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## Article

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RESEARCH

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# Mediating effect of utilisation in the relation between loan services from PSBs and capital formation of MSMEs: a study of Purba and Paschim Medinipur districts of West Bengal

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**Abstract:** The micro, small, and medium enterprises (MSMEs) have been acknowledged as the engine of economic growth and for promoting equitable progress all over the world. Let there be any category of countries, the existence of MSMEs is predictable. The MSME sector is playing a pivotal role majorly in employment generation at low capital cost.

**Purpose:** In this background, the present study is chosen to explore the factors considered under the utility of loan services provided by the public sector banks. With this, the authors have tried to establish a relation between the factors under the utility of loan, utilisation of fund, and capital formation in the MSMEs.

**Design/methodology:** To achieve the aforesaid objectives analysis is done on the basis of primary data. The primary data has been collected from 271 respondents. The respondents are the entrepreneurs of the two selected districts of the present study. In the study, the researchers have applied exploratory factor analysis, confirmatory analysis, multiple regressions, and path analysis of the structural model. The researchers have made a deliberate attempt to build a model on the relation between utility of loan service (ULS), utilisation of fund (UF), and capital formation (CF) across the enterprises.

**Findings:** The model of the present study exposes that loan services provided by public sector banks are influencing to utilise the fund effectively by the entrepreneurs but not directly influencing in the formation of capital.

**Keywords:** Public sector banks, Utility of loan service, Utilisation of fund, Capital formation, MSMEs

**JEL code:** G21, G24, H81, L26, L31, L32

## Introduction

MSMEs have been considered universally as an engine of economic growth and a key instrument for promoting equitable development. They have emerged as a vibrant and dynamic sector and as an engine of growth for the present millennium. The sector has been playing a prominent role in the socio-economic development of the country for the past six decades. The sector which forms part of the total industrial sector has direct impact on the growth of the national economy. In fact, through the establishment

of a more flexible, innovative, and competitive structure, the small enterprise sector is being accepted as a key instrument to sustainable economic growth. This growth of MSME sector also contributes drastically in the development of entrepreneurial skills among the people, decentralisation of ownership, eradication of monopoly power in the market, avoidance of concentration of wealth and power, and to make sure the balanced economic and social development of the country.

Countries like India that are overpopulated and industrially progressive are highly depending on this sector for promotion of employment amenities for the citizens of the country and attaining the balanced economic and social development of the country.

Government's initiatives enable MSMEs to enhance their competitive strength, competitive challenges, and avail benefits at the global market. PSBs had pre-conceived basket of products and services made available to the public, and they also established instruments of social change and have played a pivotal role in developing the MSME sector. The share of public sector banks lending to the sector has expanded rapidly, though the annual report of banking sector shows that the NPA (Non Performing Asset) is escalating day by day because of defaulters from the majority of MSME entrepreneurs especially from the micro-entrepreneurs. As majority of the MSMEs do not maintain proper financial statements of their transactions and operate in a turbid manner, the opaqueness of the firms makes it very difficult for them to avail formal credit.

Therefore, in this paper, keeping in our mind why they are not able to pay back the loan, we investigate the utility and utilisation of loan received from the different banks in the MSME sector. In this background, the present study is chosen to explore factors considered under the utility of loan services provided by the public sector banks. With this, the authors have tried to establish a relation between the factors under the utility of loan, utilisation of fund, and capital formation in the MSMEs.

### **Review of literature**

Basu (1957), in his study, made an attempt to examine the financial problems of small-scale industries and assessed their place in the country's Second Five Year Plan. The study pointed out the inadequate role of state finance corporations in financing the small-scale industries. Sharma (1973), in his PhD thesis entitled 'Role of Institutional Finance in the Industrial Development of Bihar', explained industrial financing by national-level financial institutions. The study also discussed the role of the state financial institutions in financing industries of Bihar. The author suggested that the financial institution should act as a guide, philosopher, and promoter of industries and recommended the setting up of small industries bank. Pareek (1978), in his work titled 'Financing of Small-scale Industry in a Developing Economy' revealed the role of financial institutions and state agencies in extending credit to small-scale units and pinpointed their attitude of indifference in catering to the need of the tiny units. He suggested that financial institutions had to tune their policies in consonance with the needs of a small-scale sector in general and the smaller among small-scale units in particular. Singh (1986) in his study titled 'Financing of SSI in India' made an analytical survey of the institutional sources of finance to the SSI and other small and tiny units, after critically examining the various aspects of the functioning of the financial institutions for the growth of the small-scale sector. Raghurama (1991), in his PhD thesis titled 'Role of Commercial Bank in Financing

