



## The ROSCAs Participation and their Influence on Financial Position of Business

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### ABSTRACT

*The role of Small and Medium Size enterprises (SMEs) becoming more prominent all over the world. The most crucial and larger part of the world economies are SMEs. ROSCA is cheap source of finance for SMEs. This study investigates ROSCA as a source of finance for SMEs. The objective of the study is to explore the participation of SMEs in ROSCAs and the influence of ROSCAs on the financial position of the business. To explore these issues, mix method was used for data collection through self-administered questionnaire and interview from Mingora City in district Swat. Total 200 questionnaires were distributed; response rate was 70%. Sample was selected through snow-ball sampling method. Frequency distribution and charts are used for presentation of data. Cross tabulation, chi-square and fisher exact test are used for checking the associations. The results illustrate that all types of businesses participated in committee, but majority are sole proprietorship. Businesses invest majority of their ROSCAs funds in existing businesses rather than other opportunities. In addition, these funds cover 20-30% financial needs of the business.*



## **Introduction**

The role of Small and Medium Size enterprises (SMEs) becoming more protuberant all over the world. The most crucial and larger part of the world economies are SMEs (M. W. J. Khan & Khalique, 2014). SMEs can be established in every locality and in every kind of business activity in the world. The contribution of SMEs to the economic development of developed and developing nation is significant (Khalique et al., 2011). In country like China Wignaraja and Jinjark (2015), investigated that there are about 4.3 million SMEs (99.5% of all enterprises countrywide). They contribute about 80.0% to employment, 58.5% to GDP and 68% to exports. In India, the contribution of SMEs has been incredible in the industrial growth. It has 40% share in the industrial manufacturing, 35% of the total produced exports are calculated for this sector. In account of employment generation, this sector is employing about 14 million people (Uma, 2013). As showed by the Small and Medium Enterprises Development Authority (SMEDA, 2011) that SME sector of Pakistan embodies about 90% of all the ventures in Pakistan. There are roughly 3.2 million Micro, Small and Medium sized businesses in Pakistan. In which majority 53% of them is retail, wholesale and hotels or restaurants, 27% tracked by other services and the lasting 20% in production sector.

SMEs finance their business through formal and informal finance. Schreiner (2001, p. 02) Defined informal finance is contracts or agreements conducted without reference or recourse to the legal system to exchange cash in the present for promises of cash in the future. Informal financial institutions are mainly separated in two wings money advancing and loan associations (Mauri, 1987; Yusuf, Ijaiya, & Ijaiya, 2009). Rotated Savings and Credit Associations (ROSCAs) are informal source of finance, which is practiced nearby around the world (M. Khan, 2013). ROSCA is a credit association which is defined by Aniket (2005) as ROSCA is a group of people contributing a specified amount to a single pot each period. The accumulated amount is distributed each period to a member, who is selected either randomly or by a bidding process. The ROSCA continues by excluded the previous winner of the pot from receiving the pot in the future. The process ends until each member received the pot once.

As mentioned above that ROSCAs are practiced about all over the world, and numbers of studies are conducted on it. ROSCA are explored from diverse perspectives like some scholar propose that committee is a security as well as insurance for enterprises as studied by (Gugerty, 2007; Klonner, 2001), few assessments also explore that ROSCA is a means of saving, we are not able to save your own (Besley et al., 1993; Yusuf, Ijaiya, and Ijaiya, 2009) and other report recommend that ROSCAs are also advantageous for individuals and entrepreneurs to decrease the societal burden in circulation of earnings in deprived persons (Ambec & Treich, 2003). M. Khan (2013) argued that ROSCA is an alternate source of finance for poor's and Agegnehu (2012) also study ROSCAs as why do members join these informal financial institutions-ROSCAs.

The process of ROSCAs which is adopted in Swat is different from the entire world. In the published literature, the contribution of the members to the pot are only on the draw day or date which in turn that contributed amount are given to one member on some predetermined criteria. But the process of contributions in Swat is on daily basis and the organizer saves the contributed amount till the draw date. There are two benefits for the president that he/she may receive the first pot and that daily installments are also invested in his business up to draw date. The method on which pot is distributed is also vary from the available literature. In former studies the pot is distributed through bidding process which is called bidding ROSCA, or it is distributed through random process which is called random ROSCA (Besley, Coate, & Loury, 1993). But here in Swat pot is only distributed through random process or pot may also be given to the needy person

without draw with mutual consent of the members, if that person is at risk. The draw of the pot may be on the pot given date or day, or the draw may be in advance of the whole member's pots. In advance draw process, the draw may also be drawn for only 3 or 4 members and after receiving their pot by that members, after that other 3- or 4-members draw are put. The aim of this work is to investigate ROSCAs in district Swat. It increases the level of knowledge and it is also helpful for the other researcher in further investigation.

ROSCAs are studied from different perspective around the world. For example (Ahn, Kang, Kim, & Shin, 2017) have find that ROSCAs might attract investors when deposit and loan rates from formal banking systems are not favorable, (Sadr, 2017) have find the determination of the optimum size of committee, (Mbizi & Gwangwava, 2013a) have studied ROSCAs as an alternative funding for sustainable micro enterprises, (Bisrat, Kostas, & Feng, 2012) investigated committee as to find the motive of the participant, (Maitra, Miller, & Sedai, 2023) studied committee as the effect of social welfare on ROSCA and (Lowenstein, 2024) have investigates ROSCAs as how communal finance fostered pre-industrial economic growth and commercial activity. In Pakistan committee are also examined from vary perspective that are in Lahore, Sargodha and Dera Ghazi Khan districts of Punjab Province (Afzal, d'Adda, Fafchamps, Quinn, & Said, 2014a, 2014b; M. Khan, 2013; M. Khan & Lightfoot, 2011), (Ullah, Naimi, & Yusoff, 2016a, 2016b) but their result are not generalizable for this geographical area. Research objective and methodology adopted by this study is also different from these studies. The processes of ROSCAs contribution and distribution are also different from those of other countries. The entrepreneurs are only participating in random ROSCAs and the method of payments and distribution of pot are also different. Committee are not studied in this area before this study. The motive behind selecting this area is that there is no literature available at Khyber Pakhtunkhwa Pakistan, and particularly district Swat. The above discussion is coercing for conducting this study.

In addition district Swat was severely pretentious from extremist's attacks in (2008-09) and from rainstorm in (2010), which drop the pecuniary activity and coarsely upset the economic situation of SMEs (Buneeri, 2010; Hashim, 2014). Throughout this tenancy majority business ceased operations temporary and few of the enterprises are completely dissolved. Because of this worse situation entrepreneurs suffer about 67% of losses and in hotel industry about 1200 units were collapsed and bearded loss of nearly 4 billion rupees (Buneeri, 2010; Hashim, 2014). In this depraved condition, these industries are now studied with relation of committee. Therefore, this area is selected for the study.

## **Literature Review**

Small and Medium Size Enterprises (SMEs) are a dominant performer in pecuniary progress of all developing and developed countries. It is also like backbone for the lucrative development of a country (Khalique, Isa, Shaari, & Abdul, 2011). In every facet of country's financial development SMEs character is the utmost momentous one. DTI, (1999a) mentioned that in UK there are 3.7m enterprises, in which 94.8% are micro and further 4.4% are small firms. SMEs denote 99.2% of overall commercial establishments in Malaysia, which contributing to GDP about 32%, 19% to exports, and 56% to employment (Chelliah, Sulaiman, & Yusoff, 2010). In South Korea the portion of SMEs employ about 70% of entire employment and the product segment are above 46% of the whole products (Harindranath, Dyerson, & Barnes, 2008). According to the World Bank (2004) report, in Mexico SMEs occupy about 50% of the work force; in Ecuador and Brazil it occupies closely 60%; about 70% in Argentina, Colombia, Panama, and Peru; and as plenty as 86% in Chile.

