounts to its members depending on the member's performance, using the same 'economic performance' ratio to be developed for each member. Here, Group I SHG is performing better than Group II, Group II better than Group III and Group III better than Group IV (Figure 4). In Group I, 61 per cent of those undertaking IGAs borrowed for IGAs, and the members undertaking dairy, have realised the highest net return per rupee of borrowing (Rs. 2.24) compared to any other SHG and any other activity even though these members redirected 30 per cent of their borrowing to other purposes such as day-to-day living expenses and health expenditure. Thus, dairy's economic performance out-performs the other two IGA activities undertaken by members of SHGs and in each SHG, the borrowing for dairy forms the highest proportion of the total borrowing compared to other IGAs.

The next best performing SHG is Group II realising a net return of Rs. 1.18 per rupee of borrowing. But here the goat keeping has outperformed other IGAs fetching a net return of Rs. 1.43 per rupee of borrowing (Table 12).

The net returns from IGAs of borrowers has been greater than that of non-borrowers in most cases and is attributed to the commitment of the borrowers to repay the loan to be eligible for raising subsequent loan, after due repayment (Table 13).

TABLE 13. NET RETURNS FROM INCOME GENERATION ACTIVITIES BY BORROWERS AND NON-BORROWERS OF SHG

Name of the SHG (Group) (1)	No. of members undertaking IGA		Net income from IGA					
			Dairy		Ornamental fishery (OF)		Goatery	
	Borrower (2)	Non-borrower (3)	B (4)	NB (5)	B (6)	NB (7)	B (8)	NB (9)
I Nandini	14	9	8646	6800	2625	1767	3167	-
II Keertini	17	4	6960	6200	3066	3000	7167	6000
III Chandrodaya	4	12	6000	4900	2250	2000	5000	4500
IV Arunodaya	6	2	4895	3800	-	2000	3750	-

B-Borrowed and NB- Not borrowed.

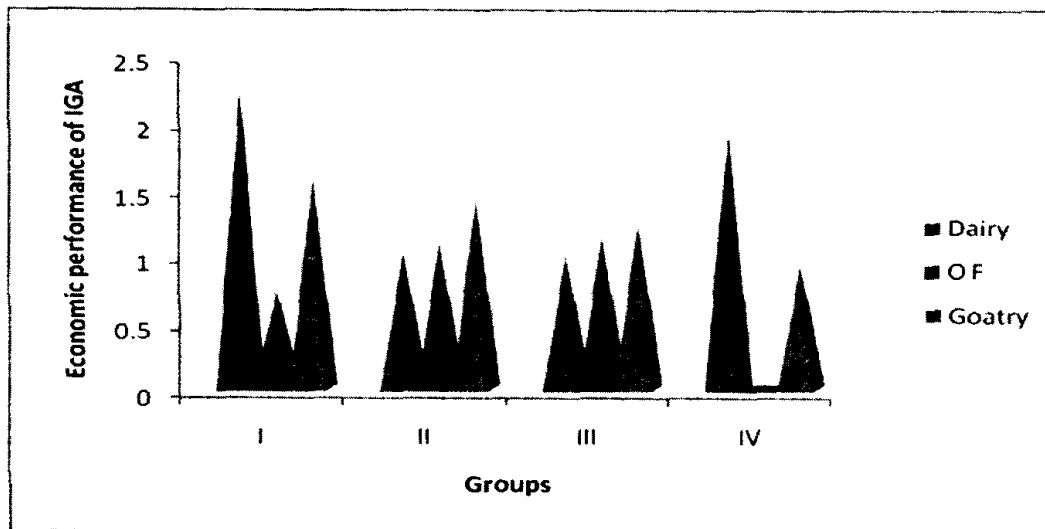


Figure 4. Economic Performance of Different Groups in Terms of IGA

#### CONCLUSION AND IMPLICATIONS

The crucial variables influencing the economic performance of SHGs is education (years of schooling) and 'training' received as *social capital* variables and dairying as *economic capital variable*. Thus, the SHGs can be empowered and strengthened to offer training to its members, provide opportunities for education and facilitate adoption of dairy, in order to enhance their economic performance. The policy thus can concentrate on two factors which promote social capital such as education and training of SHG members and the factor which promotes economic capital such as dairying. Having appreciated the economic contribution of the loan amount from SHG, formal financial institutions need to further expand the credit network through SHGs thus improving and increasing the access to credit for small and marginal farmers.

*Received March 2009.*

*Revision accepted September 2009.*

#### REFERENCES

- Dadhich, C.L. (2001), "Micro Finance-A Panacea for Poverty Alleviation: A Case Study of Oriental Grameen Project in India", *Indian Journal of Agricultural Economics*, Vol.56, No.3, July-September, pp. 419-426.
- Nagaraj, N., M.G. Chandrakanth, P.G. Chengappa, H.S. Roopa and M. Pramod Chandakavate (2008), "Contract Farming and Its Implications for Input-Supply, Linkages Between Markets and Farmers in Karnataka", *Agricultural Economics Research Review*, Vol. 21, pp. 307-316.
- Puhazhendhi, V. and K.J.S. Satyasai (2000), "Microfinance for Rural People: An Impact Evaluation", *Microfinance for Rural People: An Impact Evaluation*, Vol.6, pp. 75.
- Web sites [www.rdpr.kar.in](http://www.rdpr.kar.in); [www.nabard.org](http://www.nabard.org)