WHY PEOPLE PARTICIPATE ROSCA? NEW EVIDENCES FROM TURKEY

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ABSTRACT

Rosca which is popular among the communities that cannot make use of the formal financial markets is preferably used more by the castes having limited or no regular income level. According to the results of the observations about Turkey–which is evaluated within the category of developing countries –it is found that roscas are used widely by individuals from a wide range of socioeconomic and demographic characteristics. Moreover, the literature review about the reasons of attending a rosca cannot explain properly this wide commitment rates in Turkey. According to the results obtained by the questionnaire developed for this research it is opposed that there can be new reasons of participating rosca such as avoiding from interest and socializing. Moreover by the parametric tests conducted it is found that the reasons of participating a rosca are affected by the socioeconomic and demographic characteristics of individuals.

Keywords: Roscas, informal financial markets, formal financial markets, income level, interest aversion
JEL Classification: G10, G20, O16

1. INTRODUCTION

Rosca (Rotating Savings and Credit Associations) is a worldwide phenomenon which is especially observed in developing countries and in societies belong to low income groups in developed countries (Eroğlu, 2010; Smets, 2000). Ardener (1964, 1995) defined rosca as "an informal financial organization in which participants pay periodically to a pot and get paid from that pot in turn". In other words, roscas are a specific type of contracts in which participants vow to pay equal amounts regularly and which prompt national savings of the host countries in a portion that cannot be underestimated (Ambec & Treich, 2007). Here, the rotation word means that each participant gets paid the amount collected in the pot in turn and generally the participants wish that rotation will return at least one time (Eroğlu, 2010). In the process the participants of rosca take the roles of payer or creditor with respect to their turns in rotation.

Rosca is named as "Tanda" in Mexica, "Susu" in Gana, and "Chits" in India and "Gün" in Turkey. Although small local differences are observed during its applications the basic principals are same everywhere. These basic principles are (Ambec & Treich, 2007:2); a group of people come together periodically, in these meetings the participants pay equal amounts to a common pot, in each meeting the money collected in the pot is given only to one participant, this paid person cannot get the money collected in the pot again until the cycle is completed, the process continues until the situation that all the participants get the amount of money collected in the pot is provided, as a result the rosca falls and a new rotation starts. the paid turn of pot among the participants can be: coincident, determined by lot, determined previously.

The number of people in the groups is generally determined as a small number and the period of the meetings changes between 1 day (especially among venders and shoeblacks) and 6 months (Calomiris & Rajamaran, 1997). Especially in inflationist periods in order to avoid a disadvantageous situation to be occured for participants' purchase power the periodic payments are indexed to a commonly used currency unit such as

Euro, Dollars or precious metals such as gold or any goods such as sugar. There are five main topics that people wishing to participate a rosca have to consider and arrive on a consensus about. These are number of participants, the amount of money paid periodically, the amount of money going to be paid to the person in turn, the period of meetings and the duration of rosca. Generally the amount of money paid periodically is determined by dividing the total amount into the number of participants and the period of meetings is determined by dividing the duration of cycle into the number of participants (Anderson vd., 2003).

Roscas in Turkey are generally known as socio-cultural activities for the socialization of women and according to the literature the topic is found to be examined overwhelmingly with respect to this aspect (Tezcan, 1984; Büyükokutan, 2012; Sağır, 2013). Whereas it is noticed that participating a rosca is sourced more from meeting the economic needs instead of social ones and men participate rosca in considerable amounts as much as women do. The fact that there is a considerable amount of studies about the topic in economic and development fields justify this view.

Roscas are used commonly in developing countries or in developed countries in the regions where mostly people from low income levels live (such as the regions that immigrants live). The main reasons behind this situation are that there is no formal financial market or/and the fact that the financial needs of people in those regions cannot be met by the formal financial markets. For example, it is known that only 20% of the African inhabitants can reach to formal finance (Abbi & Gamal, 2011:998). The financial associations such as banks and insurances become inadequate to meet the needs of people from low income levels because of several reasons. There are the situations that those people have no facilities of sufficient bail, their incomes and savings are too low to be considered, they do not have any credit history providing a credential for the new credit requests and they do not have enough information about the required procedure (Fadiga & Fadiga-Stewart, 2004). These people who cannot make use of the formal finance are forced to apply to the informal credit sources such as loan sharks, family members/relatives and roscas. According to this perspective it is thought that the roscas come out as being the best suitable type of financial contracts for individuals in terms of providing strong social norms about socio-economic situation and solidarity in the related countries (Ambec ve Treich, 2003). In other words, roscas are accepted as informal financial market operations which fill the gaps created by formal financial system and so have an important role in lives of people from low income level and on whom the norms and traditions have effects (Smets, 2000; Fadiga & Fadiga-Stewart, 2004; Eroğlu, 2010; Abbi ve Gamal, 2011).

Informal financial markets are the ones which base the groups of low income level, are based on the principal of mutual trust and on the relationship of mutual borrow and lending. When compared with the formal finance, model of informal finance provides advantages in terms of not having any transaction costs, providing both saving and the credit service and its forcing effect via social interaction on people to make savings. The provided credits being not in great amounts and not long termed, and the risk variety being not allowed are the disadvantageous aspects of rosca (Schreiner, 2000).

