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

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Abstract: SMEs share only 6.5% of Pakistan's formal loan portfolio. A greater part of their finances are obtained from ROSCAs. This study, was intended to determine the impact of entrepreneurs' education, age and years in business on their decision to use ROSCAs. Primary data obtained from responses of 433 SMEs to a questionnaire is used. The SMEs were randomly selected from market committees' lists. The study found that entrepreneurs' level of education had a positive correlation with the volume of investment in ROSCAs. It was also found that their ages did not have an impact. Entrepreneurs of all ages participated in ROSCAs equally. The study also established that entrepreneurs' years in business had a positive correlation with ROSCAs. Entrepreneurs accumulate larger retained earnings and confidence in ROSCAs over time.

Key words: SME, ROSCA, entrepreneur, finance, age

INTRODUCTION

The 3.2 million SMEs operating in Pakistan are the backbone of its economy (Aysan *et al.*, 2016; Ghosh and Srinivasan, 2014). A strong SME sector and a strong economy are complementary. Enterprises need finances for seeding, running and for growth. Entrepreneurs have the option to choose from a number of sources for financing their SMEs. The well-known sources are the banks, family, relatives, friends, money-lendersand ROSCAs (Sherazi *et al.*, 2013; Beck *et al.*, 2011).

It has been seen that over 90% of the entrepreneurs opt to obtain finances from ROSCAs instead of from the others sources. There are three (among other) factors that can impact the decision-making process in a fundamental way. These are the education/training the entrepreneurs have received, their ages and the number of years they have been in business. Entrepreneurs' ages and the number of years they have been in business are inter-related. Both reflect upon the level of maturity and experiences accumulated over the years. They are collectively equated to business wisdom or acuity.

The major objective behind conducting this study is toexplore the extent to which entrepreneurs'education, their ages and their years in business impact their decision to select ROSCAs as a source of finance for their SMEs in Lahore. Three research objectives were defined to help direct this study. These are:

- To analyse the relationship between different levels of entrepreneurs' education on their decision to select ROSCAs as a source of finance
- To analyse the effect of different ages of the entrepreneurs on their decision to select ROSCAs as a source of finance
- To analyse the effects of entrepreneurs' different levels of years-in-business (age of business) on their decision toselect ROSCAs as a source of finance

This research can be useful for policy makers to understand why SMEs operating in Pakistan opt to choose ROSCAs as a source of financing over others. This research can also be beneficial for the bankers by helping them develop instruments that focus on different categories of entrepreneurs.

Literature review: Despite its importance this aspect of decision making has not attracted scholarly attention in Pakistan. Vigorous search of data bases did not reveal any study that explicitly examines the relationship of these three factors in influencing these election of ROSCAs for financing of SMEs in Lahore.

Enterprises need finances for start-up (seed financing), maintenance and for growth. According to the Pecking Order Theory in Finance (Donaldson and Fox, 2000; Myers and Majluf, 1984), businesses prefer to use retained earnings in preference to raising debt. Since, many SMEs are small and have recourse to smaller

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reserves, external debt financing becomes necessary in case of a large need. Sources of (informal) external finance include friends, relatives and ROSCAs (Sherazi *et al.*, 2013). Sources of formal finance are banks, both Interest-bearing (conventional) as well as Islamic (Beck *et al.*, 2011). Each of these sources has characteristics that impact upon them being selected as a source of finance.

Not all SMEs are fortunate enough to have friends and relatives who are able and willing to advance substantial sums of money. Moneylenders charge (extortionate) rates of interest. For religious and financial reasons, this option, too, is objectionable to most SMEs. In reality, only two sources of financing remain available. These are ROSCAs and commercial banks. Some characteristics of ROSCAs that favour them being considered as sources of finance are given below.

Interest is not involved in Random ROSCAs (Gamal *et al.*, 2014). To this extent they are Sharia-compliant. This is confirmed by fatwas (edicts) issued by scholars such as Othaimeen and Baz. Unlike in the case of formal financing, ROSCAs do not require material Collateral and rely only on social or human capital of the member. Participants' default rate is low. It is 1.6% in Chennai Bharat (Klonner and Rai, 2005). Anthropologists attribute the lack of defections from ROSCAs to social pressures and norms. Informal-random ROSCA members usually know each other fairly well. Exclusion resulting from deliberate and ill-intentioned default brings with it serious consequences. These could be "loss of face" and reputation, stigmatization as well as not being invited to any future ROSCA (Guha and Gupta, 2005).