Akin to other developing nations, Pakistan's economy is also mostly depending on SMEs. As showed by the Small and Medium Enterprises Development Authority (SMEDA, 2011) that SME sector of Pakistan embodies about 90% of all the ventures in Pakistan. There are roughly 3.2 million Micro, Small and Medium sized businesses in Pakistan. In which majority 53% of them is retail, wholesale and hotels or restaurants, 27% tracked by other services and the lasting 20% in production sector. They subsidize almost 30% to the GDP and offer approximately 78% employment prospects to nonagricultural public (M. W. J. Khan & Khalique, 2014). SME sector of Pakistan has a boundless immersion on the way to employment initiation and being the major pecuniary sector in the country. SMEs play a constructive and momentous role in economic growth, GDP enrichment, essential role in foreign exchange earnings and offers employments in rustic areas of the country (Syed, Ahmadani, Shaikh, & Shaikh, 2012). Shah, Javed, and Syed (2014) Conducted a hypothetical study of the research papers which indicates that main issues influencing the internationalization of SMEs are deficiency of finance, inside and outside export hurdles, entrepreneurial thinking and novelty. Financial problem stands the main tricky to SMEs in common and predominantly in Pakistan.

Access to fund was quoted by same study as the key hitches for SMEs, but appropriate data about SMEs financial position and performance are not obtainable (Stephanou & Rodriguez, 2008). Based on (México, 2003) survey of about 687 SMEs which demonstrate that approach to fund was ordered the 2nd most vital problem (specifically for small and newer enterprises) in the formation, expansion or divergence of their commercial actions. Typically, entrepreneurs finance their ventures over equity, debt and informal finance. The various difficulties in access to formal finance are failure to pay loan at maturity, lack of securities, weak financial situation, detailed credentials and extra hinders from the financial institutes. Because of these factors entrepreneur's swings to other special sort of finance which may not contain the like problems, which is informal sources of finance.

Informal financial institutes are largely separated in dual branches money advancing and credit associations (Mauri, 1987; Yusuf et al., 2009). Adams (1991) Exertion about informal financial societies illustrates diverse types of informal finance as: lenders, ROSCAs, dealers, land aristocrats, informal credit unions, loan agents, pawning, saving parties, friends & relative and money guards etc. In short, informal finance frequently includes minor loans and deposits, usually operates without collateral, normally deals with short-term dealings, and habitually functions in the legal shadows. Majority of the applicants in the informal system are poor persons, workers of small businesses, small ranchers, and the evicted public who are frequently incapable to get formal financial amenities (Adams, 1991).

ROSCAs is a cluster of individuals who decided to donate a static sum of money for every period to a sole account and at the close of the period the assembled sum is given to one participant that is nominated over programmed criteria. Subsequent period, other fellow takes the quantity by not including the prior winner and so on. The recipients of the pot pay afterward receipt his pot and this procedure repeat till each associate collect their pot once. Hereafter that cluster; the progression is moreover dispersed or new round is commenced, might be with dissimilar participants and lengths (M. Khan, 2013).

Committee have numerous kinds in how they work, but two key kinds are being known. The first, and utmost predominant kind is to distributes its pot randomly, study called this as random ROSCAs. In a random committee, followers bind to paying a static amount of cash into a single "pot" for every period of lifespan of the ROSCAs. Lots are drawn, and the pot is randomly assigned to single associates. In the following period, the procedure replicates by excluding the

prior winner of the pot. The course endures, with earlier pot receiver excludes, until every participant of the committee receives the pot once.

ROSCAs might also distribute the pot by means of a bidding technique. Some studies infer to this establishment as a bidding ROSCAs. One participant collects the pot in prior period than other by bidding extra, in the arrangement of a pledge of bigger payments to the committee, or one-time side contribution to another ROSCAs associates. Underneath a bidding ROSCAs, even persons can get the pot only once-the bidding procedure just creates significance (Besley et al., 1993).

The random process is further separated in two forms first wholly the draws are put in advance of starting the process and each participant has allotted number for the receiving of his pot. Second pot is allocated on draw at the end of every period. Draws are put for every pot. In Swat, the pot is also disseminated on need based; the participant which is in need the funds are paid to that fellow formerly, the deprived participant discussed with the organizer of the committee.

ROSCAs are beneficial for every kind of enterprises. There is little cost for the organizer as well as for the members. The cost which is essentially occurred on ROSCAs procedure for the organizers is the make record and payment gathering cost and the organizer may go for it (M. Khan & Lightfoot, 2011). For the participants, there is no cost of transaction, but opportunity cost only for last pot recipients. Other cost the participant may face are travelling and cost of meeting (Mauri, 1987). ROSCAs is a means for saving for those who may not able to save on your own. The key pro is that every participant, excluding the last one, will get his money prior than when doing on his own, because he is receiving finance from all other participants. This is very clear in a ROSCAs that if every participant may be saving for the identical thing, for instance, a sewing machine of US\$120. Saving \$10 a month separately, it should take one year to gather the required \$120. In a 12-member ROSCAs, all members would be in ownership of the sewing machine prior, apart from the last receiver. The blessed participant receives their funds after a period (Bouman, 1994).

ROSCAs member has further advantages that there is no tough and complex procedure of credentials and guidelines (Bouman, 1977). There is also no need of collateral necessities for participants, but own belonging and status is adequate of the participant (Khan & Lightfoot, 2009). Mauri (1987) also expressed that little degree of defaulting hazard is also extra excellence of ROSCAs, it is because of numerous reasons like participant are glowing recognized to one another. To allow an associate in committee other participant also see his good ethics and economic positions and the procedure of confirmation of situations. Though the participants may fail in exact enquiry of the associate, then assurances of the participants and the likelihood of legal act is also manageable. ROSCAs also deliver elasticity in relations of payments and refund to participants. If the followers may deprive, then they may also take his fund while communicating the organizer. Additional advantages of the committee is that every participant but the last recipient get their pot prior than if they had saved it themselves (M. Khan & Lightfoot, 2011).

Entree to ROSCAs is so humble, the enterprise has a decent functioning situation can straightforwardly join. There are no tough and sophisticated instructions for joining. Anybody who is capable to give payments on time can participate. Individual relation and acquaintance amongst the associates are also an aspect for assortment. The participants can examine the contributor worth and his firm economic state that it may not defaulting.

ROSCA are investigated from diverse perspectives, some scholar propose committee as a security or insurance for enterprises (Gugerty, 2007; Klonner, 2001), other publications also explore that committee is a foundation for saving, without ROSCAs it is difficult to save on your own (Besley

et al., 1993; Yusuf, Ijaiya and Ijaiya, 2009) and some research works illustrates that ROSCAs is also advantageous for families and entrepreneurs to decrease the societal burden in allocation of proceeds in deprived publics (Ambec and Treich, 2003).

Many SMEs use ROSCAs for business purposes; for example, to make a lump sum of money before the full amount is accumulated, to avoid transaction costs or taxes, and so on (Ahn et al., 2017). ROSCAs help to smoothen business financial cycles, to manage cash flows, and to facilitate recapitalization of enterprises by pooling financial resources to one member per time, thereby enhancing the operational sustainability of local enterprises (Ahn et al., 2017; M. Khan & Lightfoot, 2011). SMEs share in Pakistan's formal loan portfolio are only 6.5%. Greater part of their finance is taken from ROSCAs (Ullah et al., 2016a). It is observed that about 90% of entrepreneurs choose committee as source of finance for their business instead of taking loans from other source of finance (Ullah et al., 2016a).

As quoted above ROSCA are investigated from diverse scenarios in different states, nevertheless the foremost motives study nominated committee as study theme, the ROSCAs process which are adapted in Swat are different from other nations. The nominated area district Swat precisely Mingora city is our targeted area for data gathering. This zone was severely exaggerated from terrorist attack in (2008-09) and from flood in (2010), which drop the commercial action and crudely distressed the economic position of the business in this area. Throughout this tenancy majority of enterprises discontinued normal operations and numbers of SMEs are crumpled. The proprietors draw the capital from the ventures and sold his firms or some assets on harm and used that together sum for own overheads and they also pay his business incidentals which in results closer the businesses to dissolved. From this wicked condition, these industries are once more on a virtuous gainful situation. Therefore, our selected targeted population is this district for the study in which study examine the influences of informal means of finance (ROSCAs) in the financial growth of this city.

By adding to the given argument there are scarce studies commenced in Pakistan on ROSCAs that are in Sargodha, Lahore and Dera Ghazi Khan in Punjab Province (Afzal et al., 2014a, 2014b; M. Khan, 2013; M. Khan & Lightfoot, 2011; Ullah et al., 2016a, 2016b). No study was conducted on ROSCAs at Khyber Pakhtunkhwa, and predominantly at district Swat. Therefore, this area is the utmost appropriate area for performing this study.

