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Small-Medium Enterprises and credit accessibility in Kathmandu Valley

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Abstract

The study presents with the factors that affect the credit accessibility of Small Medium Enterprises (SMEs) in Kathmandu valley. The survey is based on the structure questionnaire completed by 101 selected SMEs from Kathmandu valley based on convenient sampling. The major issues dealt in the survey are concerned with owner firm and network characteristics of SMEs and their credit accessibility. It is employed descriptive and causal comparative research design. The study reveals that among the owner's characteristics the education level of the owner has positive impact on credit accessibility, whereas the gender of the owner has negative impact on credit accessibility. Among the firm's characteristics, the size of the firm has a negative impact on credit accessibility and age of the firm has an insignificant impact on credit accessibility.

Keywords: : Credit accessibility, network, education level, gender, size of the firm, SMEs

Introduction

Small and Medium Scale Enterprises (SMEs) are considered the backbone of many economies as well as for the social and economic development. SMEs contribute a significant role in creating opportunities for employment and alleviates poverty. In high-income countries, SMEs contribute around 40% of the total GDP (Bista, 2016; Dennis, Dunkelberg, & Van Hulle, 1988) and half of the total employment force (Brown, Hamilton, Hamilton, & Medoff, 1990). In the context of Nepal, SMEs contribute around 22% of the GDP and generate around 17 lakh employment (Kharel & Dahal, 2020). Due to SMEs new entrepreneurs provide the economy with a continuous supply of ideas, skills, and innovations. The development of SMEs and changes in their structure over time play a crucial role toward encouraging entrepreneurship, increasing productivity level and economic growth.

For any SMEs to perform their role in an economy, they require adequate funds that may be a formal credit or an informal credit (Abdesamed & Abd Wahab, 2014; Akoten, Sawada, & Otsuka, 2006; Klapper, Laeven, & Rajan, 2006). Chowdhury and Alam (2017) report that due to inadequate access to finance, SMEs have been unable to realize their full potentials which means that access to finance for investment and growth has become very restricted and uncertain because of which the growth and success of SMEs is being affected. Buyinza, Tibaingana, and Mutenyo (2018) revealed that it is very hard for SMEs to have

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access to formal credit, they are often operating by owner's own capital or informal sources of fund such as relatives, money lenders and they are fully dependent on those sources. Credit accessibility is very limited to small, medium and low paying enterprises (Silwal, 2019). They even sale their plant to fulfill their financing requirement.

A report of Nepal Rastra Bank (2016) reveals that 85% of the SMEs utilize formal credit i.e. only a half of the SMEs in operation. Majority of the small enterprises take credit of less than NPR 5 million (USD 43,848) whereas the majority of the medium enterprises take credit of more than NPR 50 million (USD 43,848). SMEs are paying an average of 12.51% interest rate and 1% service charge while taking loans they require around 38 days on an average to get the loans from the banks and financial institutions. The main problems that SMEs faces while getting credits from the banks and financial institution are the high-interest rate, the need for collateral and embarrassments within the processes. Most of the SMEs are not aware about different programs that exist for SMEs credits. Thus, utilization of concessional advances remains irrelevant. SMEs have less access to credit as there is chance of loan being used properly and lack of institutional capacity development. Because of these reasons SMEs feel easy and convenient in taking credit from cooperatives but there is also a problem of high interest rate for SMEs.
N. Nguyen, Gan, and Hu (2015) shows that most of the SMEs are smaller scale enterprises with exceptionally constrained access to resources such as progressed technology and formal credit, etc. SMEs are regarded as missing middle despite contribution in the social and economic development because when they require credits the commercial banks usually do not have interest in providing them credit and if they borrow from microfinance institution it might be very large.

Buyinza et al. (2018) illustrates in their study that in case of SMEs, firms face problems when they are start-ups and its access to finance fully depends upon its productivity and development. Correspondingly, SMEs which are established for less than five years have less chance to succeed in their access to credit rather than those SMEs established for more than five years (Fatoki & Asah, 2011).

Yildirim, Akci, and Eksi (2013) reports that SMEs experience more difficulty in accessing to credit rather than large firms and because of which there is creation of obstacle for innovation and growth. Yeboa, Asirifi, and Adigbo (2014) state in their study that number of banks still do not have separate organizational arrangements for managing SMEs banking relations this may result to application of due diligence system applicable to large firms and may have negative impact on SMEs.