SSI - A Case Study Dakshin Kannada', tried to analyse the problems faced by small-scale units while availing the bank finance. The problems faced by the bankers and the procedures adopted by the bank in extending finance are also examined. Park and Krishnan (2001), in their article titled 'Supplier Selection Practices among Small Firms in the United States: Testing Three Models', observed that the commercial banks came forward and made immense help to the growth of SMEs. There was a gap which required analysis about the role of the banks in the post-economic reforms. They suggested an in-depth study on the banker's role in providing the credit to promote the SMEs. Sundar, Gandhi. Kumar, and Gangatharam (2002), in their article titled 'The Role of SIDBI in Financing SSIs', studied the role of SIDBI in meeting financial requirement of small-scale industries through its various loan schemes. On the basis of this study, they concluded that the role of SIDBI in providing financial assistance was generally commendable both in terms of number of schemes sanctioned and the quantum of loans disbursed over a period of 8 years. Tarun (2004) conducted a study on CSR in Industrial Areas/SMEs: Activities, Policies and Strategies in New Delhi, Business Community Foundation. A comprehensive review of literature is an essential part of any investigation as it not only gives an idea about the work done in the past and assists in delineation of the problem area but also provides a basis for interpretation of findings. Accordingly, the available relevant literatures on MSME have been reviewed with reference to their financial as well as other related aspects. Kotler and Lee (2005), in their article titled 'CSR – Doing the Most Good for Your Company and Your Cause', New Jersey: John Wiley and Sons Inc., emphasised more on the needs and feasibilities of MSMEs and also estimated how relevantly the MSMEs emphasise the use of inherently available local resources in industrial development, but the contents, though touch upon the availability of financial resources for their surveillances, do not penetrate much about the role and effectiveness of bank finance in this respect. Chaniyara (2012), in his PhD thesis entitled 'A Study on Role of Investment Banks for Development of Indian Small and Medium Enterprises', stated as outcome of the study, with the help of investment bank's services like private placement of equity, business advisory services, and merger and acquisition, the Indian SMEs could overcome so many challenges like inadequacy of requisite R&D support, constraints in adopting energy efficiency in production process, non-availability of adequate and timely credit, inability to upgrade technology and production facilities to achieve cost competitiveness, lack of proper means and support for brand building, and non-availability of skilled personnel. Kavitha Vani. (2015), in his PhD study entitled "A study of finance gap between commercial Banks and micro, small and medium enterprises with reference to Karnataka", made an attempt to address the issue by analysing the problem from the perspective of supplier of finance and demand for finance. The main finding of the study was that the finance gap which was there in Karnataka was perceptual gap between banks and SMEs that resulted in high financial exclusion. Sen and Salim (2016)'s study dealt with the importance of MSMEs in West Bengal. They examined the performance with respect to number of units, investment, and employment generation. The study observed the existence of regional disparity among districts of West Bengal in respect of MSME units, investment, and employment. The study concluded with some suggestions for industrial clusters with the government. Industrial clusters might ensure the common facilities that would be helpful to reduce the operating cost, increase the competitiveness, and develop the skills for the sector. Also, government was needed to

enhance financial support which would be strongly boosting the development of state industry. Das and Das (2017), in their research paper, made an attempt to explore the operational and economical characteristics of micro-manufacturing enterprises (MMEs) and their status of development in particular in context of West Bengal. On the basis of 67th round NSSO unit level data, the study found that MMEs in West Bengal made important contribution towards the employment generation and output of the state economy. Approximately 10% of the output of India was produced in the West Bengal state. The productivity of MMEs was comparatively higher than the OAEs (own account enterprises), but the profit rate was comparatively higher in OAE than in the MME. The study suggested that the government should invest in the introduction of new technology and provide them proper training. Biswas, Srivastava, and Kumar (2018), in their article, made attempts to identify various factors that influence the financing gap in the MSME sector and which lead to the imposition of credit rationing approach by the banks. The paper was mainly review based and the author did a descriptive survey carried out on the bank officials in the districts of Varanasi and Chandauli. According to authors' suggestion, it is necessary for the MSME entrepreneurs to reduce information asymmetries between the borrower and the lender by operating in a transparent manner and increasing their probability of availing formal credit to reduce the financing gap in the MSME sector.

### **Research gap**

Most of the study focuses on the use of finance available from commercial banks overgrowth, development, viability, and survival of small-scale enterprises. Apart from these, several works upon banking service towards different sectors have been done by different renowned researchers. But no work was specifically undertaken to identify and analyse the mediating effects of utilisation of fund practises in the relation between utility of loan services taken from different PSBs and capital formation in the growth of MSMEs.