### **Research Objectives**

The role of ROSCAs is the utmost decisive for industries as well as for individuals. It is an informal association which supports one another in funding their ventures with cheap source of finance. Committee are investigated from different perspective by number of scholars. The study examines ROSCAs by putting the following objectives forward.

1. To examine the extent ROSCAs meet the financial need of the SMEs.
2. To study where SMEs utilize ROSCA funds.
3. To investigate the type of businesses, participate in ROSCA.

### **Research Questions and Hypothesis**

The research questions which are investigated in this study are the following:

- i. What extent ROSCA meet the financial need of the SMEs?
- ii. Where SMEs utilize committee funds?

iii. What type of businesses participates in ROSCAs?

To achieve those objectives and properly investigate the committee, the researcher uses a hypothesis testing approach. This choice was made for purpose that hypothesis will make the questionnaire and response consistent, understandable as well as easy to summarize which will help to answer the research questions properly. The following hypotheses are chosen to be tested in this study:

1.  $H_0$ : The total worth of the business has no relationship with ROSCAs funds to cover the financial need of the business  
 $H_1$ : The total worth of the business has a significant relationship with ROSCAs funds to cover the financial need of the business
2.  $H_0$ : The type of business has no association with ROSCAs funds cover the financial need  
 $H_1$ : The type of business has significant association with ROSCAs funds cover the financial need
3.  $H_0$ : Type of business is independent from investments of ROSCAs funds in the business  
 $H_1$ : Type of business has dependency on investments of ROSCAs funds in the business
4.  $H_0$ : Total worth of the business has no association with investments of ROSCAs funds in the business  
 $H_1$ : Total worth of the business has an association with investments of ROSCAs funds in the business
5.  $H_0$ : The size of pot has no association with investments of ROSCAs funds in the business  
 $H_1$ : The size of pot has an association with investments of ROSCAs funds in the business
6.  $H_0$ : Participation in ROSCAs are independents on type of business  
 $H_1$ : Participation in ROSCAs has no significant association on type of business
7.  $H_0$ : Participation in ROSCAs has no association with kind of business  
 $H_1$ : Participation in ROSCAs has significant association with kind of business
8.  $H_0$ : ROSCAs Participation are independent from numbers of employees of a business  
 $H_1$ : ROSCAs Participation are dependent on numbers of employees of a business

The outcome of the study will be beneficial for businesspersons and entrepreneurs. They may participate in committee and get benefits of low-cost finance. Finance is a big obstacle for SMEs in Pakistan.

The publication of this work for financial institution and banks are also vital, because SMEs share in Pakistan's formal loan portfolio are only 6.5%. Greater part of their finance is taken from ROSCAs (Ullah et al., 2016a). On the other hand, the banking sector is a crucial component of a nation's monetary system. To improve the health of Pakistan's economy it is essential that banks share of SME finance market be increased. This can be facilitated if banks become aware of the characteristics of this informal market and their competitor ROSCAs. This is study is helpful for banking sector and other financial institutions. Because it is observed that about 90% of entrepreneurs choose committee as source of finance for their business instead of taking loans from other source of finance (Ullah et al., 2016a).

This study is also valuable for researcher, that no literature is available about ROSCAs from this area. The process adopted here for committee are different from the rest of the world. National and international scholars can take benefits from this study.

## **Research Methodology**

The existing literature in developing countries about ROSCAs is little and few studies are conducted in Pakistan which are mentioned in the literature. In Khyber Pakhtunkhwa province, no study was conducted yet on this topic. The process and procedure of ROSCAs are different from rest of the world. Descriptive study design is best choice for this work. There are different ways a researcher can go about doing a descriptive research project. The study follows here survey research design. This design was followed on the same topic by (Agegnehu, 2012) and (Mbizi & Gwangwava, 2013b).

The target population of the study is SMEs of Mingora city in district Swat (particularly micro and small businesses). The data about number of SMEs in Mingora city is not available from an authentic source, but SMEDA mentioned in their district Swat profile that there are about 21,735 private businesses in district Swat.

The study does not classify SMEs for samples selection by its type or industry, but all types of businesses precisely focus on micro and small businesses. Non- Probabilistic (snow ball) sampling method are used to select samples for collection of data from the targeted population. The reason behind selecting this sampling method is total number of SMEs in Mingora City is unknown, every businessperson is not willing for the interview and every businessman are not participating in ROSCAs. Sampling units are all SMEs of Mingora City.

In Pakistan the studies which were led on SMEs are grounded on primary data source (A. S. Khan, Khan, Sharif, & Irfan, 2015; Mahmood et al., 2015; Shahbaz, Javed, Dar, & Sattar, 2014). The studies on this area are also mostly built on primary data (Afzal et al., 2014a, 2014b; Gugerty, 2007; M. Khan, 2013). The most central advantage of collecting primary data is that the operational definition of variables, the research design and the data collection method can be relevant with research questions and objectives (Joop J & Boeije, 2005). Time and cost are major drawbacks of primary data collections. Secondary data may be collected for some other purposes and which may not optimal for answering research questions and may not match your research constructs or variables. In addition, secondary data about SMEs are not available generally and specifically in Pakistan.

Primary data is collected through research survey. In survey, you may collect data through questionnaire, interview or observations. Here study follow questionnaire for data collection. Questionnaire was adopted their own and approved by Ph.Ds. doctors of relevant fields. Questionnaire is not available for adapting, to answers these research questions.

The characteristics of the owners of the SMEs are largely not enough educated to read and understand questionnaires. These owners do not have internet facilities, and his e-mail address and mobile phone numbers are also publicly not available. Therefore, we are collecting data through interviewer administered questionnaire and specifically structured interview. The interviewer asks questions in Pashto language and his response or preferred option are ticked in questionnaire. Those respondents who are highly qualified and/or able to read and understand questionnaire, filled their questionnaire himself. But majority are interviewed by the interviewer and his response are recorded.

Questionnaire of the study consist of two parts, first one concerned with personal information and second one concern with ROSCAs information. In personal questions data are collected about the name of the business, nature of business, qualification, age of the respondent, age of the business, marital status, business worth, number of employees, business type and ROSCAs participation. In

second part data is collected about ROSCA. It includes number of years in ROSCAs, size of the pot, installment of ROSCA, ROSCA funds investment, increase in ROSCA participation, cost of ROSCAs and purpose of participation. All questions are close ended or fixed alternative questions. The respondent has right to choose among the alternatives.

Total of 200 questionnaires were distributed and interviewed. Total of 140 questionnaires are properly filled and returned; remaining 60 sample units refuses to answer. Response rate are 70%, which is a good response rate as compare to other studies conducted in this geographical area. A study was conducted on SMEs in Punjab province of Pakistan in which 200 questionnaires were distributed from which 72 questionnaire were returned which was about 36% response rate (Hussain, Farooq, & Akhtar, 2012). Agegnehu (2012) conducted study on this research area in Ethiopia which shows 91% response rate total of 121 questionnaires distributed. Another study was conducted on SMEs in which 100 questionnaires are distributed from which 60 was returned which shows 60% response rate (Christopher, 2010).

To analyze and interpret the collected data and reached the conclusion of the study. Frequency distribution and charts are used for presentation of data by using SPSS software. Cross tabulation, chi-square and fisher exact test are used for checking the associations. The chi square test has their own assumptions. If the data does not justify that assumptions, then it does not give proper results. The alternative tools are fisher's exact test (McHugh, 2013; Mehta & Patel, 1996). Below given are assumptions for the chi square test.

1. Data would be frequencies or counts rather than percentages or other transform data.
2. The groups or categories of the ordinal data should be mutually exclusive.
3. The chi-square test need that each subject give data to one and only one cell.
4. The variable must be independent. If the two variables are related than another test must be used.
5. The expected value should not be less than 5 at least 80% of the cells, and no cell should have expected value of less than one in contingency table. This supposition is most probable to be encountered if the sample size equals at least sum of cells multiplied by 5.

The definitions of concepts or variables which are mentioned and investigated in this study are given below:

**SMEs** SMEDA defined SMEs in SMEs policy (2007) as an enterprise with below 250 employees or total worth of not more than PKR. 25m or volume of sales equal to PKR. 250m.