Balogun, Ansary, and Ekolu (2017) suggest that SMEs having partial credit might apply for credit in other financial institution or ask for financial help from friends or family in order to cover the deficit because of which the progress of firm can hinder economically. Balogun, Nazeem, and Agumba (2016) explore that while accessing for formal credit, the proprietor of the SME must be ready for investment i.e. owner's must be mindful about the needs and concern about particular sorts of investor as the investor looks out for particular things when they provide credit for funding..4

SMEs have been very important for the social and economic development, but nowadays the SMEs are not performing well and going into losses and one of the major reasons was due to inability to access to credits for the establishment of new industries or to carry out expansion plans on the existing business. It is very difficult for small firms like SMEs to have access to formal credit, they are often established and operated by owner's own capital or informal sources of fund such as relatives or informal lenders and they are fully dependent on that source. Ochido (2016) shows how credit accessibility affects growth of SMEs. The findings moreover infer that companies operated by people with no access to credit were likely to cut down or shut down their business. The results reveal that 10% had received credit only once, 7.1% had received credit twice and another 8% had received credit thrice. Only 9.7% indicated to have received credit more than three times. This results that the SMEs lacking of receiving adequate credit. These reasons encouraged us to set out on the course to make an empirical study of credit accessibility of SMEs in Nepal. Thus, the purpose of the study is to identify the factors that impact access to credit of SMEs. Specifically, it examines the impact of firm's characteristics, network and owner's characteristics on credit accessibility of SMEs in Nepal.

The paper is organized into five sections. Section II includes overview of previous studies while section III deals the methodology of the study. Section IV includes the analysis and presentation of this study and summary, conclusion and managerial implication are presented in section V.

Review of Related studies

Different studies were carried out related to access of credit of small and medium scale enterprises.
N. Nguyen et al. (2015) examined an empirical analysis of credit accessibility of small and medium sized enterprises in Vietnam and result shows that owner characteristics, educational level and gender have a positive relation in determining the access to credit, followed by SMEs relationship with banks and customers. They stated that the most expensive source of financing is from private money lender, followed by commercial bank loan and microfinance. The results further reveled that firms which have small size have less access to credit. The study shows that there is a positive effect of network and connections to credit access.

Similarly, Balogun et al. (2016) in their study examined the effect of firm traits in credit accessibility by the South African SMEs in the construction industry. The study identified access to credit as dependent variable while firm and personnel characteristics as independent variables. The results reveal that company tax number and collateral, education level, experience, size of the firm, business plan, and the project value, connections with banks and the location of the business has a positive relation in order to access to bank credit by construction SMEs. The study recommends that the owner of the company must have business or personal assets for collateral in order to get credit from the bank and the SMEs should also maintain attractive firm attributes in order to stimulate lenders and to extend the credit.

Also, study of Buyinza et al. (2018) explores the factors affecting access to formal credit by micro and small enterprises in Uganda. The study shows that the firm size, firm sales, education level, use of mobile money and information technology and gender has a positive impact with the credit accessibility. The study also predicts that the experienced firms apply less for the credit.
The age of the owner, number of years of operation of the business and the educational level of the owner have a positive relationship with the access to credit as well as the growth of SMEs. This study mainly suggested that higher education level helps to get the credit as well as growth of the company when SME owner is educated, s/he will be more informed and may have knowledge of the loan processes. (Hussein, 2015)

Moreover, Balogun et al. (2017) study shows that the age of the owner, tax number and location of the business has a positive relationship for the full credit accessibility whereas the gender of the owner, type of business ownership and collateral have a negative relationship with access to credit. The study also showed that SMEs were not able to access full credit due to lack of collateral, lack of cash flow statement and owners' equity.

Yildirim et al. (2013) study examines various effect of firm characteristics in accessing credit for small and medium scale enterprises. The findings of the study posit that asset size, export rate, sales volume and legal firm have a positive relation with satisfaction of financial products and service offered by banks. The study shows that the age of the firm does not affect in providing credit and has an insignificant relation with credit. The study also suggests that the larger firms with high and stable sales revenue have better credit accessibility offered by their local banks.
Similarly, a study of Andrieu, Staglianò, and Van Der Zwan (2018) show difference in accessing bank loans and trade credit between different firms, industries and countries. The findings of this study display that firm age and firm size are positively related to SMEs' access to bank loans, but only firm size is positively related to the provision of trade credit. The result states that there must be a complementary

effect between bank loans and trade credit. When a SME becomes larger and older it becomes easier to access for bank loan but it may not be the same case for the trade credit.

Moreover, Sun, Cen, and Jiang (2013) conducted an empirical study of bank loans accessibility influencing measures for SMEs. The study states that the availability of bank loan is dependent variable and firm size, age of the firm and asset tangibility are the independent variables. The findings state that there is a positive relationship between the size of the firm and the access to the bank loan whereas insignificant relation for age of firm and access to credit. There is existence of credit constraint due to absence of the social credit system and the serious block of commercial credit system. For asset tangibility, the greater the proportions of fixed assets, the higher the chances to obtain bank loans.