When the functions that rosca serves in the countries it is used frequently are evaluated it is observed that roscas provide an important social political perspective about the inhabitants' situation of reaching financial opportunities and using them to increase their personal wealth (Eroğlu, 2010). This informal financial market operation which stays beyond the public control mechanism-in other words which is never objected to any regulations- mobilizes an considerable amount of the national savings especially in developing countries. Roscas are used intensely in countries of Africa, Asia and Latin America (Ambec ve Treich, 2003). For example, the rate of participation among the adults in Kongo, Cameroon, Gambia, Liberia, Ivory Coasts, Togo and Nigeria changes between 50% and 95%. The ratio of national fund activated by rosca over national income is between 8% and 10% in Ethiopia and about 50% in Cameroon. In India, it is twice as big as the sector of bankings (Anderson ve Baland, 2002). Moreover in some countries the governments, financial and non-financial associations are observed to organize roscas. The the differences of formal rosca from standard rosca are the great number of participants, participants not knowing each other and the process which is going under a regulating authority (a public association, a bank, a company) within the legal contracts (Abdul-Yakeen,2012). In Argentina, the banks, car seller and government organize formal roscas. In Turkey especially in 1980's the newspapers used to organize car roscas. And still in Turkey due to the interest-free banking system being not

developed enough some special associations organize roscas with the name "cooperation system" and by this way they serve participants in terms of buying houses and cars[1].

When the literature review about the individuals' reasons to participate a rosca is examined it is observed that there is no clear consensus reached but the most commonly asserted reasons are (Besley at all;1993; Levenson ve Besley, 1996; Satkunasingam ve Shanmugam, 1997; Anderson ve Baland; Ambec ve Treich, 2003; Klonner, 2003; Gugerty, 2007; Eroğlu, 2010; Abbi ve Gamal, 2011); the wish of meeting the basic needs corresponding to savings, investments and insurance activites when the financial systems can not develop or individuals can not make use of current formal financial markets due to several reasons; buying durable goods (Indivisible Good Hypothesis); intra-familial dynamics about the women's socioeconomic status and about sharing and managing the family income; a forced mechanism of saving useful for people who have difficulties in saving their money (Commitment Hypothesis).

In Turkey rosca application is known as a women's activity. Furthermore about this application which is issued in traditions the thought of being carried out to meet the social needs instead of economic ones is dominant. In addition to this as a result of observations and interviews made recently it is found that women and also men from all ages, all professions and from all income levels organize roscas in an increasing rate. The situation that highly educated individuals especially from middle and high income levels participate roscas cannot be explained by the current reasons of participating a rosca in the literature. In this study addition to the basic reasons about participate a rosca, the reasons of mistrusting financial sector and cultural dynamics depending on religious beliefs are examined to see whether they are effective or not. Besides that bringing up the differences between the reasons of participating a rosca on the basis of socio-economic and demographic variables and providing an assessment of the general situation about rosca participation in Turkey's point of view are the other important purposes of the study.

As a part of study an instrument is developed by using the broad literature review about the reasons of participating a rosca. After that by conducting factor analysis via the data about the reasons of participating a rosca 11 sub headings some of which express new reasons to participate a rosca and are expected to contribute to the related literature are determined. Then, the differences between the groups formed according to the basis of demographic and socio-economic factors with respect these gathered 11 sub dimensions are found. In the analysis of data descriptive statistics (percentage, mean , standar deviation), factor analyses, reliability tests and parametric tests (T-Test and Anova) were used. As a result of the analyses reasons of participating a rosca were found to differ by the demographic and socio-economic factors of the individuals.

2. LITERATURE REVIEW

2.1. The Reasons of Participating A Rosca

When the items that motivate people to participate a rosca are examined it is observed that one of the main ones is people not being able to make use of the financial markets due to an undeveloped financial sytem or due to various causes. In this case because the needs about saving, consumption and investing are not met the individuals are directed towards to use rosca. The rationale of buying durable consumer products is also taking place on the same basis. The other important reason to participate a rosca is intra-familial dynamics more about the socioeconomic status of women and about the sharing and managing the family income. The very big portion of the rosca participants in the frequently used countires is women. This shows us that this intra-familial dynamics factor, which is indeed explained by socio-economic factors, is considerably affective on rosca participation. The last basic factor effective on rosca participation is about the difficulties that individuals face with in making savings. In this perspective participating a rosca functions as a forcing factor on individuals to make savings.

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2.2. The Individuals Who Cannot Make Use of Formal Finance and Roscas

Rosca participation is common especially in developing countries, in immigrants' districts of developed countries and at the countrysides. The common property of these individuals at these places is that they cannot make use of formal financial markets to meet their own needs. Two factors are proposed as the causes of that situation. First one is that the formal financial system is not developed enough in this region. Second one is that the formal financial system is especially far beyond being accessible to low income level groups. Because of these reasons millions of people can not get the expected services from the financial system about basic consumptions, investments and insurance activities. Considering that low income level groups cannot make savings and need financial support even for the basic consumption needs it can be asserted that their expectations from formal finance are at the top level.

This means that low income level groups are included in the group requesting net fund in financial system. At the same time this group comprises the most disadvantageous group in terms of the prerequisities which formal finance expects from themselves in credit requests. These prerequisities are named as 5C rule (Character, Capacity, Colleteral, Capital, Conditions). In other words, because the individuals from low income levels have a very irregular income, have no capital and their social environment is under the required standard of bail and etc they can not meet the standards determined by banking system as the basis used for credit requests. Even this group get credits in the period that economic trade cycle is positive, their irregular income causes fails in repayments and in long term their relationship with financial system turns to be a negative vicious cycle.

The education level and also financial literacy being low in these low income level groups alienate them from financial system. Low income level groups spend both their individual and family possessions mostly on meeting their basic needs, on the foundation of micro sized enterprises and on the finance of other trading enterprises in informal sector and therefore most of the time the realized savings become not enough for the finance of these expenses. In conclusion these people ask help from loan sharks, family members and relatives who are all accepted as informal credit sources or they participate roscas (Abbi & Gamal, 2011).