**Financial Need** the finance which is needed for business normal operations.

**Utilization of ROSCAs funds** where they invest committee funds in the business. Whether they fulfill his normal operation need or they may expand his current business or may starting new business.

**Type of Business** to investigate what type of business participate in ROSCAs the word type means in this study whether Manufacturing, services, Wholesale or Retail businesses. By kind study means whether business are sole proprietorship or partnership businesses, by size the study also mean that these businesses are micro or small businesses as define by SMEDA policy 2007.

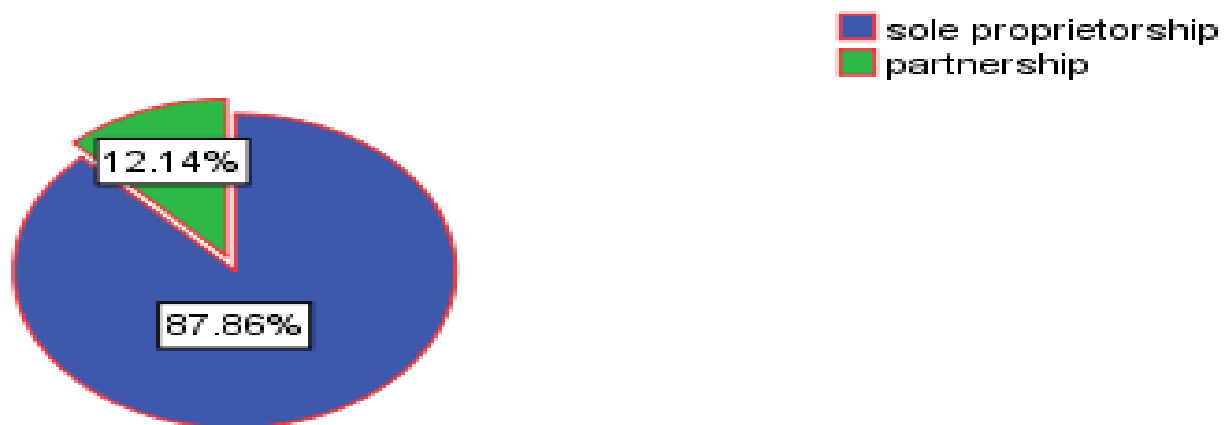
**Cost** in this study it means the amount of expenses incurred on participation of committee, it may be financial or other (security, opportunity, collection and recording or any other non-financial cost).

## Data Presentation and Analysis

Data is collected and keyboarded in SPSS software for the presentation and analysis. Code book is prepared as needed for the SPSS. The important variable in data is presented in tables and on bar graph or pie charts. Table 1 shows the frequency of business kind. The Table illustrates that 123 samples of sole proprietorship and 17 of partnership businesses were interviewed, which is about 88% and 12% respectively. Figure 1 also presents the ratio of sole-proprietorship with partnership business.

**Table 1 Kind of Business**

		Frequency	Percent	Cumulative Percent
Valid	Sole proprietorship	123	87.9	87.9
	Partnership	17	12.1	100.0
	Total	140	100.0	

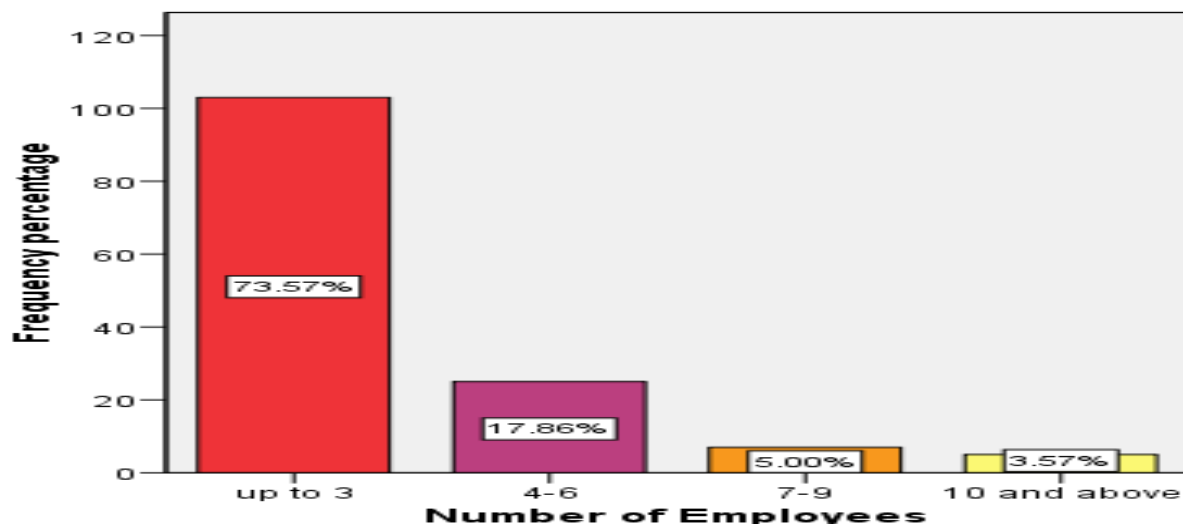


**Figure 1 Kind of Business**

The size of the businesses based on number of employees presented in following Table 2. The number of employees is also a factor in SMEs definition as mentioned in literature. A business up to 9 employees treated as micro and a business have 10 and above employees is treated as small business. In this response the highest frequency is 103 which is about 74% of all respondents. The lowest frequency is 5 of businesses having 10 and above employees. In conclusion, the majority 96% of sample respondents was micro businesses.

**Table 2 Number of Employees**

		Frequency	Percent	Cumulative Percent
Valid	up to 3	103	73.6	73.6
	4-6	25	17.9	91.4
	7-9	7	5.0	96.4
	10 and above	5	3.6	100.0
	Total	140	100.0	

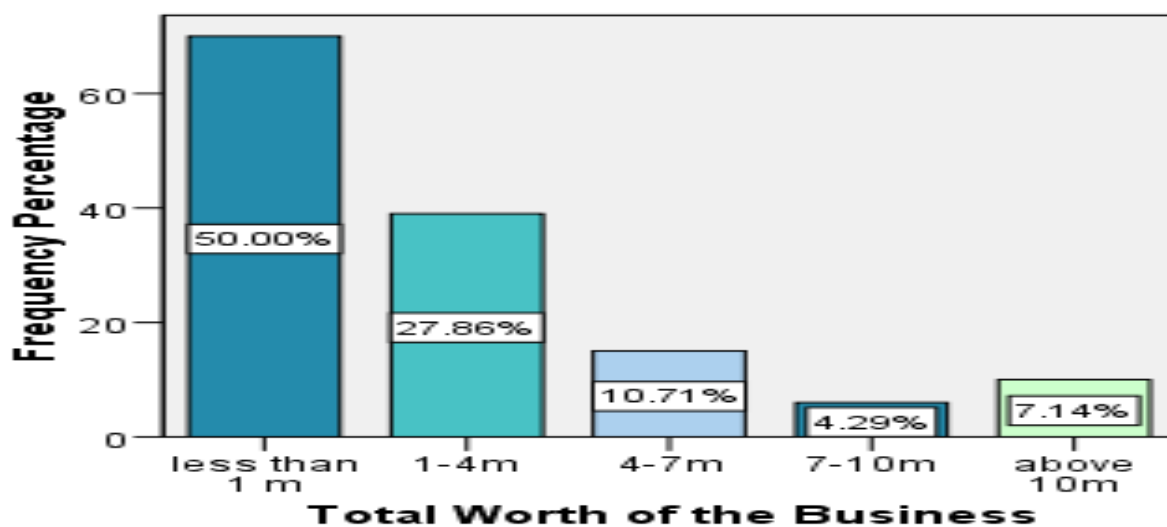


**Figure 2 Numbers of Employees**

Question about worth of the business are also asked for the purpose to know about the size of the business. The total worth of the sample businesses is mentioned in Table 3. The businesses which having assets of up to one million is about 50% of total respondents, it is the highest frequency and second highest frequency is 39 of group 1-4 million rupees that is about 28% of total respondents. It is concluded that 93% enterprises are micro and 7% are small take part in ROSCAs. Figure 3 also presents information about total worth of the business.

