



## ROSCAs: Creating Incentives for Micro-Entrepreneurship

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### ABSTRACT

In the metropolitan capital of India, there exists a dual economy: an economy where the formal and the informal sources of finance coexist. Despite the RBI directive of financial inclusion, major sections of the society including women are deprived of the delivery of financial services at affordable costs. The problem is found to be more acute for women residing in urbanized villages of Delhi. The present paper focuses on a unique financial instrument, the rotating saving credit association (Rosca, in short) as an enabler in providing venture capital funds for investment to women micro-entrepreneurs. Rosca emerges as a tool of women empowerment intertwined in social relations. Women roscas help its participants to save and borrow depending on their needs and requirement for funds apart from giving them an opportunity to interact and find solutions to their problems. The paper also lends comparison of rosca finance to other formal and informal sources of finance. It highlights the reasons for choice of this particular financial instrument vis-à-vis others. The paper finds that rosca finance is an optimal source of finance for both the savers and the borrowers in a rosca when we take into consideration the constraints faced by the users of this particular source of finance like lack of appropriate physical collateral and problems of asymmetric information.

### ARTICLE INFO

#### *Article history:*

Received 10 Sep 2022

Received in revised form

10 Oct 2022

Accepted 14 Nov 2022

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### Introduction

Developing and under-developed economies are often marked by dualism. India too, being a developing economy, is characterized by the existence of duality where modern and traditional, formal and informal, rural and urban and organized and unorganized coexist. Be it the labor market, the credit market or the social structure, dualism is an indispensable part of our lives. In this paper, we examine the

dualism with regard to labor and credit market and demonstrate their interdependence and inter-linkage. In doing so, illustrating two case studies from urbanized villages in the capital, we outline discussion of a unique financial instrument, the rotating saving credit association (Rosca), in providing incentives for micro-entrepreneurship.

### Dualism in labor market

Labor market in India is highly segmented. As per the Annual Report 2015 of Ministry of Labor and Employment, GoI, out of the total employment of 46.5 crore in 2009-10, about 2.8 crore persons worked in organized sector while the remaining 43.7 crore were in the unorganized sector. The importance of the large unorganized sector can be understood from its contribution to the national product. According to the Report of the Committee on Unorganized Sector, GoI, 2012, the estimated share of unorganized sector in GVA at current prices turned out to be 54.4 percent in 2008-09 implying that more than 90 per cent of workforce and about 50 per cent of the national product are accounted for by the informal economy.

Another dimension of duality in labor market is with respect to the gender differences. Data from the Census 2011 shows that the workforce participation rate for females, defined as the number of working females<sup>1</sup> over total number of females in the population, is much low. It is 25.51 percent against 53.26 percent for males. While rural and urban differentials in labor market also exist, they become more pronounced when interacted with gender. For urban sector, the participation rate of females trails at 15.44 percent against 53.76 percent for males. The rural sector has a better female workforce participation rate of 30.02 percent compared to 53.03 percent for males. (Table 1)

Table 1

TOTAL WORKERS IN INDIA - 2011 CENSUS				
Population/ Workers	Region	Persons	Male	Female
Population	Total	1,21,05,69,573	62,31,21,843	58,74,47,730
Workers		48,17,43,311	33,18,65,930	14,98,77,381
Percentage of workers		39.79	53.26	25.51
Population	Rural	83,34,63,448	42,76,32,643	40,58,30,805
Workers		34,85,97,535	22,67,63,068	12,18,34,467
Percentage of workers		41.83	53.03	30.02
Population	Urban	37,71,06,125	19,54,89,200	18,16,16,925
Workers		13,31,45,776	10,51,02,862	2,80,42,914
Percentage of workers		35.31	53.76	15.44

Source: Office of the Registrar General, India.

Extracted from Statistical Profile on Women Labor, 2012-13, Ministry of Labor and Employment, GoI

<sup>1</sup>Working females include both main and marginal workers. Work is defined as participation in any economically productive activity with or without compensation, wages or profit. Such participation may be physical and/or mental in nature. Work involves not only actual work but also includes effective supervision and direction of work.

It even includes part time help or unpaid work on farm, family enterprise or in any other economic activity. All persons engaged in 'work' as defined above are workers. The main point to note is that the activity should be economically productive. Reference period for determining a person as worker and non-worker is one year preceding the date of enumeration.

A person who has worked for major part of the reference period (i.e. six months or more during the last one year preceding the date of enumeration) in any economically productive activity is termed as 'Main worker'. A person who worked for 3 months or less but less than six months of the reference period (i.e. in the last one year preceding the date of enumeration) in any economic activity is termed as 'Marginal worker'. <http://censusmp.nic.in/censusmp/Data/PCA%20DATA/006%20-%20Chapter%20-%204%20-%20WPR%20.pdf>

A decadal analysis of the work participation rate reveals that while the rates for females have doubled since 1970, the rate has been almost stagnant over last decade i.e. over the period 2001- 11 While work participation rate among women in urban areas has increased, the percentage of females working is still less than a third of males (Table 2). This gender gap is equally profound in the rural sector.