2.3. Women and Roscas

The participation rate of women in Turkey and in other countires where rosca is popular is observed to be high. Meeting the need of socialization is considered at first as the reason of this situation. However, the fundamental need is beyond the need of socialization. It is proposed that the socio-economic factors, intrafamilial dynamics about the share of sources and norms about the expenses about family income are affective on the rosca participation of women (Tsai, 2000; Anderson ve Baland, 2002; Johnson, 2004). In other words, it is asserted that there are differences between women and men basically about the relationship between savings and expenses and in the way of spending the family income reserved for consumptions. As a result of the researchs women are found to be more sensitive than men especially for meeting the needs of children and family basics at the minimum level and providing its continuitiy (Satkunasingam and Shanmugam, 1997; Eroğlu, 2010; Abbi & Gamal, 2011). In addition, it is asserted that men use family income more for satisfaction of personal pleasures (cigarettes/alcohol, gambling etc) and buying products which are not in the first order priority of family wealth. According to Anderson ve Baland (2002) men spend gathered income freely to meet their personal needs whereas women spend their gathered income to meet the needs of children and common needs of family. In another study, a strong correlation is determined between the children's wealth and women's income (Strauss ve Beegle, 1996). Due to these basic differences, with an incentive of increasing their control on the family income women use rosca as a financial strategy to protect it from their husbands in order to meet the basic needs of children without any delay (Anderson ve Baland, 2002).

2.4. Forced Savings Mechanism and Roscas

Rosca is a mechanism which works on the basis of trust among participants and has no legal foundations. Therefore the question arises here: why participants prefer roscas even there are safer ways of saving and investing within the formal financial system? The answer of that question is generally explained by the Commitment Hypothesis (Eroğlu, 2010; Ambec and Treich, 2007; Dagnelie and Le may, 2009). According to this

hypothesis, making savings means abandoning today's pleasures to gain more pleasures in the future and generally people cannot postpone the pleasures that they can get today when they are in the middle of time varied options. For instance, to save the money required for a vacation in summer one must spend less money at weekends. However when it is weekend people cannot prevent theirselves from going out and spending money. Formal financial markets cannot fully meet these needs of people. In fact, making savings is a personal choice. When you have a deposit account in the bank, the bank cannot put you in a situation of legal obligation to pay periodically to that account. Of course the financial system awares of the problems individuals have in making savings and so by developing new methods they try to serve resolution advisories to the individuals in that point. For example, banks in Turkey has just strated a new service in which with the approval of customer some amount of the credit card operations' costs of the person is collected by transferring it to a different account of the same person.

Another application is again by monthly payment order making saving by transferring a portion of the salary, defined by the customer, to another account at each day of salary payment. This is useful especially for employees, wage earner or salariats. Moreover, individual pension system serves for the aim of reaching a higher level of wealth in the future by making savings today in a certain ratio. Althought an interest on the service of individual pension is oberved to increase individuals can stop making savings due to the attraction of any expense. Rosca participation provides individuals with making savings even when they lose their internal motivation towards making savings. Because the rosca participant knows that the wealth of other members in the group and his/her own wealth as well depend on his/her regular payment and so the occured socail pressure context makes participants behave carefully about regular payment. Especially it is known that women are very sensitive about making the payments in time and in full.

2.5. The Types of Rosca and the Problems Faced

Rosca applications differ from one country to another. These differences are directly related with the needs of people in these countries (Ambec, 2003: 2).Therefore the different needs and expectations of people cause rosca to have different types. The first of these types especially used commonly in Ethiopia is called *Simple or Random Rosca* (Abbi & Gamal, 2011: 1001). In this type of rosca the amount to be collected is determined via an organizer. Mostly the first turn in the cycle is of the organizer of rosca. Then the group members complete the cycle by the turn they determined before. Why the organizator takes the first turn is beacause of his/her effort and time spend. And, Because the organizator takes the first turn this stiuation removes the risk of other members' not making the payment and put other members in a aggrieved situation (Satkunasingam ve Shanmugam, 2006: 100). When the corresponding literature is examined Besley, Coate and Loury (1994) found that *Random Rosca* is more advantageous than organized markets (Ambec, 2003: 2).

The other type of rosca is *Consumer Durable Rosca*. Although it is similar to Random Rosca in terms of application way the important difference is that the purpose here is buying durable consumer product as its name implies. The organizer of that type of rosca meets with the wholesaler after s/he and the group members decide on the durable consumer product (mostly electronic devices, furniture etc.) they want to buy. According to the aggreement done with the wholesaler it is guaranteed to buy the corresponding durable consumer products in the future with the price determined today. Still in Malasia with this type of rosca used group members can own durable consumer products by this way (Satkunasingam ve Shanmugam, 2006: 100). In Turkey it is observed that especially among housewives this type of rosca is used.

The third and last type of rosca which is commonly used in Asia is named as *Bidding (auction) Rosca.* In this type of rosca participants give discount offers about the collected amount by considering their own needs. The maximum discount amount is taken out from the total amount and the money is given to the person made this offer. If enough money is left afterwards new offers are accepted again and it goes on like this. At the end of the rosca, the money left becomes so little to distribute and at this time that amount is shared equally to all participants by the organizer (Calomiris ve Rajaraman, 1998: 211). In this type of rosca the person who needs cash urgently will give the maximum discount offer and so s/he will agree on a high discount amount. The basic advantage of the Bidding Rosca is that the participation turning cycle is under the control of the participants. In other types of rosca determining the turn by lot, by the organizer or by coincidence can be only limited to consider the needs of participants. Moreover, in the turns determined by the organizers, there can be cheats of

bribe to determine the turn. (Geertz, 1962: 258). Bidding Roscas are effective on dealing with the risk of net expenses when there are costs of supervising, process and information. However, in this type of rosca the changing rate of discount offers from mounth to mounth will couse group members to be affected differently (Calomiris ve Rajaraman, 1998: 215).

The most important problem arises generally in all types of roscas is the probability of participants' not paying the participation amount. There is no legal restricting contract among parcitipants in rosca which depends on the mutual trust between participants. This situation makes the probability of non- payments a risk factor. In the literature the most affective tool to remove the risk of non-payment is pointed as the psycho-cultural factors (Ardener, 1964; Fessler, 2002; Geertz, 1962; Oh, 2007; Sterling, 1995; van den Brink ve Chavas, 1997). The probability of non- payment is dealed with the psycho-cultural factors diversified as mutual trust, gossip mechanism, social pressure, isolation, embarrassment emotion. Moreover, selecting the members according to a certain basic criteria while rosca is formed can remove the probability of nonpayments. For example, selecting the members from the people of high income level or having regular income, putting the member who has the risk of non-payment in the last turn of the cycle or establishing a seperate fund for urgent situations (Handa ve Kirton, 1999; Van den Brink ve Chavas, 1997) are some of these dealing ways with risk of non-payment.