**Table 3 Total worth of the business**

		Frequency	Percent	Cumulative Percent
Valid	less than 1 m	70	50.0	50.0
	1-4m	39	27.9	77.9
	4-7m	15	10.7	88.6
	7-10m	6	4.3	92.9
	10 & above 10m	10	7.1	100.0
	Total	140	100.0	



**Figure 3 Total Worth of the Business**

## ROSCAs Information

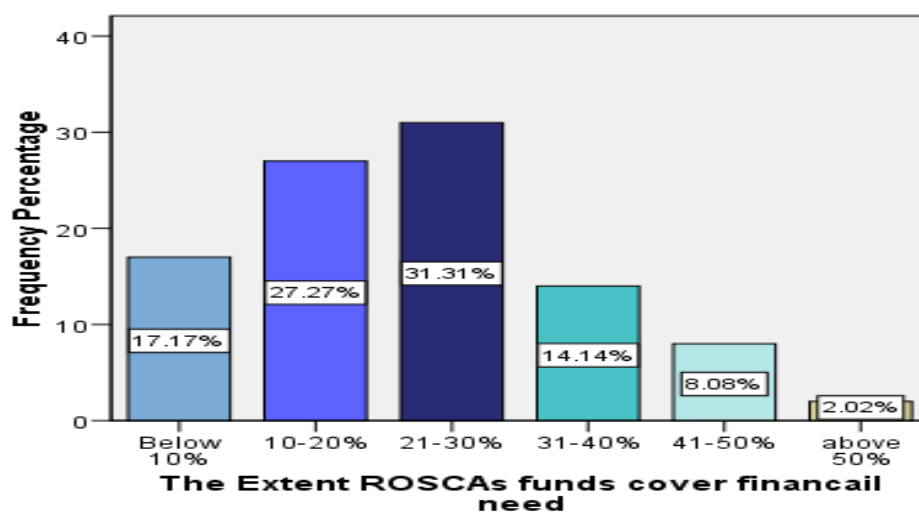
The pots received are invested in business by the entrepreneur. ROSCAs are an informal source of finance for businesses. One of the objectives of the study are to investigate to what extent ROSCAs funds meet the financial need, or what extent these funds are helpful to compile the financial need of the business. ROSCAs are cheaper source of finance and do not need detailed documentation and complicated process.

Entrepreneurs invest committee funds in the business. To know up to what array these funds covers the financial requirements. The following Table 4 gives detail information about financial need covered by ROSCAs funds. The highest frequency is 31 which are about 31% of total respondents of group 21-30%. The second highest frequency is 27 of group 10-20% and the lowest frequency is of above 50% group. To properly and easily understand the comparison of different groups are presented on Figure 4.

The first objective of the study to examine to what extent committee funds covers financial needs of the business. From the given Table, the highest frequencies are of 10-20% and 20-30% groups. It is concluded that ROSCAs funds cover up to 30% of financial need of the SMEs particularly micro and small businesses.

**Table 4 Financial Need Covered**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 10%	17	12.1	17.2	17.2
	10-20%	27	19.3	27.3	44.4
	21-30%	31	22.1	31.3	75.8
	31-40%	14	10.0	14.1	89.9
	41-50%	8	5.7	8.1	98.0
	above 50%	2	1.4	2.0	100.0
	Total	99	70.7	100.0	
Missing	System	41	29.3		
Total		140	100.0		

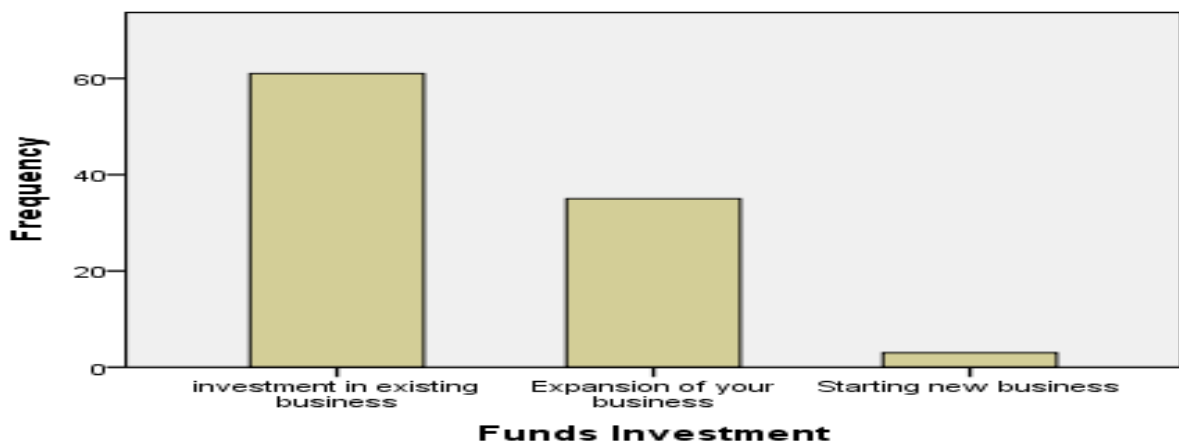


**Figure 4 Financial Need Covered in Percent**

The ROSCAs funds meet about 30% financial need. This question examines where these businesses utilize these funds. This is the second objective of the study. Below Table 5 conveys information about committee funds investment in the business. It shows that about 62% of entrepreneur invest these funds in existing inventory, 35% businesses invest for the expansion of the business and 3% entrepreneur use these funds for starting new ventures. Majority 62% entrepreneurs invest in existing inventory for continuing their normal business operations. The following Figure 5 also demonstrates the contrast of investments for different purposes of ROSCAs funds in the business.

**Table 5 ROSCAs Funds Investment**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	investment in existing business	61	43.6	61.6	61.6
	Expansion of the business	35	25.0	35.4	97.0
	Starting new business	3	2.1	3.0	100.0
	Total	99	70.7	100.0	
Missing	System	41	29.3		
Total		140	100.0		



**Figure 5 Funds Investment**

### **Cross Tabulation and Chi-square Test**

Cross tabulation is a technique use to address the relationship among two or more variables. It is the suitable procedure for addressing research questions involving associations amongst multiple nominal or interval variables. It is considering of a crosstab is a collective frequency Table or matrix. Crosstabs permit the inspection and association of differences among clusters created on nominal or ordinal groupings (Zikmund, 2003).

This study also applies cross tabulation technique to examine the relationship of different variable and then chi-square test will be used to compare observed data with that of expected data and to check the significance level. Contingency table which not fulfill the assumption of  $X^2$  than Fisher Exact test is applied which is alternate test for it.

The relationship between total worth of the business and the extent ROSCAs funds cover financial need of the business are mentioned in Table 6. The financial need of the business depends upon

total worth of the business, generally the greater total worth of the business the greater will be the financial need of that business, and vice versa. The Fisher exact test shows 0.722 insignificant results. The study will accept the null hypothesis that committee funds covering financial need of the business has no relationship with total worth of the business.

**Table 6 the extent ROSCAs funds cover financial need\* Total worth of the business**

Cross tabulation								
			Total worth of the business					Total
			less than 1 m	1-4m	4-7m	7- 10m	above 10m	
the extent ROSCAs funds cover financial need	Below	Count	9	5	2	1	0	17
	10%	% of Total	9.1%	5.1%	2.0%	1.0%	.0%	17.2%
	10-20%	Count	14	7	3	2	1	27
		% of Total	14.1%	7.1%	3.0%	2.0%	1.0%	27.3%
	21-30%	Count	17	12	1	0	1	31
		% of Total	17.2%	12.1%	1.0%	.0%	1.0%	31.3%
	31-40%	Count	5	5	2	0	2	14
		% of Total	5.1%	5.1%	2.0%	.0%	2.0%	14.1%
	41-50%	Count	5	1	1	1	0	8
		% of Total	5.1%	1.0%	1.0%	1.0%	.0%	8.1%
	above	Count	1	1	0	0	0	2
	50%	% of Total	1.0%	1.0%	.0%	.0%	.0%	2.0%
Total		Count	51	31	9	4	4	99
		% of Total	51.5%	31.3%	9.1%	4.0%	4.0%	100.0%

The relationship between the type of business and the extent ROSCA funds covers the financial needs of the business are given in Table 7. As stated above; ROSCAs funds cover about 30% financial need of the businesses. The 2<sup>nd</sup> hypothesis of the study is to investigate the relation of ROSCAs funds with type of business. The financial need covered by ROSCAs funds was vary with type of business. Below Table exhibits the relationship. In manufacturing, service and wholesale businesses it covered 10-20% need and in retail business it covered 20-30% financial need of the business. The relation is insignificant at 0.41. It means that type of business is independent from the extent ROSCAs funds cover the financial need of the business.