Table 2

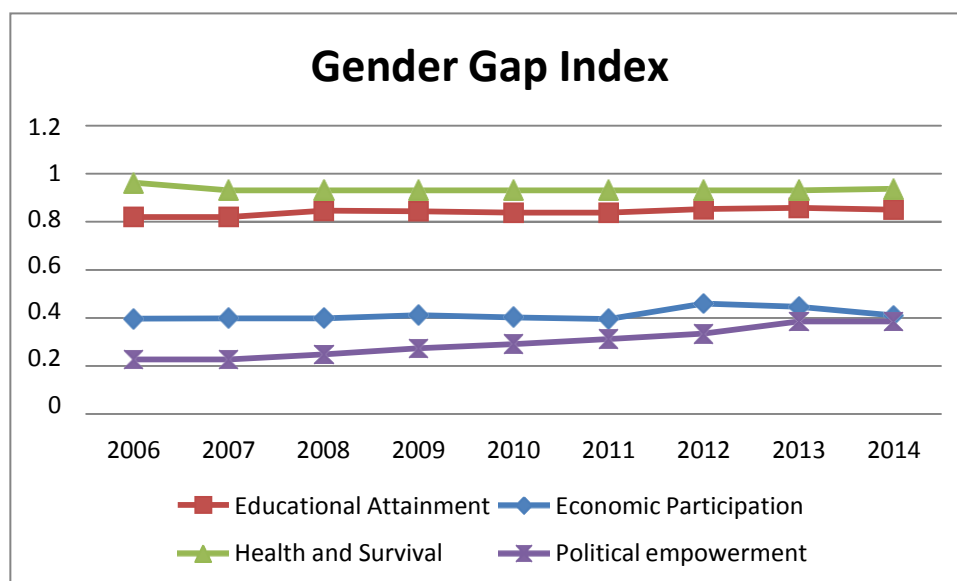
Work Participation Rate by Sex (1971-2011)				
Year	Region	Persons	Male	Female
1971	Total	33.08	52.61	12.11
	Rural	34.03	53.62	13.42
	Urban	29.34	48.82	6.68
1981	Total	36.7	52.62	19.67
	Rural	38.79	53.77	23.06
	Urban	29.99	49.06	8.31
1991	Total	37.5	51.61	22.27
	Rural	40.09	52.58	26.79
	Urban	30.16	48.92	9.19
2001	Total	39.1	51.68	25.63
	Rural	41.75	52.11	30.79
	Urban	32.25	50.6	11.88
2011	Total	39.8	53.3	25.5
	Rural	41.8	53	30
	Urban	35.3	53.8	15.4

Source: Office of the Registrar General, India.

This aspect of dualism is echoed by the Gender Gap Report 2014. India scores a rank of 114 out of 142 countries in Global Gender Gap Index. Although India seems to be doing reasonably well in terms of providing education and meeting health-care needs of women, the scores for economic participation and political empowerment stand quite low (Table 3).

Table 3. Gender Gap Index

Year	Total no. of countries	Overall		Economic Participation		Educational Attainment		Health and Survival		Political Empowerment	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
2014	142	114	0.646	134	0.41	126	0.85	141	0.937	15	0.385
2013	136	101	0.655	124	0.446	120	0.857	135	0.931	9	0.385
2012	135	105	0.644	123	0.459	121	0.852	134	0.931	17	0.334
2011	135	113	0.619	131	0.396	121	0.837	134	0.931	19	0.312
2010	134	112	0.615	128	0.403	120	0.837	132	0.931	23	0.291
2009	134	114	0.615	127	0.412	121	0.843	134	0.931	24	0.273
2008	130	113	0.606	125	0.399	116	0.845	128	0.931	25	0.248
2007	128	114	0.594	122	0.398	116	0.819	126	0.931	21	0.227
2006	115	98	0.601	110	0.397	102	0.819	103	0.962	20	0.227



More worrisome is the trend relating to economic participation when viewed over the period 2006-14. India is far behind not just in terms of magnitude of the score but also in terms of ranking. India's ranking in economic participation is 134 out of 142 in 2014, compared with neighboring China at 76 with a score of 0.656 and Sri Lanka at 109 with score of 0.591. Hovering around 0.4, the index of economic participation dipped in 2014 (See Graph). Notably, the index of economic participation and opportunities is quite comprehensive. It includes the following dimensions: labor force participation rate for the 15-64 age group, wage equality for similar work, estimated earned income, number of legislators, senior officials, managers, professionals and technical workers.