When we look at the purpose of the study and its significance, according to the literature review roscas are found to be used commonly in developing countries and by individuals belong to low income levels in developed countries. These individualds cannot access to formal financial markets. Because these individuals cannot reach to formal financial markets they cannot utilize the advantages of formal financial markets while making decisions about investment, basic consumption and making savings. Hence they prefer an informal financial market operation "rosca". According to the observations made in Turkey it is observed that rosca participation is not a uniqe application to low income level groups, it is also used by groups of people from various ages, various income levels i.e among groups of wide range of socio-economic and demographic profile. While considering this aspect the rosca participation in Turkey cannot be explained properly by the factors in the current literature. For this reason, this study aims to determine the factors effecting the rosca participation in Turkey and analyze how the effects of these factors differ with respect to socio-economic and demographic characteristics.

3. DATA AND METHODOLOGY

3.1. The Methods Used in Sampling, Instrumentation and Analyses

First of all, there are some limitations in the study. The first one of these limitations is the sample. The population is the all people participating rosca in Turkey. To reach the desired sample size by convenience sampling method the questionnaire could be apllied in a some cities of Turkey. Although the random sampling methods would provide statistically more generalizable results bacause these methods are limited in terms of being applicable and needs more time and cost they could not be preferred for this study. Lastly, the fact that there is no any tested measurement instrument accepted in common before can also be reported as a limitation. Due to that deficiency the measurement questionnaire was developed by the researchers by utilizing from the literature.

The population of the study is the all people participating rosca in Turkey. The questionnaires were at first sent to Samsun, Kocaeli, Ankara, Sakarya provinces and their counties. Out of this wide mass of people as much as possible were tried to be reached via digital media. 650 of the 1000 distributed questionnaires came back and 350 of these were determined to be filled by people experienced rosca before and hence only these 350 forms were taken into analyses. Tha data of the research were collected by the questionnaire technic. The questionnaire form is composed of two parts. First part is composed of 15 questions asking the demographic characteristics of the participants. Second part is designed as a questionnaire with 46 questions to measure the reasons of rosca participation. The reasons of rosca participation questionnaire composed of likert type questions for each of statement in 5 levels which are very important (1), important(2), little important (3), not important (4) and no idea (5). The data of the research were analyzed by using SPSS for Windows 21.0

software programme. In the analysis of data the descriptive statistics (percentage, mean, standard deviation), factor, reliability analyses and parametric tests (T-Test and Anova) were used.

4. FINDINGS AND DISCUSSIONS

The demographics of the participants of the study are shown in Table 1[2]. When the table is examined accordance with the literature it is seen that the majority of the participants are women. As it was predicted with respect to economic indicators, some distributions whose explanation does not exist in current literature emerge. These are: the 75% of the participants being working people and about 80% of these people having a moderate regular income level in Turkey standards and most importantly 45% of the participants being the income level group of 2.500 TL and higher. Moreover more than 50% of the participants have educational status of bachelor or higher. In conclusion, it can be asserted that the probability of not being able to use the formal financial markets and/or not being able to meet the basic consumption needs is a very low.

4.1. Factor Analysis and Reliability

The factor loads and subdimensions of the questionnaire are determined by conducting factor analysis on the questionnaire used in the study. Before conducting factor analysis, by conducting Kaiser-Meyer-Olkin (KMO) and Bartlett tests the questionnaire was determined whether it was applicable for the factor analysis or not. As seen in Table 2[3], the KMO value of the reasons of rosca participation questionnaire was found to be.858 and the p value gathered by Bartlett test was found as .000. Hence it was deduced that the questionnaire was applicable to conduct factor analysis.

According to the results of the conducted factor analysis the explained variance of the questionnaire is found as 67,195. So, it can be deduced that the questions of the questionnaire can explain the 67% of the reasons of rosca participation. The factor loads of the questionnaire changes between the values of 0,450 and 0,847. Cronbach Alfa value is checked in order for the reliability of the questionnaire to be evaluated. The alpha coefficient of the questionnaire is determined as .919.

The Cronbach Alpha values of "Socialization", "intrafamilial dynamics of family income and expenses", not being able to reach the formal financial markets", "basic consumption", "investment", "avoding possible economic loss", "need of being prestigious", "second order needs", "feeling of economic freedom" are .832, .834, .813, .699, .759, .802, .695, .739, .732, .573, .918 respectively.

After determining the subdimensions of the questionnaire, to see how the reasons of rosca participation differ by the basic demographic and socio-economic factors parametric tests were conducted. The results of the t-test conducted to determine the differences between the factors affecting the rosca participation of women and men were shown in the Table 3.