**Table 7 the Extent ROSCAs Funds Cover the Financial Need \* Type of Business**

Cross tabs								
			Type of Business					Total
			Manufacturing	Services	Wholesale	Retail	Wholesale & retail	
The Extent ROSCAs Funds Cover the Financial Need	Below	Count	0	3	6	4	4	17
	10%	% of Total	.0%	3.0%	6.1%	4.0%	4.0%	17.2%
	10-20%	Count	3	6	5	11	2	27
		% of Total	3.0%	6.1%	5.1%	11.1%	2.0%	27.3%
	21-30%	Count	2	3	2	18	6	31
		% of Total	2.0%	3.0%	2.0%	18.2%	6.1%	31.3%
	31-40%	Count	2	1	0	11	0	14
		% of Total	2.0%	1.0%	.0%	11.1%	.0%	14.1%

41-50%	Total Count	1	0	3	4	0	8
	% of Total	1.0%	.0%	3.0%	4.0%	.0%	8.1%
above 50%	Total Count	0	1	1	0	0	2
	% of Total	.0%	1.0%	1.0%	.0%	.0%	2.0%
Total	Total Count	8	14	17	48	12	99
	% of Total	8.1%	14.1%	17.2%	48.5%	12.1%	100.0%

### Investments of ROSCAs Funds in the Business

The investment of ROSCAs funds in the business are given in Table 5, that majority 62% ventures invest it in existing inventory. Study explains different type of business, with where they invest these funds in the business. Table 8 shows that manufacturing concerns invest 50% of the funds in existing inventory, 37% business invest it for expansion of the business. In service type business 64% invest in existing inventory, 36% invests for expansion purpose. In wholesale enterprises 59% are invest it in existing inventory, 35% for expansion of the business and retail type business invest 65% committee capital in existing inventory, 33% for expansion and 2% for starting new business. In wholesale and retail type ventures 58% are invested in existing inventory, 42% for expansion purpose. In conclusion, all type of business invests big portion of funds in existing inventory and second priority are expansion of current business. This is 2nd objective of the study is where SMEs utilize their committee funds. This discussion also answers the 3<sup>rd</sup> hypothesis that there is no relationship in it. The relationship is insignificant at 0.832 on fisher's exact test

**Table 8 Type of Business \* Investments of ROSCAs Funds in the Business**

Cross tab			Investments of ROSCAs Funds in the Business			Total
Type of Business			investment in existing inventory	Expansion of the business	Starting new business	
Manufacturing	Count		4	3	1	8
	% within Type of Business		50.0%	37.5%	12.5%	100.0%
Services	Count		9	5	0	14
	% within Type of Business		64.3%	35.7%	.0%	100.0%
Wholesale	Count		10	6	1	17
	% within Type of Business		58.8%	35.3%	5.9%	100.0%
Retail	Count		31	16	1	48
	% within Type of Business		64.6%	33.3%	2.1%	100.0%
Wholesale & retail	Count		7	5	0	12
	% within Type of Business		58.3%	41.7%	.0%	100.0%
Total	Count		61	35	3	99
	% within Type of Business		61.6%	35.4%	3.0%	100.0%

Second objective of the research is to examine the investment of committee funds. Above discussion investigate this objective. Here Table 9 demonstrate the association between total worth of the business and investment of ROSCAs funds. The following Table presents the relationship between the variables. The level of significant on Fisher's exact test are 0.168. Relationship are

insignificant and P value are higher than minimum acceptable level 0.05. It is concluded that committee funds investment is independent from the worth of the business. The business financial position is strong or weak, but it has no association with funds investment. Table also shows that majority about 62% of enterprises invest it in existing inventory.

**Table 9 Total Worth of the Business \* Investments of ROSCAs Funds in the Business**

Crosstab						
			Investments of ROSCAs Funds in the Business			Total
			investment in existing business	Expansion of your business	Starting new business	
Total Worth of The Business	less than 1 m	Count	26	23	2	51
		% within Total Worth of The Business	51.0%	45.1%	3.9%	100.0%
	1-4m	Count	21	10	0	31
		% within Total Worth of The Business	67.7%	32.3%	0.0%	100.0%
	4-7m	Count	6	2	1	9
		% within Total Worth of The Business	66.7%	22.2%	11.1%	100.0%
	7-10m	Count	4	0	0	4
		% within Total Worth of The Business	100.0%	0.0%	0.0%	100.0%
	above 10m	Count	4	0	0	4
		% within Total Worth of The Business	100.0%	0.0%	0.0%	100.0%
Total		Count	61	35	3	99
		% within Total Worth of The Business	61.6%	35.4%	3.0%	100.0%

Table 10 exhibits the relationship of ROSCAs funds investment with size of the Pot. Some committee are large, medium or small (Bisrat et al., 2012). The study examines the size of committee with these committee funds investment in the business. The association are tested on Fisher's exact and results are insignificant at 0.624. It is concluded that size of the pot has no relationship with ROSCAs funds investment. Weather the size is small or large but majority around 62% of enterprises invest it in existing business. This discourse supports the second objective of the study that majority are invest it in existing inventory. It rejects the 5<sup>th</sup> hypothesis that size of pot has no association with these funds' investments.

**Table 10 Size of Pot\* Investments of ROSCAs Funds in the Business**

			<b>Crosstab</b>			
			Investments of ROSCAs Funds in the Business			Total
			investment in existing business	Expansion of the business	Starting new business	
Size of Pot	Less than 100,000	Count	23	16	1	40
		% within Size of Pot	57.5%	40.0%	2.5%	100.0%
	100,001-300,000	Count	17	8	0	25
		% within Size of Pot	68.0%	32.0%	0.0%	100.0%
	300,001-500,000	Count	11	7	1	19
		% within Size of Pot	57.9%	36.8%	5.3%	100.0%
	500,001-700,000	Count	6	4	1	11
		% within Size of Pot	54.5%	36.4%	9.1%	100.0%
	above 700,000	Count	4	0	0	4
		% within Size of Pot	100.0%	0.0%	0.0%	100.0%
	Total	Count	61	35	3	99
		% within Size of Pot	61.6%	35.4%	3.0%	100.0%

### Participation in ROSCAs

One of the research questions is what type of business participated in ROSCAs. Table 08 answers that intensity of involvement of the business that was 70% and Table 11 presents the strength of distinct type enterprises participation in committee. Table exhibits that manufacturing concerns involvement was 67%, services enterprises participation was 58%, wholesale business sharing was 74% and retail type enterprises involvement was 76%. To generalize the result on average total 70% businesses participated in ROSCAs. Retail and wholesale businesses have more participation ratio to ROSCAs as compared to manufacturing and service type business. The relationship between type of business and committee participation are tested on chi-square test. Results are insignificant at level of 0.551. The 6<sup>th</sup> hypothesis of the business was rejected that type of business has no association with ROSCAs participation.

**Table 11 Type of Business\*Participation in ROSCAs**

			<b>Crosstab</b>		
			Participation in ROSCAs		Total
			Yes	No	
Type of Business	Manufacturing	Count	8	4	12
		% within Type of Business	66.7%	33.3%	100.0%
	Services	Count	14	10	24
		% within Type of Business	58.3%	41.7%	100.0%
	Wholesale	Count	17	6	23

	% within Type of Business	73.9%	26.1%	100.0%
Retail	Count	48	15	63
	% within Type of Business	76.2%	23.8%	100.0%
Wholesale & retail	Count	12	6	18
	% within Type of Business	66.7%	33.3%	100.0%
Total	Count	99	41	140
	% within Type of Business	70.7%	29.3%	100.0%

The relationship between kind of business and participation of ROSCAs are presented in Table 12. The aim of investigation is what kind of business has association with committee participation. This is the third objective of the study. The kind of the business means whether it is sole proprietorship or partnership. The frequency of Sole proprietorship involvement in committee is more than that of partnership 59%. It means that sole proprietors took part more than partnership. Relationship is insignificant at 0.250 based on Fisher exact test. It rejects the 7<sup>th</sup> hypothesis that participation in ROSCAs has independent from kind of business.