Chowdhury and Alam (2017) concludes that the various factors affecting access to finance of small and medium enterprises (SMEs) of Bangladesh. The study shows the problems of SMEs in credit accessibility and suggest the ways needed for strengthening the SMEs access to finance for their expansion and growth. The finding results that there is a positive relation between the access to credit and firms' traits, financial traits, and owners' traits. The firms' traits include the firms age and size, the financial traits include the start-up capital, current status of capital, interest rate, business plan etc. and the owner's traits include skills and education which directly affect the access to credit. Similarly, Silwal (2019) conducted a survey of financial executives of small medium enterprises in Nepal by using descriptive and exploratory research design with the 122 structured questionnaires. The survey shows that small medium enterprises have less access to credit accessibility. The result further shows that these firms planned to reduce employment and investment in order to fulfill the financial requirement. It also expresses the views that many small firms drop their investment due to the inability to credit access.

Survey data

The population of the study was huge as it contained the business owners of Kathmandu Valley from different age and gender which was difficult to obtain. Therefore, keeping in mind every constraint as well as viable resources the researchers focused on non-probability sampling to determine the sample and obtain the data. From the non-probability sampling, we used convenience sampling so that the samples are easily available and convenient to the researchers. Thus, for the purpose of this study, the multipart questionnaire was distributed in July-August 2019 to the 150 SMEs entrepreneurs and business owner of the business established in Kathmandu, out of which 101 usable questionnaires were received. The sample size is appropriate for the analysis as suggested by (Roscoe, 1975). He proposed as a rule of thumb for determining sample size where sample size is larger than 30 and less than 500 are appropriate for social science research. The questionnaire mainly contained questions on background information of respondents, firm characteristics, and credit accessibility and relevant information based on previous study (N. T. Nguyen, 2014) and current scenario of Nepalese context. The paper employed descriptive and causal comparative research design to mitigate the purpose of the study. In order to explore the impact of credit accessibility, the binary logistic regression has been employed. When modeling dichotomous responses, logistics regression is recommended over linear regression and this allows to estimate probabilities of the response occurring (May & Hosmer, 2003). The binary logistics model can be expressed as :

$$Y=\beta 0+\beta 1x1+\beta 2x2+\ldots\ldots\ldots\ldots..+\beta kxk+\varepsilon i$$

Or, Credit accessibility=constant+β1 age of owner+β2 gender of owner+β3 education level+β4 age of firm+β5 firm size+β6 network+εi

Based on the aforementioned discussions, the following hypothesis have been developed:

H1: There is positive significant relationship between credit accessibility and gender of owner.
H2: There is positive significant relationship between credit accessibility and age of owner.
H3: There is positive significant relationship between credit accessibility and education level of owner.
H4: There is positive significant relationship between credit accessibility and age of firm.
H5: There is positive significant relationship between credit accessibility and size of firm.
H6: There is positive significant relationship between credit accessibility and network

Credit Accessibility: For the survival and overall productivity of a firm credit is a very important component. Accessibility to credit infers to the ability of enterprises or individuals to obtain external funding to enable them ease cash stream issues. Credit can be either short term or long-term depending on the lender's assessment of the borrower's ability to pay. Smaller firms usually have limited access to non–bank lenders due to lack of credit worthiness. Nowadays, access to credit has been a necessity for SMEs in order to grow and expand as they lack of adequate capital.

Owner's Characteristics

Small firms are mostly managed by owners and their performance largely depends upon the management ability of the owners. Some of the owner's characteristics such as the age, gender and education level of the owner are considered as strong determinants of credit accessibility.

When the owners are young they are considered less risk averse so they are more willing to borrow from the external source of financing which shows that there is a negative relation between age of owner and access to credit of SMEs (Coleman, 2004). Whereas some other scholars says that, they may feel that as they have less experience their application for bank loan may be rejected which shows that there is a positive relation between age of owner and access to credit(Akoten et al., 2006).In terms of Gender, female are considered to be more constrained and face more problems while accessing credit rather than male which shows that there is a negative impact of gender of owner on access to credit of SMEs (Carter, 2011) whereas Irwin and Scott (2010) stated in his study that there is a positive relation for gender of owner and access to credit as females obtain credit more easily than male. Rand (2007) stated in his study that when the owners are highly educated, they lead to the high-performance level of the firm because of which firms rely more on retained earnings. Similarly, N. Nguyen et al. (2015)showed that education has a positive impact on the accesibility to credit.

Firm Characteristics

The characteristics of the SMEs play a vital role in determining the access of credit to the SMEs. The characteristics of SMEs consist of the firm size and the age of the firm.The size of the firm is basically proxified by the number of employees or sales or the total assets of the firm. Burkart and Ellingsen (2004) states that the size of a firm has an important influence on the debt ratios as firms with more real assets tends to have greater access to long-term debt. Similarly, Cassar (2004) argues that it is more expensive for smaller firms to resolve information asymmetries with debt providers and imply that there is a positive relation between size of firm and access to credit.