Table 3: The Occured Differences between Women and Men with respect to Factors Affective on Rosca Participation

Sub dimensions	Gender	N	Mean	Std. Deviation	Std. Error Mean	F	Sig.	Sig. (2 tailed)
1	1	235	26994	.91840	.06004	2418	0.00	0.00
	2	115	31681	.80348	.07559			
3	1	235	3836	.6487	.0425	10242	0.00	0.00
	2	115	3577	.7790	.0732			
4	1	235	3312	.7394	.0484	9420	0.00	0.00
	2	115	3019	.8811	.0821			
5	1	235	3368	.8884	.0582	.097	0.76	0.00
	2	115	3026	.8586	.0800			

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[2] Appendix-1
[3] Appendix-2

6	1	235	3731	.8544	.0558	.005	0.94	0.01
	2	115	3508	.7672	.0715			
8	1	235	3412	.8812	.0576	1875	0.17	0.00
	2	115	3050	.9069	.0845			
10	1	235	3089	.8619	.0563	5690	0.01	0.00

According to this, the mean (3.1681) of socialization subdimension of men is significantly higher than of (2.6994) women. It can be asserted that because the labor force in Turkey is dominated by the men and there are other difficulties such as long working hours etc men prefer rosca to meet their social needs. As a reflection of men dominated labor force market, it is observed that the means of subdimensions of not being able to reach the formal financial markets and avoding from a possible aconomis loss are significantly higher for women (3.836/3.731) than they are for men (3.577/3.508). In accordance with the literature it is deterined that the mean of meeting basic consumption needs subdimension is significantly higher for women (3.312) than it is for men (3.019). And as a complimentary to that factor, it is observed that the mean of meeting second order needs subdimension is significantly higher for men (3.324) than it is for women(3.089). According to this it is seen that women participate rosca in order to meet the common needs of home such as basic consumption needs whereas men much rather participate rosca in order to meet their personal needs. It is found that the mean of making saving subdimension of women (3.368) is significantly higher than of men (3.026). While considering that marginal expense tendency is considerably low at Turkey it can be asserted that women who cannot be able to reach the formal financial markets use rosca as a forced mechanism of saving to make investment. Lastly, the mean of avoiding from interest subdimension of women (3.412) is found significantly higher than of men (3.050). As a result of observations done in Turkey it is determined that people prefer rosca just to avoid from interest due to the necessity of their religious beliefs. A question raises here: why these people do not preferer Islamic banking systems.

But as it is seen by the factor analysis, the banking system is perceived confusing by women and they are afraid of being misdirected. Therefore, it can be asserted that the women who would like to avoid from interest system use rosca application as an instrument to make saving and investments.

Tablo 4: The Occured Differences among Various Educational Status Groups with respect to Factors Affective on Rosca Participation

Mean Groups		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
1		2,6923	2,8974	3,6615	2,7692	3,301	3,417	2,908	2,776	3,821	3,333	3,359
2		2,79	3,136	3,4868	3,039	3,065	3,627	2,727	3,357	3,899	3,16	3,467
3		2,81	3,16	3,788	3,22	3,255	3,695	2,745	3,235	3,76	3,093	3,38
4		2,8947	3,3171	3,8614	3,3072	3,278	3,675	2,76	3,349	3,942	3,097	3,765
5		3,0805	3,5714	3,9357	3,7931	3,578	3,914	3,054	3,621	4,092	3,46	4
Total		2,8521	3,2279	3,752	3,2155	3,255	3,658	2,791	3,293	3,905	3,167	3,617
Relating groups Sig.<0.05		-	1-5	2-4 2-5	1-3,4,5 5-2,3,4	-	-	-	1-4,5	-	-	-
Factor ANOVA		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
F		0.960	2.788	4.468	9.022	1.892	1.584	0.988	4.620	1.527	1.715	3.425
Sig.		0.43	0.02	0.00	0.00	0.11	0.178	0.414	0.00	0.19	0.14	0.00
Homogeneity of Variances	Levene Stat.	1.834	0.602	9.825	5.012	5.409	5.224	0.736	3.283	3.717	2.884	21.065
	Sig.	0.12	0.66	0.00	0.00	0.00	0.00	0.568	0.01	0.00	0.02	0.00

In Table 4 the occured differences among the various educational status groups with respect to sub dimensions affecting rosca participation are shown. By the conducted One Way ANOVA tests it is determined that only about sub dimensions of numbers 2,3,4 and 8 groups differ significantly. According to this, the mean (2.8974) of intrafamilial dynamics of family income and expenses sub dimension of the people who are primary school graduates is significantly lower than (3.5714) of the people who have post graduate degree. While considering that as the educational status increases the mean of this subdimension increases it can be asserted that this situation can be explained by the relative importance given by the individuals from various educational status and this importance increases as the educational status increases. Besides, it can be thought that the groups having high educational status use rosca application as an financial intsrument to meet a spesific need defined before (such as meeting the educational costs of children). According to the not being able to reach the formal financial markets sub dimension it is found that the means of groups having bachelor degree and post graduation (3.8614-3.9357 respectively) are significantly higher than of the groups having middle school degree (3.4868). Considering the assumption of a direct relationship between educational status and income level indeed this situation is the opposite of the expected one. The situation that as the mean of the not being able to reach the formal financial markets subdimension increases the educational status increases can be asserted to be explained by the impossibility of reaching financial markets for the middle school graduates and by the situation of rosca for bachelor graduates and post graduates that it is an option tried but fails.

This situation show that as the education status of the individual increases they use rosca application purposively to meet more specific needs. In other words, it can be deduced that the individuals perceive rosca as an financial instrument and prefer rosca to meet their needs which are defined before they start participating rosca. Lastly, it is observed that as the educational status increases the means of avoiding from interest subdimension increases. This situation cannot be simply interpreted as the increase in sensibilites related with religious beliefs as the educational status increases.this relationship can be interpreted by the assumed linear relationship between the educational status and income level. Moreover, the people who are affected frequently by the frequently occuring banking crisis in Turkey are the high educational status individuals having greater tendency towards making marginal expenses. The negative experiences and sensibilities related with relious beliefs can be asserted to cause that result.

In Table 5 the occured differences among the various age groups with respect to sub dimensions affecting rosca participation are shown. By the conducted One Way ANOVA tests it is determined that only about sub dimensions of numbers 2,7,8 and 11, groups differ significantly. According to this, the mean (3.8400) of intrafamilial dynamics of family income and expenses sub dimension of the people in the age range of 18-25 is significantly higher than of the people in the age range of 36-45 and of 46-55 (3.1030/3.0489). The rosca participation of young people in order to meet their educational needs is an expected situation when considering that their marginal consumption inclination is high due to lower income level in the age range of 18-25 than in the other age ranges –when all other conditions are accepted as constant- and due to the fact that this age region expresses the beginning of their career. It is observed that as the age increases the groups' means of the not being able to make savings subdimension increases as well. This situation can be asserted to be resulted from the pressure created by the increasing responsibility (marriage, children etc.) as the age increases.