ROSCAs have limitations too. They are serious enough to influence the decision whether or not to adopt ROSCAs. The time that lapses between submitting a correctly prepared application to a bank for a loan and its sanction has been reported by the respondents to be between 1 and 3 months. The timing of obtaining the loan is predictable with reasonable accuracy. The funds can be made a part of a business plan. On the other hand, it is impossible to predict correctly when a member will "win" the Pot. In case of a 20-member ROSCA, it can range anywhere between one and 20 months. Funds due from a ROSCA cannot be made part of a financial plan. ROSCAs are extra-legal in Pakistan. Dispute resolution is resource consuming. Out-of-court settlements are resorted to.

Fraud or mismanagement on the part of the ROSCA organizer and default on that of one or more members can bring down a ROSCA (Besley and Alec, 1996; Ardener,

1964). A part of the enterprise's working capital has to be withdrawn for payment into the ROSCA. It remains out of circulation till the Pot is obtained. In case of the last winners, the amount and the period spent out of circulation can be substantial. Had this capital remained in circulation it could have led to additional profit.

In order to minimize risk of default by members, some ROSCAs do not admit non-property owners. This places entrepreneurs operating out of rented premises at a disadvantage. These characteristics, the positive and the negative, are serious enough to affect the decision whether or not to adopt ROSCAs. The decision will be influenced by the entrepreneur's level of maturity (age), his knowledge acquired through education and the lessons he has learned about conducting business (years in business).

These questions have not been researched especially in regards to their relation with ROSCA financing of SMEs in Pakistan. Very few studies appear to have been conducted on this subject. On the base of the literature, following hypothesis are formulated:

- There exist significant differences in the opinions about financing through ROSCAs score for different education level of participants
- There exist significant differences in the opinions about financing through ROSCAs score for different age groups of participants
- There exist significant differences in the opinions about financing through ROSCAs score for the business duration of participants (age of business)

MATERIALS AND METHODS

The study examines ROSCAs assources accessed by SMEs for financing their start-up, running and growth phases as well as thepercentage of their needs obtained for each of them. It was carried out in Lahore city, the second largest in Pakistan. Itis the capital of Punjab province. Lahore contributes approximately 13.2% to the national economy.

In this study the sample frame was the SME owners. The study was carried out among the over -12,000 SMEs that operate in Azam Cloth Market and deal in the wholesale of textiles, the electrical, electronic and computer wholesalers at Faisal, Siddique, Hall Road and Hafeez Center markets, the machinery wholesalers at Bull Road and retailers across Lahore.

The targeted population for this study was the SME owners. Random sampling technique was used in this

study and respondents were selected randomly from the sampling frame. Before collection of data, this researcher conducted focus group discussions with five research scholars and five SME owners. As a result of the discussions, the questionnaire was modified to suit Lahore's SME environment. The questionnaires were prepared in English language but were administered by the researcher in the vernacular language. The respondents were assured of the confidentiality and anonymity of their responses. A little >67 questionnaires were distributed among the SME's owners.When collected, they were found to carelessly filled andwere rejected. The researcher then personally administered the questionnaires to 433 SME owners. These have been used in preparing the report. SPSS 21 was used for the analysis of the data.

RESULTS AND DISCUSSION

Hypothesis 1 indicates that there is a significant difference in the opinions about financing through ROSCAs score for different education level of participants.

A one-way between-groups analysis of variance was conducted to explore significant difference in the opinions about financing through ROSCAs score for different education level of participants One-way between-groups ANOVA is used when the research involves one independent (grouping) variable with three or more levels (groups) and one dependent continuous variable Pallant.

The education level of participants is divided into five groups (Group1: Middle or less; Group 2: High; Group 3: Intermediate; Group 4: Graduate; Group 5: Masters and above). Results in Table 1 indicates there exist statistically significant difference at the p<0.05 level in opinions about financing through ROSCAs score for the five education groups of the respondents: $F(4, 417) = 2.614$, $p = 0.035$.

Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 (M = 1.77, SD = 0.32) was significantly different from Group 4 (M = 1.90, SD = 0.29) and Group 1 is not significantly different from Group 2, 3 and 5 as shown in Table 2.

Hypothesis 2 indicates that there is a significant difference in the opinions about financing through ROSCAs score for different age groups of participants. A

Table 1: Describe level of deucation through through ROSCAs score

Level of education	Descriptive			ANOVA (Between groups)	
	N	Mean	SD	F-value	Sig.
Middle or less	66	1.7789	0.32041	2.614	0.035
High	90	1.8419	0.32609	-	-
Intermediate	145	1.8803	0.32500	-	-
Graduate	111	1.9054	0.29503	-	-
Master	10	1.6864	0.33638	-	-
Total	422	1.8583	0.31956	-	-

Dependent variable: Opinions about financing through ROSCAs

Table 2: Multiple comparison

Tukey HSD

Level of education (I)	Level of education (J)	Mean difference (I-J)	SE	Sig.	95 % confidence interval	
					Lower bound	Upper bound
Middle or less	High	-0.06299	0.05139	0.736	-0.2038	0.0778
	Intermediate	-0.10133	0.04709	0.200	-0.2303	0.0277
	Graduate	-0.12648	0.04929	0.079	-0.2615	0.0086
	Master	0.09256	0.10762	0.911	-0.2023	0.3874
High	Middle or less	0.06299	0.05139	0.736	-0.0778	0.2038
	Intermediate	-0.03833	0.04256	0.897	-0.1549	0.0783
	Graduate	-0.06349	0.04498	0.621	-0.1867	0.0598
	Master	0.15556	0.10571	0.582	-0.1341	0.4452
Intermediate	Middle or less	0.10133	0.04709	0.200	-0.0277	0.2303
	High	0.03833	0.04256	0.897	-0.0783	0.1549
	Graduate	-0.02515	0.04000	0.970	-0.1347	0.0844
	Master	0.19389	0.10369	0.335	-0.0902	0.4780
Graduate	Middle or less	0.12648	0.04929	0.079	-0.0086	0.2615
	High	0.06349	0.04498	0.621	-0.0598	0.1867
	Intermediate	0.02515	0.04000	0.970	-0.0844	0.1347
	Master	0.21904	0.10471	0.225	-0.0678	0.5059
Master	Middle or less	-0.09256	0.10762	0.911	-0.3874	0.2023
	High	-0.15556	0.10571	0.582	-0.4452	0.1341
	Intermediate	-0.19389	0.10369	0.335	-0.4780	0.0902
	Graduate	-0.21904	0.10471	0.225	-0.5059	0.0678

Dependent variable: Opinions about financing through ROSCAs; The mean difference is significant at the 0.10 level

one-way between-groups analysis of variance was conducted to explore significant difference in the opinions about financing through ROSCAs score for different age groups participants.

Participants were divided into five groups according to their age (Group 1: 29 years or less; Group 2: 30-34 years; Group 3: 35-40 years; Group 4: 41-50 years; Group 5: 51 and above). Results in Table 3 indicates there exist no statistically significant difference at the $p<0.05$ level in opinions about financing through ROSCAs score for the five groups according to age of respondents: $F (4, 329) = 1.269$, $p = 0.282$.

Hypothesis 3 indicates that there is a significant difference in the opinions about financing through ROSCAs score for the business duration of participants

(age of business). A one-way between-groups analysis of variance was conducted to explore significant difference in the opinions about financing through ROSCAs score for the business duration of participants (age of business).

The duration of Participant's business is divided into four groups (Group 1:<5 years; Group 2: 5-10 years; Group 3: 11-15 years; Group 4: >15 years). Results in Table 4 indicates there exist statistically significant difference at the $p<0.05$ level in opinions about financing through ROSCAs score for the five groups according to age of respondents: $F (3, 429) = 1.269$, $p = 0.282$.

Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 3($M = 1.92$, $SD = 0.298$) was significantly different from Group 4 ($M = 1.80$, $SD = 0.33$) and Group 3 is not significantly different from Group 1 and group 2 as shown in Table 5.