### **Objectives of the present study**

1. To extract the factors that are considered as utility of loan services provided by PSBs.
2. To explore the effects of factors of utility of loan services on capital formation in MSMEs.
3. To develop a model on the basis of the mediating effect of utilisation of fund in the relation between utility of loan services and capital formation in MSMEs.

### **Hypotheses of the study**

H<sub>01</sub>: The factors of utility of loan services do not influence capital formation.

H<sub>11</sub>: H<sub>01</sub> is not true.

H<sub>02</sub>: Utilisation of fund does not work as a mediating role between utility of loan services and capital formation.

H<sub>12</sub>: H<sub>02</sub> is not true.

**Table 1** Response rate of the respondents

Response	Total
No of selected respondents	360
No of met respondents	271
No of unmet respondents	89
Response rate	75.2%

Source: Authors' Survey

## Research methodology

### Source of data

In the present study, the researcher has used only primary source of data. The data has been collected through self-structured questionnaire filled by the selected entrepreneurs.

### Population of the study

The target populations of the present study are the MSME districts of East and West Medinipur of West Bengal state who took loan from public sector banks and have been doing their business successfully. The estimated size of the population was 5973 units who were registered at District Industries Centre (DIC) of the selected districts during the period of 5 years from 2010–2011 to 2014–2015.

### Sample size

After knowing the estimated population, the sample size of the MSMEs has been determined using Cochran's formula to collect primary data.

According to Cochran's formula, the estimated sample size was 360.

### Sampling design

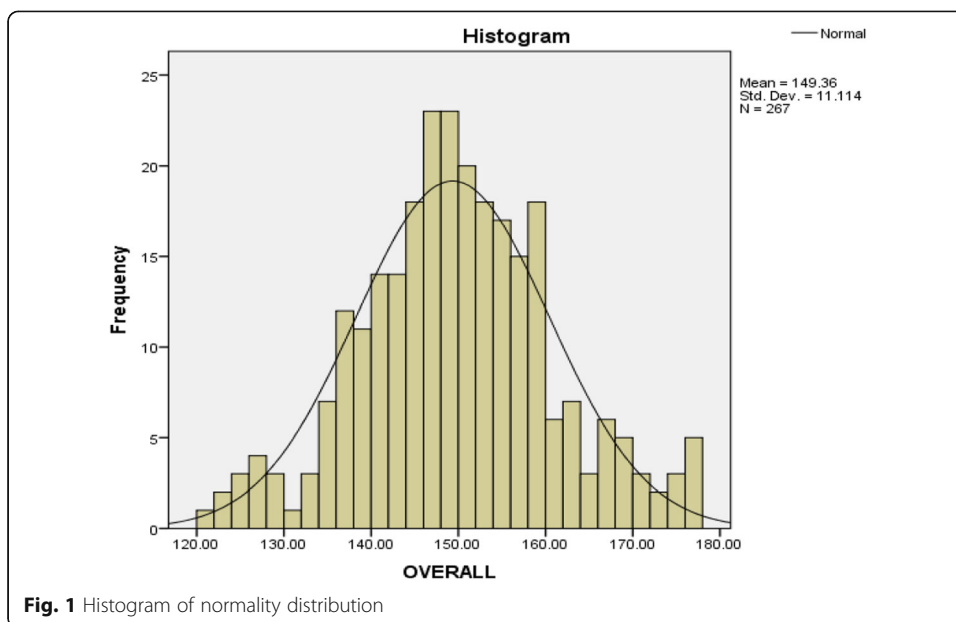
To draw the estimated sample size, stratified random sampling technique has been used. The study was based on two districts, and each district is divided into four sub-divisions. A list of blocks in each sub-division has been prepared. Blocks have been randomly selected from each list by random number method. Thus, total 18 blocks have been selected for the study. Again, a list of enterprises in each selected block has been prepared. Using random number, 20 enterprises have been selected from each block. Thus, the totals of 360 sample enterprises were selected from the selected two districts.

### Data analysis

The data analysis has been done using various statistical tools like independent sample *t* test, Levene's test, Mahalanobis  $D^2$ , Cook's distance test, Shapiro-Wilk test, Harman's one-factor test, correlation, factor analysis, and multiple regression analysis. Also, the data analysis has been done using Path Analysis developed by AMOS software. Before going to develop a model using Path Analysis, the researcher has used some test to check whether the data is clean and ready to go for multivariate analysis or not.

### Data screening

Data must be screened in order to make sure that the data is useable, reliable, and valid for testing any causal theory. Hence, the researcher has focused on some specific issues



which are recommended by different researchers for the purpose of data cleaning and pre-analysis.