Table 5: The Occured Differences among Various Age Groups with respect to Factors Affective on Rosca Participation

Mean Groups	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
1	2,8	3,84	3,667	3,2	2,817	3,75	2,4333	3,4833	4,044	2,822	3,867
2	3,091	3,392	3,718	3,242	3,227	3,803	2,6913	3,3207	4,017	3,199	3,847
3	2,744	3,103	3,731	3,202	3,218	3,699	2,7819	3,3228	3,948	3,165	3,505
4	2,801	3,049	3,817	3,207	3,282	3,535	2,8112	3,3936	3,801	3,181	3,575
5	2,707	3,3	3,733	3,176	3,507	3,399	3,2	2,8378	3,75	3,225	3,278
Total	2,856	3,223	3,748	3,212	3,251	3,655	2,7914	3,2967	3,912	3,171	3,613

Relating groups Sig.<0.05		-	1-3,4	-	-	-	-	5-1,2	5-,2,3,4	-	-	2-5
Factor ANOVA		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
F		2.403	3.831	0.337	0.060	1.749	2.319	2.938	2.919	2.230	0.750	2.738
Sig.		0.05	0.00	0.85	0.99	0.13	0.05	0.02	0.02	0.06	0.55	0.02
Homogeneity of Variances	Levene Stat.	0.415	0.513	0.517	0.876	1.389	4.933	0.722	1.443	2.858	1.954	8.956
	Sig.	0.798	0.726	0.723	0.478	0.237	0.000	0.577	0.219	0.02	0.10	0.00

With respect to the avoiding from interest subdimension the age group of "56 and more" is found to have significant mean difference from of the ranges of 26-35, 36-45 and 46-55. According to this it is observed that the individuals in the age group of "56 and more" are more flexible than young individuals in terms of getting into debt with interest. While considering the human life composed of four periods which are saving, insuring the wealth, consumption and being awarded that includes retirement; individuals in the being awarded period can be asserted to make investments that provide prestige for themselves and that support their childre (Karan, 2004: 706). Because the individuals in the age group of 56 and more are in being awared period they can be asserted to behave flexible in terms of avoding interest. Lastly, with respect to feeling of economic freefom as the age increases the means deacrease. And it is observed that the mean (3.2778) of age group of range "56 and more" is significantly less than of age group of range "26-35" (3.8469). This situation can be explained by the positive effect created by the increase in gathered money by the family as the income increases –even the women do not work-.

In Table 6. The occured differences among the various income groups with respect to sub dimensions affecting rosca participation are shown. By the conducted One Way ANOVA tests it is determined that only about sub dimensions of numbers 1,5,7 and 10, groups differ significantly. According to this, mean of the sociolization sub dimension of the people without a regular income (2.4280) is significantly lower than of people with income in the range of 1.501-2.500 TL (2.9457). This situation can be asserted to be resulted from the stress factor of work life which is the main difference between working people and unemployed people. With respect to basic consumption sub dimension generally as the income level increases the means of the groups increases. However, according to the related literature it is known that majority of the studies include individuals without a regular income and for these individuals meeting the basic consumption needs is the leading reason of participationg a rosca. As seen in the table 6, the mean of basic consumption needs subdimension (3.4034) of the individuals without a regular income is significantly higher than of the individuals whose income is in a range of 900-1500 TL. Whatsimore among the higher income level groups a positive relationship between income and mean of basic consumption needs subdimension is observed. This situation can be explained by the usage of rosca application purposively to meet the specific needs in the significantly higher income level groups. With respect to investment sub dimension the mean (3.6375) of the individuals having an income in a range of 3.501- 5.000 TL is found to be significantly higher than of the individuals having an income in a range of 900-1.500 TL and of the ones in a range of 1.501-2.500 TL (3.0313/3.1236). Being the marginal consumption tendency high for low income level groups and the situation that with increased income level the marginal consumption tendency decreases and the unnecessary expenses cannot be prevented explain this situation. Similar to the results of basic consumption subdimension, with respect to subdimension of not being able to make savings it is observed that the relationship between the individuals without a regular income and the two lowest income level groups is becoming reversed as the income level increases. Not being able to make savings is accepted as normal among the individuals without a regular income. The relationship becoming reversed as the income level increases can be asserted to be resulted from the situation that unnecessary expenses cannot be prevented. As a matter of fact it is observed that as the income level increases the mean of the subdimension of meeting secondary needs increases as well and these results support the thoughts explained above.

Table 6: The Occured Differences among Various Income Level Groups with respect to Factors Affective on Rosca Participation

Mean Groups		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
1		2,428	3,54	3,736	3,4034	3,534	3,773	3,182	3,25	3,767	3,174	3,5814
2		2,805	3,044	3,591	2,7734	3,031	3,672	2,434	3,207	3,99	3,073	3,5781
3		2,946	3,164	3,607	3,0955	3,124	3,551	2,71	3,169	3,959	3,225	3,4091
4		2,869	3,16	3,893	3,2739	3,2	3,54	2,821	3,392	3,772	2,954	3,6632
5		3,008	3,492	3,95	3,5875	3,638	3,919	2,923	3,438	4,025	3,408	3,85
6		3,131	3,354	4	3,8167	3,433	3,917	3,096	3,45	4,089	3,822	4,1538
7		3,667	2,5	3,4	3,875	3,75	4	3,125	3,75	4,333	3,833	4,5
Total		2,852	3,228	3,752	3,2155	3,255	3,658	2,791	3,293	3,905	3,167	3,6174
Related Groups Sig.<0.05		1-3	-	-	1-2 2-4,5,6 3-5,6	5-2,3	-	1-2,3	-	-	2-6 4-5,6	-
Factor ANOVA		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
F		2.541	2.147	2.787	8.034	3.328	1.682	4.065	0.913	1.876	3.843	1.801
Sig.		0.02	0.04	0.01	0.00	0.00	0.12	0.00	0.48	0.08	0.00	0.09
Homogeneity of Variances	Levene Stat.	1.687	1.438	6.609	4.543	3.572	4.758	0.492	1.958	1.624	3.068	5.856
	Sig.	0.123	0.199	0.000	0.000	0.000	0.000	0.814	0.071	0.139	0.006	0.000