In terms of age of the firm, Klapper et al. (2006) states that younger firms rely more on informal source of financing rather than financing from bank. According to Chandler (2009), the longer a firm exists and the bigger it is, the more it signals that the firm can access to credit and implies that there is a positive association between these characters.

Network

Network plays a very important role in lending relationships as it helps in raising required capital, identifying market opportunities, obtaining personnel, identifying suppliers, identifying and developing technology. Moro and Fink (2013)stated that when the loan mangers has trust relationships with the firm it would have less constraints and it will increase the ability to access credit. Similarly, Owualah (2002) stated that long relationship between a bank and SMEs owners does convey an advantage while accessing credit. This shows that there is a positive impact of network of SMEs while accessing credit.

Distribution of SMEs Credit Accessibility in past three years

Table 3.1 and figure 3.1 shows the main characteristics of SMEs credit accessibility in the past three years. Firstly, for the number of credits, 67.9% of SMEs approached one to three credit suppliers, 14.81% approached four to six credit suppliers and 17.28% approached more than 7 credit suppliers. Among the applied credit suppliers, 45.67% implied that the loan application successful rate was above 80%, 25.92% of the SMEs indicated successful rate of 60%-80%, 25.92% of the SMEs indicated successful rate of 40%-60% and 2.46% of the SMEs indicated successful rate was less than 40%. Thus, implies that chance of success in loan application is quite high in this sample. In terms of the percentage of the loans that cover SMEs capital needs,7.4% of

Table 3. 1: Distribution of SMEs Credit Accessibility in past three years

	Category	Frequency	Percentage
No of Credit Suppliers	1 to 3	55	67.90
	4 to 6	12	14.81
	More than 7	14	17.28
% of successful application	Above 80%	37	45.67
	60% to below 80%	21	25.92
	40% to below 60%	21	25.92
	20% to below 40%	2	2.46
	Less than 20%	0	0.00
% of capital needs the loan cover	Above 80%	6	7.40
	60% to below 80%	26	32.09
	40% to below 60%	35	43.20
	20% to below 40%	13	16.05
	Less than 20%	1	1.23
Purpose	Expanding Business Activity	54	66.67
	Urgent Temporary Capital Shortage	11	13.58
	Paying Debt	5	6.17
	Financing new investment project	11	13.58

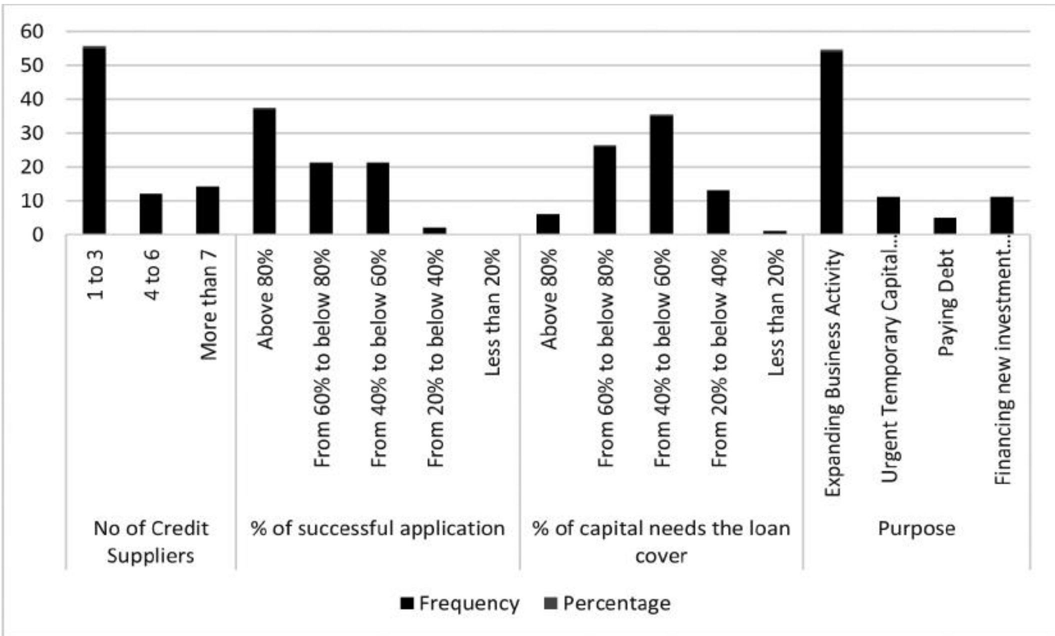

Figure 3. 1 *Distribution of SMEs credit accessibility in the past three years.*

SMEs implied that loans cover the capital needs more than 80%, 32.09% of SMEs imply that it covers up to 60%-80%, 43.20% of SMEs suggest that it covers up to 40-20 per cent, 16.05% of SMEs imply that it covers up to 20% - 40% and 1.23% imply that it covers less than 20%. In terms of the purpose of the loan, 66.67% of SMEs took loan for expanding business activity, 13.58% of SMEs took loan when there was capital shortage, 6.17% of SMEs took loan for paying debt and 13.58% of SMEs took loan for financing in new investment project.