**Table 12 Kind of Business\*Participation in ROSCAs**

Crosstab			Participation in ROSCAs		Total
Kind of Business			Yes	No	
Sole- proprietorship	Count		89	34	123
	% within Kind of Business		72.4%	27.6%	100.0%
	Count		10	7	17
	% within Kind of Business		58.8%	41.2%	100.0%
Partnership	Count		10	7	17
	% within Kind of Business		58.8%	41.2%	100.0%
Total	Count		99	41	140
	% within Kind of Business		70.7%	29.3%	100.0%

Table 13 presents the cross tabulation of micro and small businesses based on total numbers of employees with participation in ROSCAs. The relationship is exhibited to examine the level of participation of micro and small businesses. Table shows that micro businesses participating more than small business. One of the objectives of the business is what type of business involve in committee. Based on available data it is concluded that the participation of micro businesses in committee was more than small businesses. The results are tested on Fisher's exact and results are significant at 0.018. It means that micro and small enterprises have relationship with committee participation. The study will reject the null hypothesis.

**Table 13 Numbers of employees\*Participation in ROSCAs**

Crosstab			Participation in ROSCAs		Total
Numbers of employees			Yes	No	
up to 3	Count		75	28	103
	% within Numbers of employees		72.8%	27.2%	100.0%
	Count		20	5	25
	% within Numbers of employees		80.0%	20.0%	100.0%
4-6	Count		20	5	25
	% within Numbers of employees		80.0%	20.0%	100.0%

7-9	Count	3	4	7
	% within Numbers of employees	42.9%	57.1%	100.0%
10 and above	Count	1	4	5
	% within Numbers of employees	20.0%	80.0%	100.0%
Total	Count	99	41	140
	% within Numbers of employees	70.7%	29.3%	100.0%

## Discussions

### The Extent Committee Funds Cover Financial Need

SMEs select source of finance for nourishing their financial need, whether formal or informal source. Informal source of finance comprises money lending and associations. Households, servants and businesses all participating in ROSCAs for the purpose to full fill some of their financial need. Servant and households have diverse sources of finance for needs and requirements, but ROSCAs is also one of them. Entrepreneurs participating in ROSCA to meet up to some extent the financial need of the business. Some entrepreneurs are participating for personal use. The study examines it as source of finance and to what extent these funds cover its financial need. As mentioned in the above Table 4 and its explanation, ROSCAs funds covers 20-30% financial need of all type of the businesses. Based on type of the business committee cover 10-20% financial need of manufacturing, whole sellers and services businesses, and 21-30% of retail businesses.

### Where SMEs Invest ROSCAs Funds

Entrepreneurs participated in committee to fetch funds for the business. These are cheap capital source for the business. Second objective of the study is to find where they invest the funds. These funds are invested whether in existing business, for expansion of the business, for starting new business or somewhere else in the business. Table 5 and its explanation exhibits that majority of the funds are invested in existing businesses and where possible these funds are also invested for expansion and for starting new business. Table 8 presents that by types of businesses wherever is the accommodation for the investment. Each type of business invests majority of the funds in existing business and existing inventory.

ROSCAs has divided in small, medium and large committee (Agegnehu, 2012). The study examines the size of ROSCA with these funds' investment in the enterprise in Table 10. The results show that size of pot has no association with committee funds' investments in the business. The dependence of committee funds investment on financial positions of the venture are investigate in Table 9. The discussion demonstrate that investment funds has no association with ROSCA funds.

### Business Participation in ROSCAs

ROSCAs is informal association in which individual and business can participate. Third objective of the study is to explore what type of business participates in committee. Table 11 illustrates that about 67% of manufacturing firms take part in committee, 58% of services provider business participated, 74% of wholesale businesses, 76% retail businesses and 67% of wholesale and retail business participated in ROSCAs. Majority are participated in committee. The kind of business

participate in committee as exhibited in Table 12, 72% sole-proprietorship businesses and 59% of partnership business participating in ROSCAs. Table 13 shows that based on numbers of employees 43-80% of Micro businesses and about 20% of small businesses participated in committee.

## **Conclusion and Recommendation**

Rotated savings and Credit Associations examined as source of finance for SMEs in district Swat particularly Mingora City. Interviewer administered questionnaire method was used for collection of data and response rate is 70%. Data were presented and analyzed through descriptive statistics and Chi-square test was applied for testing the relationship among variables and concepts.

The finding of the study shows that about 70% of businesses is participating in ROSCAs. Most committee installments payments are on daily basis and daily if not possible than two- or three-days' installments are paid collectively. Some entrepreneurs also pay installments weekly and/or pot day or date basis. The distributions of the pot are randomly basis. In random distributions process series of methods are adopted for pot findings; it includes the whole draws are placed in start of the ROSCA and each member has allotted a number, the lottery is put for two or three pots and only one draw is put on the specified draw date. In some associations, the pot is also given to the neediest person without the draw.

ROSCAs funds cover about 30% financial needs of the business. Majority 62% of the business invest ROSCAs funds in existing inventory. Some businesses also invest these funds for expansion of the business and for starting new business. The strength of business participation in ROSCAs based on type are about 67% of manufacturing firms, 58% of services provider business, 74% of wholesale businesses and 76% retail businesses. Majority are participated in committee. The kind of business participate in committee are 72% sole-proprietorship businesses and 59% of partnership business. Based on total worth of the business, 60 to 80% of micro businesses and about 40% of small businesses took part in ROSCAs. Based on numbers of employees, around 80% of Micro businesses and about 20% of small businesses participated in committee.

The main limitation of the study is the collection of data. District Swat is a tax-free zone and individual and businesses does not pay any tax. In 2016 government decided to impose tax on this area and peoples are reacted against it. When the interviewer asked about interview then they refuse because they afraid that government may not get our financial data and impose tax on us. Entrepreneurs and owners refuse to give personal and business information.

Another limitation of the study is the targeted population is only Mingora city of district Swat. Very few samples 200 are selected because of limited time of the study. District Swat has about 2.161 million populations as in 2014.

The window for future research is to investigate committee in Islamic perspective. The process of ROSCAs available in literature in context of Islamic sharia and what are the rules about ROSCAs in Islam. The relationship of ROSCAs with trade credit can also be investigated. The assessment of benefits of committee to the organizers and members.

There are numerous contributions of the study. The first one of is that ROSCA is cheap and easy source of finance for entrepreneurs. Every businessperson can participate in committee and could finance their business without complicated process and high cost. From this study individuals and businessman can know about ROSCAs and its varied benefits. This work is also helpful for new investors starting small business.

The banking sector is a crucial component of a nation's monetary system. To improve the health of Pakistan's economy it is essential that the share of banks in SMEs finance market must be increased. This can be facilitated if banks become aware of the characteristics of this market as well as the extent of saturation by their competition, ROSCAs. These aspects have not earlier been examined in detail and scholarly studies are rare.

Individuals and employees can also be participated in committee and can get aids of a good means of savings, insurance and finance. This study is helpful for Government policy makers while preparing policy regarding finance and committee play a vital role in the economic development of the country in providing cheap source of finance. This study may also helpful for financial institutions while designing their products and services offerings.