Reasons for low female participation in labor force are abound. Some dwell into the socio-cultural and politico-economic fabric of the country and other relate to issues of measurement. Some are welcoming; others are distressing. A part of the trend can be explained by rising enrollment of women of working age group in secondary schools and also rising incomes which is evident from a drop in the number of women of wealthier households participating in the labor force (ILO, 2013)<sup>2</sup>. Besides, since women shoulder much of household responsibilities and that work being unpaid work, it does not reflect in their work participation rates and measurement of national income. Moreover, females face significant wage differentials relative to their male counterpart for similar work in addition to cultural attitudes and societal norms compounding the problem of discrimination at work place. (Statistical Profile on Women Labour, GoI, 2012-13). Occupational segregation in terms of less diverse occupational choice and acceptance is also responsible for declining employment opportunities for women (ILO, 2013; Daymard, 2015).

As a result a high proportion of socially and economically underprivileged sections of society particularly women are concentrated in the informal unorganized sector. The consequences of working informally go far beyond the income dimensions of poverty to include lack of human rights and social inclusion. Compared to those who work in the formal economy, those who work in the informal economy are likely to have less access to basic infrastructure and social services, face greater exposure to common contingencies (e.g., illness, property loss, disability and death), have less access to the means to address these contingencies (e.g., health, property, disability or life insurance), have, as a

<sup>2</sup> ILO's Global Employment Trends 2013 Report.

result, lower levels of health, education and longevity, have less access to financial, physical and other productive assets, have fewer rights and benefits of employment, have less secure property rights over land, housing or other productive assets, and face greater exclusion from state, market and political institutions (Progress of the World's Women, 2005).

One important outcome of this is that the number of female entrepreneurs has doubled over the past ten years to about 10 million outside the agricultural sector. This is primarily due to the rise in enterprises without hired workers (Table 4). Their share rose in all sectors: manufacturing, services and trade. Women now account nearly half of total entrepreneurs without workers in manufacturing. In services and trade, their shares have also grown but remained modest at about 10% of total. Given the often marginal nature of these activities, this is possibly a result of lack of wage employment opportunities elsewhere in the Indian economy.

Table 4. Female and male entrepreneurs in India: recent trends

	Female entrepreneurs as a percentage of all entrepreneurs			Count in thousands					
	2000	2005-06	2010	2000		2005-06		2010	
				Male	Female	Male	Female	Male	Female
Entrepreneurs with workers									
Manufacturing	6	6	5	1743	113	2136	148	2542	142
Trade	4	N.A.	3	1774	76	N.A.	N.A.	2728	81
Services	6	8	6	1402	95	1885	158	2762	188
Entrepreneurs without workers									
Manufacturing	29	43	46	8637	3448	8275	6129	7591	6542
Trade	6	N.A.	10	14,210	945	N.A.	N.A.	15,693	1770
Services	6	9	8	8623	598	11702	1153	13,874	1282

Source: various NSS rounds Extracted from Daynard (2015)

A more detailed sectoral breakdown shows that there are large differences between men and women activities. Apart from retail trade, which is the most important sector for both females and males, nearly half of female entrepreneurs with workers operate in traditionally female sectors. These are wearing apparel, education, health, and other personal services (beauty treatment, hairdressing, cleaning of textile, household maintenance etc.). In contrast, male entrepreneurs with workers are dispersed in more diverse activities (Daynard, 2015).

### Dualism in credit market

Just like the labor market, the Indian credit market too is segmented giving rise to financial dualism. Modern banking institutions exist side by side with indigenous banking. In India, the formal or institutional credit market comprises the scheduled commercial banks, regional rural banks, co-operative banks, non-banking financial institutions, micro-finance institutions etc. On the other hand, the co-existent informal credit market consists of agricultural moneylenders, professional moneylenders, landlords, family and friends and so on. A particular informal institution is the rotating saving credit association (rosca) which we shall be discussed in detail later.

RBI's Report on Currency and Finance (2006-08) depict intriguing trends with respect to financial dualism. Considering the period from 1981-2002, the share of non-institutional sources still remains

over 50 percent in terms of the total number of indebted households. In terms of outstanding household debt, informal credit market accounts for more than 36% of the total debt outstanding. This is not to disregard the prominent role of commercial and cooperative banks but it does reflect that informal institutions continue to hold so much importance as a source of credit.

A more convincing fact is this that this relates less to the arguments of lack of education, urbanization, access, availability etc. often thought to be associated with rural indebtedness. This is so because as can be seen from the Table 5 the informal credit market is equally relevant for the urban consumers. Well over 50 percent of urban households are indebted to sources that are non-institutional.