SMEs perception on Credit Accessibility

Table 3.2 shows the perception of SMEs on credit accessibility.60.49%of the borrowers had experienced difficulty in obtaining loan in past three years. The reasons of difficulty were high interest rate i.e. 66.67%, not having relation with credit official i.e. 7.84%, performance was not good i.e. 15.8% and inadequate collateral i.e. 9.8%. 87.65% of the SMEs preferred formal lender and 12.34% of the SMEs preferred informal lender.

Table 3. 2: SMEs perception on Credit Accessibility

SMEs Perception on Credit Accessibility	Category	Frequency	Percentage
Have Experienced difficulties in obtaining loan	Yes	49	60.49
	No	32	39.50
Reason of difficulty	Interest was too high	34	66.67
	Not having relation with credit official	4	7.84
	Business Performance was not good	8	15.68
	Not having adequate collateral	5	9.80
Lender Preference	Formal Lender	71	87.65
	Informal Lender	10	12.34
Self-rating of SMEs credit access last 3 years	Difficult	18	22.22
	Neutral	53	65.43
	Easy	7	8.64
	Uncertain	3	3.70

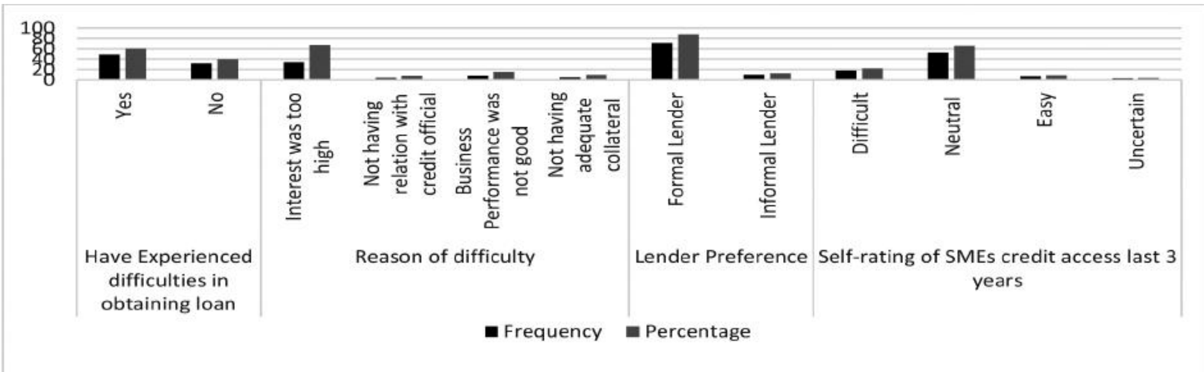

Figure 3. 2 *SMEs perception on credit accessibility*

For the opinion of SMEs for their credit access in past three years, 22.22% of SMEs had difficulty in obtaining loan, 65.43% of SMEs reported that it is neither difficult nor hard to obtain loan, 8.64% of SMEs reported it was easy to obtain loan and 3.7% of SMEs felt that the access to credit was uncertain. The result is also displayed in figure 3.2.

Profile of the SMEs in survey

Table 3.3 shows the profile of SMEs which is classified by borrowers and non-borrowers' group. The table includes the respondents' individual characteristics i.e. gender, age, education level, SMEs Characteristics i.e. Age of firm and Firm size and Network-statistics was also used in order to show the mean difference between the variables used in this study.

In the case of gender and age of the SME owners, SMEs are dominantly managed by male owners i.e. by 51.48% and middle-aged owners i.e. by 31.68%. The t-statistics for the relationships between credit access and these variables are statistically significant at 1% (2-tailed) i.e. gender is significant at t=9.707 and age of owner is significant at t=24.481 which implies that male and female have different opinions and their opinions do not match statistically. Similarly, the categorized age group also have different opinions and presented the opinions contrarily.