## References

1. Adams, D. W. (1991). Taking a Fresh Look at Informal Finance. *Financial systems and development in Africa*, 23(09), 29-42.
2. Afzal, U., d'Adda, G., Fafchamps, M., Quinn, S., & Said, F. (2014a). Two Sides of the Same Rupee? Comparing Demand for Microcredit and Microsaving in a Framed Field Experiment in Rural Pakistan (pp. 01-46): Centre for the Study of African Economies, University of Oxford.
3. Afzal, U., d'Adda, G., Fafchamps, M., Quinn, S., & Said, F. (2014b). Using the 'Committee' as a Model for Individual Finance in Pakistan (pp. 02-26): Centre for the Study of African Economies, University of Oxford.
4. Agegnehu, B. (2012). *Why do members join indigenous informal financial institutions- RoSCAs?* (Master Thesis), Swedish university of agricultural sciences.
5. Ahn, D., Kang, W., Kim, K.-K., & Shin, H. (2017). Analysis and design of microfinance services: A case of ROSCA. *The Engineering Economist*, 62(3), 197-230.
6. Ambec, S., & Treich, N. (2003). Roscas as financial agreements to cope with social pressure. *Centre for Studies in Economics and Finance (CSEF), CSEF Working Papers*, 103.
7. Aniket, K. (2005). Self Help Groups: Use of Modified ROSCAs in Microfinance. *ESE Discussion Papers*, 137, 03-59.
8. Besley, T., Coate, S., & Loury, G. (1993). The Economics of Rotating Savings and Credit Associations. *The American Economic Review*, 792-810.
9. Bisrat, A., Kostas, K., & Feng, L. (2012). Are there Financial Benefits to Join RoSCAs? Empirical Evidence from Equib in Ethiopia. *Procedia Economics and Finance*, 1(0), 229-238. doi: [http://dx.doi.org/10.1016/S2212-5671\(12\)00027-5](http://dx.doi.org/10.1016/S2212-5671(12)00027-5)
10. Bouman, F. J. (1994). ROSCA and ASCRA: Beyond the Financial Landscape. *Financial Landscapes Reconstructed. The Fine Art of Mapping Development*. Boulder: Westview, 01-10.
11. Buneeri, S. (2010). Swat: From tourism to terrorism. Retrieved 29 March 2017, 2017, from [http://www.valleyswat.net/articles/swat\\_tourism\\_terrorism.html](http://www.valleyswat.net/articles/swat_tourism_terrorism.html)
12. Chelliah, S., Sulaiman, M., & Yusoff, Y. M. (2010). Internationalization and performance: Small and medium enterprises (SMEs) in Malaysia. *International Journal of Business and Management*, 5(6), 27-37.
13. Christopher, I. F. (2010). *Impact of Microfinance on Small and Medium-Sized Enterprises in Nigeria*. Paper presented at the Proceedings of the 7th International Conference on Innovation & Management.

14. 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.
15. Harindranath, G., Dyerson, R., & Barnes, D. (2008). ICT Adoption and Use in UK SMEs: a Failure of Initiatives. *The Electronic Journal of Information Systems Evaluation*, 11(2), 91-96.
16. Hashim, A. (2014). Pakistan's Swat Struggles Back to its Feet. Retrieved 29 March 2017, 2017, from <http://www.aljazeera.com/indepth/features/2014/11/pakistan-swat-struggles-back-feet-20141126125347154921.html>
17. Hussain, I., Farooq, Z., & Akhtar, W. (2012). SMEs Development and Failure Avoidance in Developing Countries Through Public Private Partnership. *African Journal of Business Management*, 6(4), 1581-1589.
18. Joop J, H., & Boeije, H. R. (2005). Data Collection, Primary vs Secondary. *Encyclopedia of Social Measurment*, 1, 593-599.
19. Khalique, M., Isa, A. H. B. M., Shaari, N., & Abdul, J. (2011). Challenges for Pakistani SMEs in a Knowledge-Based Economy. *Indus Journal of Management & Social Sciences*, 5(2), 74-80.
20. Khan, A. S., Khan, M., Sharif, S., & Irfan, M. (2015). Open Innovation in SME's of Southern Punjab Pakistan. *Journal of Business and Management Research*, 08, 229-237.
21. Khan, M. (2013). Are ROSCAs Providing an Alternative Funding Source for Poor? *Journal of Economics and Sustainable Development*, 4(19), 127-130.
22. Khan, M., & Lightfoot, G. (2011). ROSCAs: Alternative Funding for Sustainable Enterprise. 01-22.
23. Khan, M. W. J., & Khalique, M. (2014). An Overview of Small and Medium Enterprises in Malaysia and Pakistan: Past, Present and Future Scenario. *Business and Management Horizons*, 2(2), 38-49.
24. Klonner, S. (2001). *How Roscas Perform as Insurance*. (330, 69120). Heidelberg Germany.
25. Lowenstein, M. (2024). Rotating savings and credit associations (ROSCAs) in prewar China: Communal finance and the roots of economic development. *The Economic History Review*, 77(3), 796-822.
26. Mahmood, N., Jianfeng, C., Jamil, F., Karmat, J., Khan, M., & Cai, Y. (2015). Business Incubators: Boon or Boondoggle for SMEs and Economic Development of Pakistan. *International Journal of U- & E-Service, Science & Technology*, 8(4), 147-158.
27. Maitra, P., Miller, R., & Sedai, A. (2023). Household welfare effects of ROSCAs. *World Development*, 169, 106287.
28. Mauri, A. (1987). The Role of Financial Intermediation in the Mobilisation and Allocation of Household Savings in Ethiopia: Interlinks Between Organized and Informal Circuits. *Giordano Dell'Amore Working Paper*(2), 01-29.
29. Mbizi, R., & Gwangwava, E. (2013a). Rotating savings and credit associations: An alternative funding for sustainable micro enterprise-case of Chinhoyi, Zimbabwe. *Journal of Sustainable Development in Africa*, 15, 181-193.
30. Mbizi, R., & Gwangwava, E. (2013b). Rotating savings and credit associations: an alternative funding for sustainable micro enterprise—case of Chinhoyi, Zimbabwe. *Journal of Sustainable Development in Africa*, 15(7), 181-194.
31. McHugh, M. L. (2013). The chi-square test of independence. *Biochemia medica*, 23(2), 143-149.
32. Mehta, C. R., & Patel, N. R. (1996). Exact Tests™. *SPSS exact tests*, 7, 12.
33. México, F. (2003). Empresa Media, fuerza económica de México. *México: FUNDES*.

34. Sadr, S. K. (2017). The optimum size of rotating qard ḥasan savings and credit associations. *ISRA International Journal of Islamic Finance*, 9(1), 15-26.
35. Schreiner, M. (2001). Informal finance and the design of microfinance. *Development in Practice*, 637-640.
36. Shah, T. H., Javed, S., & Syed, S. (2014). Internationalization of SMES in Pakistan: A Brief Theoretical Overview of Controlling Factors. *Journal of Managerial Sciences*, 7(2), 214-230.
37. Shahbaz, M. A., Javed, A., Dar, A., & Sattar, T. (2014). Performance Measurement of Small and Medium Enterprises (SMEs) in Pakistan. *Archives of Business Research*, 2(3), 42-49.
38. Stephanou, C., & Rodriguez, C. (2008). Bank Financing to Small and Medium-Sized Enterprises (SMEs) in Colombia. *World Bank Policy Research Working Paper Series*, 04-42.
39. Syed, A. A. S. G., Ahmadani, M. M., Shaikh, N., & Shaikh, F. M. (2012). Impact Analysis of SMEs Sector in Economic Development of Pakistan: A Case of Sindh. *Journal of Asian Business Strategy*, 2(2), 44-53.
40. Ullah, M. S., Naimi, N. B., & Yusoff, R. B. M. (2016a). The Impact of Entrepreneurs' Levels of Education, Age and Years in Business on Their Decision to Obtain Finance for Small and Medium Enterprises (SMES) from Rotating Savings and Credit Associations (ROSCAS) in Lahore. *The Social Sciences*, 11(13), 3252-3256.
41. Ullah, M. S., Naimi, N. B., & Yusoff, R. B. M. (2016b). What size of opportunity will open to banks that penetrate the small and medium enterprise (SME) finance market at lahore? The next great challenge for enterprising banks. *Social Sciences (Pakistan)*, 11(13), 3245-3251.
42. Uma, P. (2013). Role of SMEs in Economic Development of India'. *Asia Pacific Journal of Marketing & Management Review*, ISSN, 120-126.
43. Wignaraja, G., & Jinjara, Y. (2015). Why Do SMEs Not Borrow More from Banks? Evidence from the People's Republic of China and Southeast Asia. *ABDI working paper series*, 03-28.
44. Yusuf, N., Ijaiya, G. T., & Ijaiya, M. A. (2009). Informal Financial Institutions and Poverty Reduction in the Informal Sector of Offa Town, Kwara State: A Case Study of Rotating Savings and Credit Associations (ROSCAs). *J Soc Sci*, 20(1), 71-81.
45. Zikmund, W. G. (2003). *Business Research Methods*: Thomson/South-Western.