Similar to gender differentials existing in labor market, we observe a gender gap in the credit market. Males held twice as many deposit accounts as females as on March 31, 2014 (Table 6). Also, the amount held in male-owned accounts is more than double the amount held in female-owned account. While differences among rural women and men is narrower in terms of the

Table 5. Percentage of Total Indebted Households- Institutional versus Non-institutional sources

Credit agency	Rural					Urban			Total		
	1961	1971	1981	1991	2002	1981	1991	2002	1981	1991	2002
I. Institutional agencies	17.3	24	48.8	66.7	50.6	46	61.1	52.2	48.2	65.4	50.9
i. Government	8.6	8.3	5.4	7.3	3	9	11.9	5.6	6.2	8.3	3.5
ii. Cooperative societies	15.9	18.5	33.4	28.6	26	20.9	25.4	20.2	30.7	27.9	24.9
iii. Commercial banks	0.6	1.1	16	32.1	21.5	14	19.2	18	15.5	29.1	20.8
II. All non-institutional agencies	82.7	76	51.2	41.9	58.5	54	48.7	52.8	51.8	43.4	57.3
i. Landlords	1.4	11.2	6.2	4.7	1.5	1.4	1	0.6	5.1	3.9	1.3
ii. Agricultural moneylenders	51	25.8	13.2	9.8	12.5	2.2	2.1	1.1	10.8	8.1	10.2
iii. Professional moneylenders	17.7	15.7	10.5	13.2	26	16.4	17.6	27.5	11.8	14.2	26.3
III. All agencies	100	100	100	100	100	100	100	100	100	100	100

Source: AIDIS various rounds

Extracted from Report on Currency and Finance, RBI, 2006-08 number of accounts owned by females, there is a stark difference in the amount held as deposits in these accounts. In case of urban and metropolitan areas, the gender differences with respect to the number and amount of deposits are in the same direction. Combining these observations with gender disparities in labor market reinforces the fact relating to existence of earning differentials between rural women and men.

The gender differentials are starker when we analyze the distribution of outstanding credit in small borrowal accounts. Small borrowal accounts have a credit limit of Rs. 2 lakhs and are largely held by individuals in the household sector and are concentrated in a few sectors such as agriculture, small business, retail trade and personal loans. Males hold about three and a half times as many borrowal accounts as females (Table 7). Moreover, the amount borrowed by men is more than three times that of women. This indicates that women are less likely to take loans for economic activities than men.

Moreover, small borrowal accounts account for more than 78 percent of the outstanding credit of scheduled commercial banks. This means the number of small denomination borrowers is very large (Table 8).

Table 6. Population Group-wise Deposits of Scheduled Commercial Banks according to Broad Ownership Category Mar. 2014

(No. of accounts in thousands, Amount in Rs. Million, Percent)

Population Group	Individuals				Others		Total	
	Male		Female		No. of accounts	Amount	No. of accounts	Amount
	No. of accounts	Amount	No. of accounts	Amount				
Rural	257200	476475.4	109280	1667004	40144	1439801.6	406624	7871511.1
	63.3	60.5	26.9	21.2	9.9	18.3	100	100
Semi-urban	221710	6268838.6	90997	2289817	27815	2852116.4	340522	11410772.1
	65.1	54.9	26.7	20.1	8.2	25	100	100
Urban	148178	7352759.6	62872	3209660	20471	6577680.2	231521	17140100.3
	64	42.9	27.2	18.7	8.8	38.4	100	100
Metropolitan	151133	12210945.3	73704	5602903	23206	25320980	248043	43134828.7
	60.9	28.3	29.7	13	9.4	58.7	100	100
All-India	778221	30597248.8	336854	12769385	111636	36190578.3	1226710	79557212.2
	63.4	38.5	27.5	16.1	9.1	45.5	100	100

Source: Basic Statistical Returns of Scheduled Commercial Banks in India - Volume 43, March 2014

Table 7. Percentage Distribution of Outstanding Credit of Small Borrowal Accounts of Scheduled Commercial Banks according to Broad Category of Borrowers

Mar.2014

(Percent)

Population Group	Individuals				Others		Total	
	Male		Female		No. of accounts	Amount outstanding	No. of accounts	Amount outstanding
	No. of accounts	Amount outstanding	No. of accounts	Amount outstanding				
Rural	77.9	78.7	19.2	18.5	2.8	2.7	100	100
Semi-urban	72.1	73.1	25	24.1	2.9	2.8	100	100
Urban	72.5	71.3	23.7	23.7	3.8	5.1	100	100
Metropolitan	81.8	78.4	16.8	17.2	1.4	4.5	100	100
All	76.5	75.7	20.9	21	2.7	3.2	100	100

Source: Basic Statistical Returns of Scheduled Commercial Banks in India - Volume 43, March 2014

Table 8. Outstanding Credit of Scheduled Commercial Banks according to size of size of credit limit:

Mar. 2014

(in Rs. Million and Percent)

Credit Limit Range (in Rs. Million)	No. of Accounts	Credit Limit	Amount outstanding
Less than 0.025	32567062	436317.9	371659.5
	23.5	0.5	0.6
Above 0.025 to upto 0.2	76658335	6170673.3	4895251.5
	55.2	6.5	7.8