Table 3. 3: Profile of the SMEs in sample

For the education level of the SMEs owners, they are mostly educated since there are no

	Borrower		Non-Borrower		All Respondents		Statistical Test
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	
Gender:							
Male	39	48.14	13	65	52	51.48	t=9.707
Female	42	51.85	7	35	49	48.51	
Age Group:							
< 30 years	13	16.04	5	25	18	17.82	t=24.481
30-39 years	24	29.62	8	40	32	31.68	
40-49 years	22	27.16	3	15	25	24.75	
>50 years old	22	27.16	4	20	26	25.74	
Education Level:							
Never Gone to School	0	0	0	0	0	0	t=40.691
School Level	11	13.58	0	0	11	10.89	
College Level	45	55.55	7	35	52	51.48	
University Level	16	19.75	10	50	26	25.74	
Post-graduate (Masters/PHD)	9	11.11	3	15	12	11.88	
SMEs age:							
5 years or less	13	16.04	5	25	18	17.82	t=23.338
6-10 years	24	29.62	8	40	32	31.68	
10-15 years	22	27.16	3	15	25	24.75	
15 years and above	22	27.16	4	20	26	25.74	
SMEs size:							
50 lakh-1 crore	34	41.97	15	75	49	48.1	t=14.472
1 crore-1.5 crore	21	25.92	4	20	25	24.75	
1.5 crore-2 crore	0	0	0	0	0	0	
2 crore-2.5 crore	10	12.34	0	0	10	9.9	
More than 2.5 crore	16	19.75	1	5	17	16.83	
Network:							
Commercial Bank	36	44.44	9	45	45	44.55	t=17.403
Microfinance Institution	9	11.11	2	10	11	10.89	
Financial Institution	9	11.11	0	0	9	8.91	
No network	27	33.33	9	45	36	35.64	

respondents who have never gone to school. Particularly, 10.89% of the owners were qualified till school level, 51.48% of the owners were qualified till college level, 25.74% of the owners were qualified till university level and 11.88% of the owners were qualified till post-graduate (Masters/PHD). This result suggests that SME owners are dominantly owned by owners who have qualified till college level. The education level of the owner is also significant at 1% i.e. t=40.691 which implies the owners that have school level education, college, university, post-graduate has different thinking and do not match statistically.

For the SMEs age, the majority of the sample SME has been operated till 6-10 years i.e. 31.68%. Whereas the SMEs that have been operated less than 5 years are 17.82%, till 10-15 years are 24.75% and more than 15 years are 25.74%.The SMEs age are also significant at 1% i.e. t=23.338 which indicates that the SMEs having different years of operation have different opinions.

The SMEs size measures the yearly average sales of the SMEs owners. The majority of the SMEs sample have an average sale of 50 lakh to 1 crore i.e. 48.1%. Whereas the SMEs that have an average sale of 1 crore to 1.5 crore is 24.75%, 2 crores to 2.5 crore is 9.9% and more than 2.5 crore is 16.83%. The SMEs size is also significant at 1% i.e. t=14.472 which indicates that the SMEs having different size have different opinions.

The network measures the relationship of SMEs with the financial institution. The majority of the SMEs sample have network with the Commercial Bank i.e. 44.55%. The SMEs that have network with microfinance institution is 10.89%, financial institution is 8.91% and those SMEs that do not have network are 35.64%. The network of SMEs is also significant at 1% i.e. 17.403 which indicates that the SMEs having different networks have different opinions.

Data Analysis and Discussion

This section deals with the impact of Owner's Characteristics (Age, Gender, and Education), SMEs Characteristics (Firm Age and Firm Size) and Network on access to credit of SMEs in Kathmandu Valley.

Table 4. 1: Descriptive statistics of the variables

	N	Minimum	Maximum	Mean	Std. Deviation
Credit Accessibility	101	0.00	1.00	0.20	0.40
Age of owner	101	30.00	62.00	41.93	9.295
Gender of Owner	101	0.00	1.00	0.49	0.502
Level of Education	101	2.00	5.00	3.39	0.836
Age of Firm	101	3.00	53.00	16.5	11.32
Network	101	1.00	4.00	2.36	1.361
Size of Firm	101	15.42	19.34	16.27	0.81722

The table 4.1 displays the summary statistics of firm characteristics that determine the credit accessibility of SMEs which were regarded as the key factors for testing hypothesis. The study has thus used the dichotomous and category questions to collect the data. Descriptive statistics shows that the mean of credit accessibility is 0.2 with the standard deviation of 0.4 and ranges from 0 to 1. This implies that , the value of credit accessibility can vary on both sides by 0.4. The mean of age of owner is 41.93 with the standard deviation is 9.295 and it ranges from 30 to 62, it implies that the value of age of owner can vary on both sides by 9.295. Similarly, gender of owner has the mean of 0.49 with standard deviation of 0.502 ranging from 0 to 1, which means value can be deviated by 0.502. The level of education of the owner has a mean of 3.39 with standard deviation of 0.836 ranging from 2 to 5, which means that value can be fluctuated by 0.836. The age of firm has a mean of 16.5 with standard deviation of 11.32 ranging from 3 to 53, which means value can be fluctuated by 11.32. The network has a mean of 2.36 with standard deviation of 1.361 ranging from 1 to 4 which means value can be strayed by 1.361. Finally, size of firm has a mean value of 16.2727 with standard deviation of 0.81722 and minimum range of 15.42 to maximum range of 19.34 which means value can be fluctuated by 0.81722.