In Table 7 the occured differences among the various vocation groups with respect to sub dimensions effective on rosca participation are shown. By the conducted One Way ANOVA tests it is determined that only about sub dimensions of numbers 1,5,7 and 10, groups differ significantly. According to this mean of the sociolization sub dimension of the housewifes' is lower than of retired people, employees, officers and people having a professional vocation. This situation can be asserted to be resulted from the potential dificulties of work life. With respect to investment sub dimension, it is observed that the mean of self-employed people is lower than of all other vocation groups except for the unemployed group's mean. This stuation can be asserted to be resulted from the characteristic of the income that of the corresponding vocation group. Except for the self-employment for other vocation groups income is stable and so if they want to make savings there is the necessity of making any saving from that stable income. However for self-employed people because the source of a new investment is again provided by the income gathered from their current investments for their rosca application preference making investment is not an important reason.

With respect to investment sub dimension it is seen that the mean of the retired people (3.4706) is significantly more than of the employees (2.3917). The reason of this situation can be asserted as the increase in marginal consumption tendency in retirement period due to the decrease in income of retired people. Lastly, it isobserved that with respect to to second order needs sub dimension the mean of retired people (3.6111) is significantly greater than of teachers (2.9091). Again similar to the case of making savings sub dimension, it can be stated that the second order needs of retired people cannot be met by their limited income due to the increase in marginal consumption tendency in retirement period and as a result they prefer rosca application to meet these needs.

Table 7: The Occured Differences among Various Vocation Groups with respect to Factors Affective on Rosca Participation

Mean Groups	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
1	2,9091	3,636	3,2	3	2,9318	3,886	2,364	3,591	3,939	3,212	3,212
2	3,1852	3,435	3,871	3,347	3,5972	3,611	3,471	2,944	3,907	3,611	3,611
3	2,3421	3,289	3,716	3,233	3,6053	3,711	3,031	3,154	3,744	3,234	3,234
4	3,3056	2,867	3,627	2,867	2,775	3,733	2,392	3,358	4,033	3,089	3,089
5	3,0388	3,212	3,705	3,07	3,25	3,541	2,709	3,157	3,903	3,264	3,264
6	2,7434	3,074	3,868	3,368	3,2336	3,594	2,718	3,513	3,896	2,909	2,909
7	2,9194	3,4	3,869	3,417	3,3373	3,857	2,91	3,413	4,005	3,18	3,18
8	2,6458	3,375	3,575	2,969	2	3,281	2,281	2,906	3,958	3,458	3,458
Total	2,8563	3,226	3,754	3,216	3,2586	3,662	2,788	3,295	3,908	3,171	3,171
Related groups Sig.<0.05	3-2,4,5,7	-	-	-	8-2,3,4,5,6,7	-	2-4	-	-	42157	-
Factor **ANOVA**	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
F	5.140	1.727	1.893	2.571	5.948	1.252	4.353	2.110	0.883	2.293	1.687
Sig.	0.00	0.10	0.07	0.01	0.00	0.74	0.00	0.042	0.520	0.02	0.111
Homogeneity of Variances — Levene Stat.	2.093	0.645	5.105	2.510	1.987	2.590	1.674	3.504	2.973	2.792	8.465
Homogeneity of Variances — Sig.	0.04	0.718	0.00	0.01	0.056	0.01	0.114	0.001	0.005	0.008	0.000

5. CONCLUSION

The studies and efforts about financial markets' extension and becoming deepen are carried out in Turkey which is evaluated in the developing countries. However, it is observed that a considerable amount of the individuals in Turkey is still making savings, buying basic durable goods or directing their investments by using informal financial systems apart from formal financial markets. The rosca application which is very common in the immigrants' regions of the developed countries and in underdeveloped countries exist due to various reasons among many groups in Turkey. Today in Turkey rosca has the property of meeting financial, economic and social needs of a wide range of people from house wifes to private sector employees, from young people to old ones, from low income level to high income levels.

In this study, the individuals who are rosca participant were reached and than analyzed in terms of their reasons of rosca participation. As a result of the applied questionnaire which measures the individuals' reasons of preferring rosca, sub dimensions about rosca participation were determined. After determinetion, how the reasons of rosca participation differ with respec to to indviduals' socio-economic and demographic characteristics were examined.

As a result of the analyses 11 sub dimensions are determined about the rosca participation. These dimensions are: socializing, dynamics of intra-family income and expences, not being able to reach the formal financial market, basic consumption, investment, avoding from a possible economic loss, making savings, avoiding from interest, need of prestige, social needs and feeling of economic freedom. The effects of socio-economic and demographic characteristics of the individuals on the rosca participation can be summarized as; it is found the reasons of rosca participation differ considerably by gender; it is found the reasons of rosca participation differ by education status and as education status increases more indivuals use rosca as a financial instrument; it is found the reasons of rosca participation differ by age of the participants; different age groups prefer rosca for different reasons; it is found the reasons of rosca participation differ by income level of the individuls; it is concluded that because the incole level is highly dependent on the individuals' vocation, age and educational status it should be evaluated with them; it is found the reasons of rosca participation differ by vocations of the indivuals.