Above 0.25 to upto 0.5	19677888	6497580.8	4758323.6
	14.2	6.8	7.6
Above 0.5 to upto 1	5126155	3777560.5	2826423.1
	3.7	4	4.5
Above 1 to upto 2.5	3098846	5053710.2	3861226.1
	2.2	5.3	6.1
Above 2.5 to upto 5	881738	3165265.1	2446236.9
	0.6	3.3	3.9
Above 5 to upto 10	336094	2489669.1	1890651.7
	0.2	2.6	3
Above 10 to upto 40	246263	5045706.5	3671639.5
	0.2	5.3	5.8
Above 40 to upto 60	41939	2105441.9	1462285.8
	0	2.2	2.3
Above 60 to upto 100	37743	3145010.8	1001066.5
	0	3.3	3.2
Above 100 to upto 250	38164	6374399.5	4190618.6
	0	6.7	6.7
Above 250 to upto 1000	29714	15567107.2	9871986.6
	0	16.4	15.7
Above 1000	10941	35266003.8	20576455
	0	37.1	32.8
Total	138750882	95094446.6	62820824.3
	100	100	100

Source: Basic Statistical Returns of Scheduled Commercial Banks in India - Volume 43, March 2014

To summarize, most women entrepreneurs are entrepreneurs with no hired workers i.e. they operate on a small scale with not very large capital needs. Given that more than half of financial needs are being met by the informal financial sector, it would not be an exaggeration to state that a bulk of women entrepreneurs in the unincorporated unorganized sector are dependent on informal financial sector for meeting their capital requirements. It is in this context that we now discuss a less researched informal source of finance, namely, the rotating saving credit association which provides funds to women in the unincorporated sector for entrepreneurial activities.

Before we undertake a discussion of roscas, let us look at some key findings of researches that analyze borrowing behavior of females vis-à-vis males providing substantive evidence of financial dualism and of women entrepreneurs resorting to informal sources for finance :

Based on data from two surveys, FinScope and FinAccess, carried out since 2002 in nine South and East African countries, Aterido et al. (2011) find that

- Women are less likely than men to use formal financial services in all nine countries.
- There is variation in the use of informal financial services. In Kenya, South Africa and the United Republic of Tanzania, women are more likely to use informal financial services than men. In Namibia and Rwanda, the reverse is true.
- Use of formal banking services is positively correlated with education, income, formal wage employment and self-employment.



- Borrowers in lower-income countries are more likely to use informal sources of credit, such as family and friends, rather than formal sources such as banks.

Analysing Global Findex data for 148 countries, Demirgüç-Kunt and Klapper (2013) report that

- Friends and family are the most commonly reported source of informal loans in developing countries, followed by informal lenders.
- Households in the poorest quintile are more likely to have taken out loans for health or other emergencies than adults in richer households.

Based on survey data from three countries, namely, Ecuador, Ghana and India, using regression analysis Grown et. al. (2015) conclude that

Poorer households tend to hold a greater share of expense debt than asset debt.

- Since expense debt (with the possible exception of loans for education) is unlikely to generate future income streams, the composition of debt among the poor points to potential cycles of indebtedness.
- Debt from informal sources predominates among the borrowers in Ghana and Karnataka.
- Women's borrowing is positively and significantly associated with being a member of a group and living in a household in the wealthiest quintile, while men's borrowing is only significantly, but negatively, associated with age.
- Group membership is positively associated with holding outstanding informal debt, with the marginal effects being particularly large in Karnataka.
- Group membership may also play an important role, especially for women, in transmitting information about local credit market conditions.

From U.S. data from 1993 National Survey of Small Business finances, Coleman (2000) find that

- Women-owned firms are less likely to use formal credit for financing.
- It does not seem that lenders discriminate against women on the basis of gender in terms of access to capital.

Using data obtained from a customized survey of 600 British firms, Sara and Peter (1998) determine that

- Gender is one of the factors that affect the financing process of businesses in U.K.
- Female-owned businesses tend to have less access to formal credit than male-owned businesses.

### **Roscas and micro-entrepreneurship**

The above analysis of research studies reveals the heavy dependence of women on informal credit for meeting requirements of finances for varied purposes. More specifically, it depicts reliance on informal sources by women entrepreneurs even in the developed countries what to say of the less developed economies which are marred by tales of gender discrimination in access to credit. Another fact that requires emphasis is the role of group membership or in other words, social network on access to credit.

Roscas is a financial instrument that runs on group dynamics and thrives on social network among members. A rosca is a revolving financial scheme where a group of individuals comes together to borrow and invest funds. Roscas serve the role of financial intermediation for those who need money for exigencies and for those who are in search of a financial vehicle to park their savings and earn returns.

A Rosca is defined as a financial mechanism which entails the formation of a group of people who contribute fixed amounts of money to a pre-determined pool of money called the rosca pot. Each participant either through draw of lots or bidding is entitled to the rosca pot in a given round. The rosca cycle ends when each person in the group has received the pot.

An example of a typical discount bidding rosca is discussed below. It is a three lacs denomination rosca of 15 members with duration of 15 months. At the beginning of each month, pot is allocated through bidding to the member who offers to pay the highest discount. Winning bid in each month is indicated in Column 3. The winning bid in first and last month is zero because no bidding takes place in these months.