Correlation analysis

Table 4.2 explains the correlation between factors determining the credit accessibility of SMEs in Kathmandu Valley. The major focus is given to age of owner, gender of owner, level of education, age of firm, network and firm size. From table 4.2, we can observe that level of education of the owner and access to credit has high influences with each other with 0.247 correlation score. Weak negative correlation can be seen between owner's age and credit accessibility with correlation value of -0.123.

Table 4. 2: Correlation analysis of factors that impact credit accessibility of SMEs

	Credit Accessibility	Age of Owner	Gender of Owner	Level of Education	Age of firm in years	Network	Firm Size
Credit Accessibility	1						
Age of Owner	-0.123	1					
Gender of owner	-0.134	-0.07	1				
Level of Education	.247*	-0.036	-0.022	1			
Age of firm	-.242*	.402**	-0.037	-0.092	1		
Network	0.034	-0.06	-0.065	0.089	-0.093	1	
Firm size	-.245*	0.124	-0.027	-0.091	.309**	-0.083	1

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Similarly, there is a weak negative correlation between gender of the owner and access to credit with the value of -0.134. Age of the firm and credit accessibility have a moderately negative relationship with the value of -0.242. There is a weak positive correlation between network and credit accessibility with the value of 0.034. Moderately negative relation can be traced between firm size and credit accessibility with the correlation value of -0.245. Since correlation with all the variables are less than 0.8, thus we can say that there is no issue of Multi-collinearity so we proceed it for the further analysis in the following paragraph.

Regression Analysis

In table 4.3, regression coefficients were used to show the impact of these variables: age of owner, gender of owner, education level, age of firm, network, firm size on the credit accessibility of SMEs. The study findings revealed that there is a positive relationship between the educational level, network and the credit accessibility of the SMEs whereas age of owner, gender of owner, age of firm and firm size have a negative relationship with the credit accessibility of SMEs.

Table 4. 3: Regression coefficients of independent variable and credit accessibility

	B	S.E.	Wald	df	Sig.	Exp(B)
Age of Owner	-0.012	0.035	0.128	1	0.721	0.988
Gender of owner	-0.995	0.587	2.868	1	0.09	0.37
Education level	0.765	0.352	4.729	1	0.03	2.15
Age of Firm	-0.054	0.039	1.961	1	0.161	0.947
Network	0.002	0.208	0.000	1	0.992	1.002
Firm size	-0.825	0.492	2.812	1	0.094	0.438
Constant	10.852	7.977	1.851	1	0.174	51626.8

Similarly, there is a weak negative correlation between gender of the owner and access to credit with the value of -0.134. Age of the firm and credit accessibility have a moderately negative relationship with the value of -0.242. There is a weak positive correlation between network and credit accessibility with the value of 0.034. Moderately negative relation can be traced between firm size and credit accessibility with the correlation value of -0.245. Since correlation with all the variables are less than 0.8, thus we can say that there is no issue of Multi-collinearity so we proceed it for the further analysis in the following paragraph.

Regression Analysis

In table 4.3, regression coefficients were used to show the impact of these variables: age of owner, gender of owner, education level, age of firm, network, firm size on the credit accessibility of SMEs. The study

findings revealed that there is a positive relationship between the educational level, network and the credit accessibility of the SMEs whereas age of owner, gender of owner, age of firm and firm size have a negative relationship with the credit accessibility of SMEs.

From the above table, three variables have significant relationships with credit accessibility i.e. Education level at 0.03 ($p<0.05$), Gender of owner at 0.09 ($p<0.1$) and firm size at 0.094($p<0.1$). The result can also be seen from the value of Wald test. This implies that a unit change in education level of owner and network leads to 0.765 and 0.002 changes in credit accessibility of SMEs whereas unit change in age of owner, gender of owner, age of firm and size of firm leads -0.012, -0.995, -0.054 and -0.825 changes in credit accessibility of SMEs.

For the hypothesis, from table 4.3, the gender of the owner has a significance value of 0.09 which means that the gender of the owner and the credit accessibility has a significant relationship at 10% (0.09<0.10) but the gender of the owner has a negative significant impact on credit accessibility. Therefore, H1 is rejected. The result is consistent with Balogun et al. (2017) as they state that there is a negative impact of gender of owner and credit accessibility of SMEs and refer that this may have occurred because sample is taken from a particular area of a country and if sample was from the whole country results may have been different.