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Appendix 1 – Table 1: Distibutions of Frequencies and Percentages of the Sample

Gender	Frequency	%	Employment Status	Frequency	%
Women	235	67,2	Not working	86	24,6
Men	115	32,9	Wage earner, salariat or jobbers	246	70,3
Total	350	100	Self-employed	12	3,4
Age	**Frequency**	**%**	Employee	6	1,7
18-25 ages interval	15	4,3	Total	350	100
26-35 ages interval	99	28,3	**Rosca Type Preference**	**Frequency**	**%**
36-45 ages interval	105	30	TL	258	73,7
46-55 ages interval	94	26,9	Dollar	31	8,9
56 and older	37	10,6	Euro	5	1,4
Total	350	100	Gold	55	15,7
Educational Status	**Frequency**	**%**	Other	1	0,3
Primary and middle school	39	11,1	Total	350	100
High School	77	22	**Rosca Group Members**	**Frequency**	**%**
Associate Degree	50	14,3	Relatives	52	14,9
Bachelors	155	44,3	Neighbours	33	9,4
Post graduate	29	8,3	Collegues	137	39,2
Total	350	100	Schoomates	3	0,9
Vocation	**Frequency**	**%**	Mixed	125	35,7
Not working	11	31,1	Total	350	100
Retired	18	5,1	**Precaution for the risk of nonpayment**	**Frequency**	**%**
Housewife	57	16,3	Forced to feel responsible via peer pressure	34	9,7
Employee	30	8,6	Excluding from the group	20	5,7
Officer	86	24,6	Putting the most risky member in the last turn	28	8
Teacher	77	22	Choosing the member by reference	15	4,3
Professional Vocation	63	18	Specying an organizer	54	15,4
Self-employment	8	2,3	Choosing the not risky people as members	154	44
Total	350	100	Other	45	12,9
Marital Status	**Frequency**	**%**	Total	**350**	**100**
Married	299	85,4	**Number of participants in Rosca**	**Frequency**	**%**
Single	51	14,6	Below 12	286	81,7
Total	350	100	More than 12	64	18,3
Number of Children	**Frequency**	**%**	Total	350	100
None	74	21,2	**Amount of money paid regularly to Rosca TL**	**Frequency**	**%**
1 or 2	220	62,9	0-100	184	52,6
3, 4 or 5	55	15,7	101-249	82	23,4
More than 5	1	0,3	250-499	47	13,4
Total	350	100	500-749	20	5,7
Income (TL)	**Frequency**	**%**	750 and more	17	4,9
None	44	12,6	Total	350	100
900-1.500	64	18,3	**Frequency of Meetings for Rosca**	**Frequency**	**%**
1.501-2.500	89	25,4	Once ayear	342	97,7
2.501-3.500	96	27,4	Twice a year	8	2,3
3.501-5.000	40	11,4	Total	350	100
5.001-10.000	15	4,3	**Frequency of turns**	**Frequency**	**%**
More than 10.000	2	0,6	Once a month	316	90,3
Total	350	100	Twice a month	34	9,7
Income Bracket (TL)	**Frekans**	**%**	Total	350	100
None	228	79,4	**Preference of turn style in rosca**	**Frequency**	**%**
1-2.000 TL	51	14,6	By lot	294	84
2.000-5.000 TL	18	5,1	By coincidence	9	2,6
5.001-10.000 TL	3	0,9	Determining previously	47	13,4
Total	350	100	Total	350	100

Appendix 2 - Table 2: Factor Analysis of Reasons of Rosca Participation Questionnaire

	Variables	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
Socialization	To relax and have a good time	.830										
	To have an opportunity of meeting with my friends	.824										
	To have an opportunity of evaluating the current issues	.786										
	To meet with new people	.652										
	To learn new things	.618										
	To have an opportunity of meeting with my relatives	.503										
Intrafamilial Dynamics of income and expenses	To support my children's education		.812									
	Because I am considering my children's future		.793										
	To meet the school needs of my children		.574									
	Beacuse I want my children not having less than their friends' possessions		.492									
	Because my husband/wife spends family income extravanagtly		.461									
Not reaching to formal financial markets	Because I am afraid of not being able to pay back the credit of banks			.772								
	Because the banks did not accept my credit application			.771								
	Because I cannot meet the criteria of credit apllications of banks			.737								
	To take a precaution of the possibility of loosing my regular income			.587								
	Because I have anxiety about not being able to meet the basic needs of my family			.585								
Basic Consumption	To buy food/cleaning materials				.692							
	To buy electronic devices, tv, household appliances etc.				.634							
	To meet the heating fuel needs(coal, firewood etc.) of my family				.509							
	To pay a debt				.450							
Investment	To buy a land estate such as a house or plot					.784						
	To buy a car					.739						
	To make a capital stock for the business establishment					.631						
	To make use of a current investment opportunity					.514						
Avoding possible economic loss	Because I am afraid of being misdirected by banks or other financial associations						.731					
	Because the banking operations are confusing for me						.706					
	Because the interest rates are too high and so I do not want to take up a loan on						.601					
	Because I want to get rid of my friends and relatives wanting debt money from me						.496					
Economising	Because I cannot stop myself making unnecessary expenses							.777				
	Because I have difficulty in saving money							.705				
	To meet the common needs of my family							.541				
	To contribute to family income							.462				
Avoiding from interest	I do not want to get an income from interest								.847			
	I do not want to take up a loan on with interest								.831			
	To feel a sence of solidarity								.478			
	I know that If I take up a loan on /get an income from interest people around me will criticize me badly								.473			
Need of being prestigious	Having the chance of showing off									.819		
	To math-make people who would like to marry									.769		
	To feel myself important and valuable									.469		
Second order needs	To go on a holiday										.700	
	To meet my personal needs (personal development, personal care etc.)										.645	
	To spend money for spoiling yourself										.605	
Feeling of economic freedom	To feel the emotion that I have an regular income independent from my husband/wife											.643
	Explained Total Variance										67,195	
	KMO and Bartlett Test										.858 and .000	
	Cronbach Alpha Coefficient (General, .919)	.832	.834	.813	.699	.759	.802	.695	.739	.732	.573	.918