In first month organizer takes the pot without any bidding for the pot.<sup>3</sup> The organizer receives the full amount of rosca pot net of his contribution for that month. In last month also, there is no bidding since there is only one person left to take the pot. Like the organizer, the last winner too receives the full amount of the rosca pot net of his monthly contribution.

In all other months, the pot is allocated through auction. Each member places a bid in form of discount he is willing to accept on the lump sum. The member who offers the highest discount wins the pot. For instance, in month 2, the winning bid is Rs. 72000.

This discount of Rs. 72000 is distributed equally as dividend among all rosca members including the winner. So, each member in month 2 is entitled to a dividend of Rs.4800. This means that each member pays an effective contribution of Rs.15200 in month 2. Similarly, in month 3, winning bid is Rs. 63000, dividend is Rs. 4200 and effective monthly contribution is Rs. 15800.

Table 9. Rs. 3 lac Denomination Rosca

Month	Denomination	Winning bid	Monthly contribution	Net receipt of pot	Dividend per person
(1)	(2)	(3)	(4)	(5)	(6)
1	300000	0	20000	280000	0
2	300000	72000	15200	212800	4800
3	300000	63000	15800	221200	4200
4	300000	56000	16267	227733	3733
5	300000	40000	17333	242667	2667
6	300000	40000	17333	242667	2667
7	300000	28000	18133	253867	1867
8	300000	26500	18233	255267	1767
9	300000	22000	18533	259467	1467
10	300000	22500	18500	259000	1500
11	300000	15500	18967	265533	1033
12	300000	9000	19400	271600	600
13	300000	9000	19400	271600	600
14	300000	6000	19600	274400	400
15	300000	0	20000	280000	0

The winner pays his monthly contribution in the period that he receives the pot. So, in this rosca, winner of rosca pot in month 2 pays his monthly contribution of Rs. 15200. Therefore, net amount of pot that he receives from rosca is Rs. 212800. Although rosca contributions are uniform across member in any

<sup>3</sup> In some rosca, the organizer takes the second pot without bidding.

given month, the amount of contribution is variable over the roscacycle. As can be seen from the Table, the effective monthly payment by all members is Rs. 20000 in month 1, Rs. 15200 in month 2, Rs. 15800 in month 3, Rs. 16267 in month 4 and so on.

A recap of the distinguishing features of the discount-bidding rosca:

1. Pot gets allocated through bidding.
2. Bidding is not done once at the time of formation of rosca. It happens every month.
3. Monthly payments are same across members but not across months over a rosca cycle.

The amount of pot received by winners is not identical.

1. Winner pays his contribution for the month in which he receives the pot.
2. Dividend gets distributed equally to all rosca members in each period.

Contrary to bidding rosca, a random or a lottery rosca, as the name suggests, determines the order of receiving the rosca pot through draw of lots. There is no bidding in this case which means that the individuals get full amount of the rosca pot in each round. This type of rosca is observed typically among very poor households and housewives whose primary intent is safeparking of their savings.

Roscas can be found in all parts of the world. They are particularly popular in Sub-Saharan African and Latin American countries. In India, bidding roscas are more popular. They can be seen as imperfect substitutes of formal financial sources. The uniqueness of rosca follows from it simultaneously possessing features of a saving and a credit instrument. Different people join rosca with different motivations. While some join rosca to borrow, others join rosca to lend and earn interest on their savings.

Using data collected for 36 roscas from two urbanized villages of Delhi, with rosca denomination varying from Rs. 16,000 to Rs. 12 lacs, rosca duration ranging from 10 to 20 months and monthly rosca contributions of Rs 1000 to Rs. 1 lac, the rate of interest for borrowers in roscas came to be about 38.72% per annum on average. This is much higher compared to the interest on bank loans which is about 12% per annum but is lower than the average interest rate charged by professional moneylender which is about 52% per annum.<sup>4</sup> Interest rate on rosca loans is comparable and in most cases less than the rate of interest on microfinance loans that are available at rates of interest ranging from 30-70% per annum.<sup>5</sup>

Individuals who participate in roscas usually fail to meet the eligibility criteria for a bank loan. So, in effect, the rate of interest on a loan from bank is close to infinity for these individuals. In such a scenario, rosca appears to provide loan to borrowers at cheaper rates. Besides, banks refrain from giving consumption loans in absence of any physical collateral. Around 43% of the rosca members in our sample utilized rosca money for consumption purposes.

Also, small ticket size loans are difficult to service for banks. In our sample, 20% of the members participate in roscas of denomination less than Rs. 1 lac which is suggestive of the small-sized loan requirements of these members. Small loans are hard to service by banks since the cost of loan administration is higher for small-sized loans.