Similarly, the age of the owner has a significance value of 0.721 which means that the age of the owner and credit accessibility has an insignificant relationship (0.721>0.10). Therefore, H2 is rejected. This implies that it does not matter whether owner is young or old while accessing credit. Whereas Hussein (2015) and Akoten et al. (2006) had a positive impact of age of owner on access to credit. The present researcher has collected a small sample of respondents which may not have focused on all age groups because of which the result may have been insignificant.
The education level of the owner has a significance value of 0.03 which means that the education level and credit accessibility have a significant relationship at 5% (0.03<0.05). Therefore, H3 is accepted. The education level of the owner has a positive impact on credit accessibility which implies that when the owner is educated there is a high chance of getting credit. The result is consistent with Balogun et al. (2016), Buyinza et al. (2018), Chowdhury and Alam (2017), Hussein (2015), and Rand (2007).

The age of the firm has a significance value of 0.161 which means that the age of the firm and the credit accessibility has an insignificant relationship (0.161>0.10). Therefore, H4 is rejected. This implies that it does not matter whether the firm is young or old in order to access credit. Yildirim et al. (2013) and Sun et al. (2013) also found an insignificant impact of age of firm on credit accessibility of SMEs.

The firm size has a significance value of 0.094 which means that the firm size and the credit accessibility have a significant relationship at 10% (0.094<0.10) but the size of the firm has a negative significant impact on credit accessibility. Therefore, H5 is rejected. Abdesamed and Abd Wahab (2014) also has a negative significant impact on credit accessibility. This may have occurred because the large firms of Nepal may not be well known and the Nepalese capital market is still in the growing phase.

Similarly, the network has a significance value of 0.992 which means that the network and the credit accessibility have an insignificant relationship (0.992>0.10). Therefore, H6 is rejected. This implies that the network or connection does not have any impact while accessing credit. Whereas Moro and Fink (2013), Owualah (2002) and Nguyen et al. (2015) had a positive relationship with the credit accessibility of SMEs but Fatoki and Asah (2011) also had an insignificant impact of the network on credit accessibility as the sample size was small than these researchers because of which the result may have been insignificant.

Discussion and conclusions

The general objective of this study was to analyze the factors that impact the credit accessibility of SMEs in Kathmandu Valley. Similarly, the present researcher has considered descriptive as well as exploratory design to conduct the study through a survey of questionnaires from which statistical analysis and results were obtained. Further, the present researcher used primary and secondary sources of information. A total of 101 samples were surveyed using a convenience sampling method who were SMEs entrepreneurs of various businesses and were knowledgeable about the situation of SMEs in Kathmandu Valley.

As per the analysis, the present researcher found that among the owner's characteristics gender of the owner, educational level of the owner had a significant impact on the credit accessibility of SMEs, but the age of the owner had an insignificant impact on the credit accessibility of SMEs. The gender of the owner had a negative significant impact on access to credit and the educational level of the owner had a positive significant impact on access to credit. For the firm characteristics of SMEs, firm size had a negative significant impact on the credit accessibility of SMEs but the age of the firm had an insignificant impact on the credit accessibility of SMEs. Further, the network of SMEs had an insignificant impact on the credit accessibility of SMEs.

For the owner characteristics of SMEs, the study found out that the education level of the owner has a significant positive impact on the access to credit and it is the most important factor of the owner in order to access credit. Similarly, Balogun et al. (2016), Buyinza et al. (2018), Chowdhury and Alam (2017), Hussein (2015), and Rand (2007) also confirmed in their study that the education level of the owner has a positive impact on the accessibility of credit. In the study, the present researcher has also found that there is an insignificant relationship between the age of owner and access to credit but Hussein (2015) and Akoten et al. (2006) revealed that there is a significant positive association between the age of the owner and credit accessibility. The present researcher has found out that the gender of the owner had a negative impact on access to credit. Similarly, Carter (2011) and Balogun et al. (2017) also found in their study that there is a negative impact of the gender of the owner on the accessibility of credit.

Managerial Implication and future research

There are several dimensions in measuring credit accessibility. The study focuses on determining the business owners' views on financing accessibility in their ongoing business in Kathmandu valley. The SMEs owners believe that education level, size of the firm are the key components having their credit accessibility. The size of the firm plays an important role in accessing the credit of SMEs. Thus, it is suggested business owners consider these factors while accessing credit. The business owner should also think about the factor of gender as it is found that the gender of the owner has a negative impact on credit accessibility.

As there are various factors that impact the credit accessibility of SMEs, we have only taken six components. So, the future researcher can consider more factors such as asset tangibility, the profitability of the firm, sales turnover, growth of the business, liquidity position, and among others to gain additional insight about the results. This study is based on small-medium enterprises and the result cannot be generalized to the large-scale firms thus, it is suggested future researchers conduct a similar type of study including large-scale enterprises and compare whether the same factors influence all enterprises i.e. small, medium, and large. If more sample enterprises are included in the study, the result would be more precious thus it is suggested to the future researchers to include a large sample size.

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