Contribution to literature and policy: The banking sector is a crucial component of a nation's monetary system. In order to improve the health of Pakistan's economy it is essential that banks' penetration and share of SME finance market be increased. This can be facilitated if banks become aware of the characteristics of this market as well as the extent of penetration by their competition, ROSCAs. These aspects have not earlier been examined in detail and scholarly studies are rare. This study contributes to literature and to policy formation by exploring these aspects. The findings can be used to adopt measures that can increase banking sector profitability by enhancing its share of the SME finance market.

Table 3: Descriptive of age of respondents through ANOVA test

Level of	Descriptive			ANOVA (Between groups)	
education (years)	N	Mean	SD	F-value	Sig.
<29	72	1.8958	0.32469	1.269	0.282
30-34	69	1.8531	0.38444	-	-
35-40	65	1.8182	0.33169	-	-
41-50	78	1.7803	0.29589	-	-
51 and above	50	1.8591	0.32562	-	-
Total	334	1.8394	0.33368	-	-

Dependent variable: Opinions about financing through ROSCAs

Table 4: Description of level of education through ANOVA

Level of	Descriptive			ANOVA (Between groups)	
education (years)	N	Mean	SD	F-value	Sig.
Less than 5	81	1.9052	0.31641	3.168	0.024
5-10	98	1.8711	0.31429	-	-
11-15	96	1.9205	0.29861	-	-
>15	158	1.8072	0.33015	-	-
Total	433	1.8651	0.31962	-	-

Dependent variable: Opinions about financing through ROSCAs

Table 5: Multiple comparisons

Tukey HSD

(I) AGE_B business age (years)	(J) AGE_B business age (years)	Mean difference (I-J)	SE	Sig.	95% confidence interval	
					Lower bound	Upper bound
<5	5-10	0.03411	0.04764	0.891	-0.0888	0.1570
	11-15	-0.01529	0.04786	0.989	-0.1387	0.1082
	>15	0.09791	0.04335	0.110	-0.0139	0.2097
5-10	<5	-0.03411	0.04764	0.891	-0.1570	0.0888
	11-15	-0.04940	0.04556	0.699	-0.1669	0.0681
	>15	0.06381	0.04079	0.400	-0.0414	0.1690
11-15	<5	0.01529	0.04786	0.989	-0.1082	0.1387
	5-10	0.04940	0.04556	0.699	-0.0681	0.1669
	>15	0.11320*	0.04105	0.031	0.0073	0.2191
>15	<5	-0.09791	0.04335	0.110	-0.2097	0.0139
	5-10	-0.06381	0.04079	0.400	-0.1690	0.0414
	11-15	-0.11320*	0.04105	0.031	-0.2191	-0.0073

*The mean difference is significant at the 0.05 level; Dependent variable: Opinions about financing through ROSCAs

Several other significant gaps in our knowledge of ROSCA operation remain unfilled. Khan (2012) reported the presence of household ROSCAs in a small city. Little is known about their operating parameters in that city or in a large industrial-commercial hub like Lahore. The numbers of SMEs that participate in ROSCAs, the sizes of the Pots, etc., have not been studied or reported.

CONCLUSION

This study empirically investigated significant difference in the opinions about financing through ROSCAs score for different education level, age groups and duration of business of participants. The results showed that there is a significant difference in the opinions about financing through ROSCAs score for different education level of participants. The results show that the significant differences between the two education levels such as middle or less education level and graduate level. However, there is no significant difference in the opinions about financing through ROSCAs score for different age groups of participants. For all the age groups of the respondents, there are no differences about the opinions of financing through ROSCAs score.

The results also describe that there is a significant difference in the opinions about financing through ROSCAs score for the business duration of participants (age of business). The results indicate that the mean score for 11-15 business level was significantly different from >15 years of business duration.

LIMITATIONS

This study cannot be the representative of the whole population of Pakistan because it was carried out in the city of Lahore. Thirty nine different business sectors were included in the study.

RECOMMENDATIONS

It is recommended that future studies be carried out in the city of Faisalabad and concentrate on the textile manufacturing sector. It is also recommended that other studies be carried out in the much larger city of Karachi. These should focus on separate business sectors.

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