For the net savers, we find that the rate of interest earned in a rosca is much higher around 23.56% per

<sup>4</sup> Summary Report on Informal Credit Markets in India (Dasgupta, 1989).

<sup>5</sup> Asian Development Bank Report (Fernando, 2006).

annum. It is much higher than the interest rates on deposits offered by formal financial institutions. The best rate of interest in the formal sector is offered on recurring deposits which is about 9% per annum. Parking money in equities and mutual funds is an option but equity and debt markets are more sophisticated financial institutions usually beyond comprehension of the kind of people who normally participate in roscas. In our sample, 86% of the rosca participants have education no more than class 12.

Another virtue of rosca as a saving instrument is that it offers flexible saving scheme to people with different saving abilities. We observed that savings in roscas varied from Rs. 1000 to Rs. 1 lac per month.

Also, rosca instills a sense of saving discipline since individuals have to make contribution on a regular basis. Gugerty (2005) argues that women find it easier to save in groups. The reason is that individuals are time-inconsistent or myopic. This in part is facilitated by the fear of social sanctions and threat of future exclusion which holds credence in the setting that we studied.

Thus, rosca as a financial instrument scores reasonably well in terms of meeting the diverse needs of individuals in a homogenous group. It is probably for this reason that rosca holds relevance in the presence of other alternative market and non-market financial institutions.

We discuss below case studies of two women entrepreneur from the two urbanized villages in which our survey was conducted (For details, see Choudhary (2022)).

### Case Study 1:

Usha (name changed)<sup>6</sup>, is a small merchant trader dealing in women apparels. She is an undergraduate. Before starting this business, she was a housewife and a member of a local discount bidding rosca. Her contributions to roscas were financed through her savings from monthly domestic expenses. The rosca gave her a chance to get a lumpsum amount of money.

She could not save in a bank since that required opening up of an account. The petty amount of savings that she initially started with did not seem worthy to her for keeping in bank. Also, opening of a bank account would have required consent of the husband which she knew would not have come. In fact, the husband would have seen it as unnecessary and would not have appreciated her parking away funds from monthly household expenses.

The group functioning of the rosca provided her an opportunity to save as well as seek information from other group members. She enjoyed going for the monthly rosca meetings and felt empowered that she could also save. Gradually during the course of one of the roscas, it occurred to her that she could use the lumpsum to set up her business. Through her discussion in the rosca group she understood that there is a demand for suits among ladies in the village. Since this did not require high initial investment, she used her premises and started selling unstitched suits. Though she had to face initial resistance from her family, particularly husband and in-laws, she was able to start since she was not dependent on them for funds required to start the venture.

The rosca group members facilitated her venture by referring acquaintances to her. Overtime, she started receiving orders from other women in the villages. The women would tell her their requirement and she would cater to their demand. Today, she has two employees (a male and a female) working under her with an air-conditioned shop. She has used money earned through this venture to fund her son's higher education. She now plays an active role in decision-making in the house and is respected by all in the

<sup>6</sup> Privacy agreement signed.

neighborhood. In fact, she is now herself a rosca organizer and some members of her rosca are women who buy suits from her on credit. The rosca is beneficial to her as the amount of credit extended by her gets paid in monthly installments without any delay or defaults. Also, it is convenient for her debtors who get suits when required and can pay back in easy monthly installments.

### Case Study 2:

Mamta (name changed)<sup>7</sup> is a tailor by profession who has completed education till Class X. She operates from the premises of her home. She has been a housewife for many years before she took to this business of sewing suits for ladies. She has not done any professional sewing course. It was just that she took some lessons on it as part of home science subject that she studied in school. Her husband is not well-educated. He could not even clear his Class X exams. Therefore, he could not get a good job. Call it luck or lack of astuteness that he failed in every venture he took up. Realizing that their situation has become miserable since the time she got married and came to this house and village, she took to this work as she had three children to feed. She feels that only education could take them out of poverty and therefore, wants her children to be well- educated.

The initial investment for the sewing machine came from her husband which she took as a loan. She could not get a loan from the bank because of lack of adequate collateral. Also, she would not have been able to fulfill the documentation requirement of the bank. Taking loan from the moneylender would have been very costly as she feels that more than the principal she would have ended up paying interest.

Though there were other tailors in the vicinity, they were all men. Women found it comfortable to give their measurements and get their suits stitched from her. In no time, Mamta started sewing suits for women in the village.

Using the money that she earned from sewing suits, she became a member of the rosca that one of her clients was running. This helped her save money earned from business from her husband who would otherwise spend it all over drinks and enjoyment with his friends. Savings in the rosca enabled her to return the loan for the sewing machine that she took from her husband. Also, she was able to meet her working capital requirements and buy a superior machine that professional tailors use. Now she is herself running a rosca and is able to pay for coaching fee of her daughter who wants to pursue J.B.T. The members in her rosca are mostly her clients who have faith in her ability and trust her with their money. Using the lumpsum from the rosca, she has also been able to build small rooms which she has given on rent and provide her additional source of income. She is more confident and has obtained mastery over her job. Moreover, she earns some more money by giving sewing lessons to girls in the village. Once she will be over with her household responsibilities of settling down her children, she dreams of opening up a boutique.

The case studies above highlight how saving small sums in rosca group helped provide crucial initial start-up capital to one and working capital to another. Participation in rosca requires commitment and financial discipline. Since rosca is embedded in social network, it overcomes the problem of screening, monitoring and enforcement which are fundamental to a credit contract.

### Conclusion

Dualism is an indispensable phenomenon of under-developed economies characterized by an incomplete development of the market economy and the fiscal, administrative and social economy. Existence of

<sup>7</sup> Privacy agreement signed.

price differentials is a characteristic feature of a dualistic economy where high rates of interest and low wages in the unorganized traditional sector prevail. Markets are segmented which necessitates the employment of different policies to cope with dissimilar conditions in the two sectors. This may impose real costs on an underdeveloped economy which yields it a comparative disadvantage relative to a developed economy (Meier, 1995; Thirlwall, 1994).

In this paper, we focused on the dualism in labor and credit market and how together it affected the performance of an economy. We specifically studied the implications of labor and financial dualism for entrepreneurial initiatives by women. We also analysed the role played by an indigenous financial institution in promoting micro-enterprises.

We see that there are various reasons for people to withhold themselves from approaching the formal sector for credit despite formal lending rates being low. The presence of asymmetric information between the borrower and the bank in credit contracts necessitates the need for physical collateral. Typically, most people find it difficult to furnish collateral. Also, they find the procedural requirements of banks to be demanding. The waiting time involved in processing of a bank loan is usually long so that the individual at times may miss the opportunity that comes his way. In all, transaction costs associated with formal financial sector constrain the use of the facilities provided by it. Rosca serves as an effective saving and credit instrument for those who feel constrained to access funds from the formal source and other informal sources like professional moneylenders.

## References

1. Annual Report. 2015. Labour Bureau. Ministry of Labor and Employment.
2. GoI.Asian Development Bank Report. 2006.
3. Aterido, R., T. Beck and L. Iacovone. 2011. Gender and Finance in Sub-Saharan Africa: Are Women Disadvantaged? Policy Research Paper 5571. World Bank, Washington, DC.
4. Basic Statistical Returns of Scheduled Commercial Banks in India. 2014. Vol. 43, March 2014. RBI.
5. Choudhary, I. 2022. An Anatomy of the Small: A Study of Rotating Saving Credit Associations in Delhi Villages. *International Journal of Trend in Scientific Research and Development*, 6(7), 172.
6. Coleman, S. 2000. Access to capital and terms of credit: A comparison of men-and women-owned small businesses. *Journal of Small Business Management*, 38(3), 37.
7. Dasgupta, A. 1989. Reports on Informal Credit Markets in India: Summary available at [http://www.researchgate.net/publication/247391322\\_Reports\\_on\\_Informal\\_Credit\\_Markets\\_in\\_India\\_Summary](http://www.researchgate.net/publication/247391322_Reports_on_Informal_Credit_Markets_in_India_Summary)
8. Daynard, A. 2015. Determinants of female entrepreneurship in India. OECD Economics Department Working Papers, No.1191, OECD Publishing.
9. Demirgüç-Kunt, A., & Klapper, L. 2013. Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings Papers on Economic Activity*, Global Employment Trends 2013 Report. ILO.
10. Global Gender Gap Report 2014. World Economic Forum.
11. Grown, C., Deere, C.D., Catanzarite Z., Oduro A.D., Suchitra J.Y., Swaminathan H., & Boakye-Yiadom L., 2015. Who Borrows? An Analysis of Gender, Debt And Assets In Ecuador, Ghana And

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Karnataka, India. UN Discussion paper, June 2015.

12. Gugerty, M. K. 2007. You can't save alone: Commitment in rotating savings and credit associations in Kenya. *Economic Development and cultural change*, 55(2), 251-282.
13. <http://censusmp.nic.in/censusmp/Data/PCA%20DATA/006%20-%20Chapter%20-%204%20-%20WPR%20.pdf>
14. Meier, G.M. 1995. *Leading Issues in Economic Development*. Sixth Edition Oxford University Press, India.
15. Progress of the World's Women. 2005. UNIFEM Report on Currency and Finance 2006-08. RBI
16. Report of the Committee on Unorganized Sector. 2012. National Statistical Commission. GoI. Sara, C., & Peter, R. 1998. The financing of male-and female-owned businesses. *Entrepreneurship & Regional Development*, 10(3), 225-242
17. Statistical Profile on Women Labor. 2012-13. Labour Bureau. Ministry of Labor and Employment. GoI.
18. Thirlwall, A.P. 1994. *Growth and Development: With Special Reference to Developing Economies*. Fifth Edition. The Mcmillan Press Limited & ELBS. 2013(1), 279-340.