**Response rate**

In this study, the response rate as shown in Table 1 is 75.2%. According to Sekaran and Bougie (2016), in survey studies, a response rate of 30% is acceptable. Therefore, the study response rate is adequate for further analysis.

**Missing data**

In this study, the data was collected by the researcher, hand to hand from the respondents. To prevent the occurrence of missing data, the researcher duly checked the filled-in questionnaire and asked the respondents to refill if they had left any question blank without putting the answer. So, there was little scope of missing data. Still, to be doubly assured of having no missing data, the researcher conducted frequency analysis after collecting all the data to check if there was any missing value or any coding

**Table 2** Descriptive statistics

		Statistic	Standard error
Overall	Mean	149.356	0.68019
	95% confidence interval for mean	Lower bound	148.017
		Upper bound	150.695
	Median	149	
	Variance	123.531	
	Standard deviation	11.1144	
	Skewness	0.11	0.149
	Kurtosis	0.149	0.297



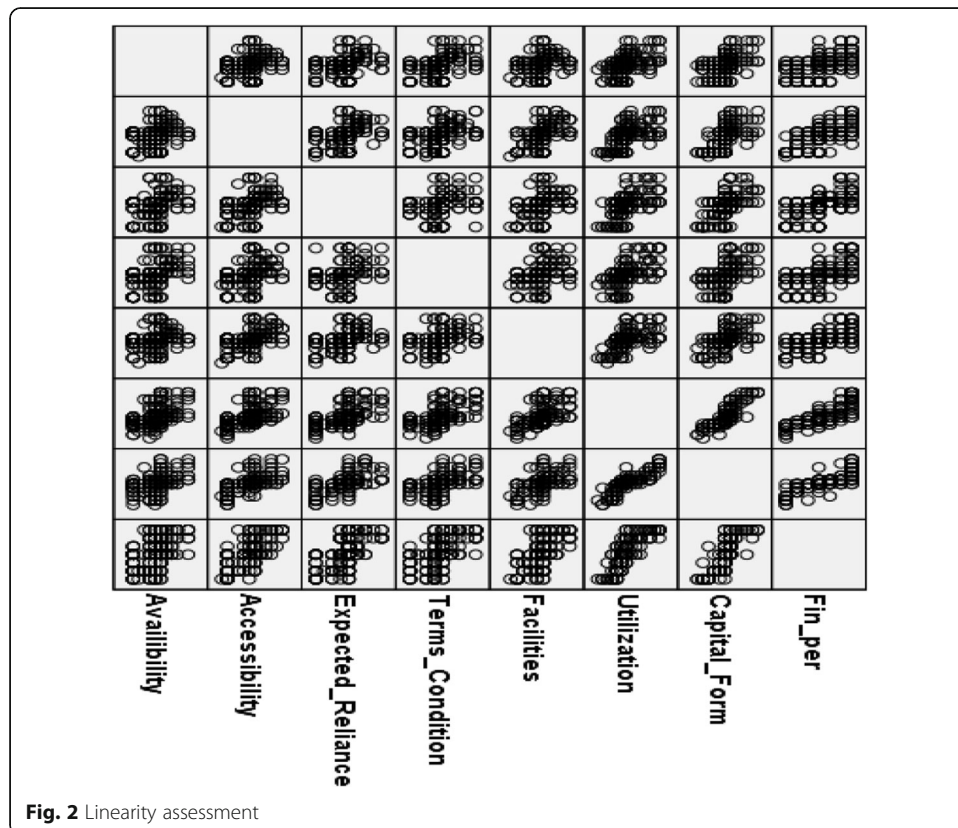
**Table 3** Test of normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Overall	0.99	267	0.069

mistake. After running the frequency analysis on IBM SPSS version 22, there was no missing value found.

**Analysis of multivariate outliers**

Outliers are the extreme scores or values of data sets. In this study, multivariate outliers were detected using Mahalanobis distance ( $D^2$ ) and Cook’s distance statistical tools. There were four outliers with the probability of  $D^2$  less than 0.001. And none of the respondents had a Cook’s distance greater than 1. According to Stevens (1984), there is no need to remove the outliers where Cook’s distance is less than 1. But here, the researcher has deleted four outliers based on Mahalanobis  $D^2$  because they could distort the result of the data analysis. Mahalanobis  $D^2$  and Cook’s distance for all the cases are reported in the Appendix. Henceforth, after removing four multivariate outliers, the final dataset in this study was 267.





**Table 4** Correlations among the exogenous variables

		Availability	Accessibility	Expected reliance	Facilities	Terms and conditions
Availability	Pearson correlation	1	.244**	.295**	.403**	.222**
	Sig. (two-tailed)		.000	.000	.000	.000
	N	267	267	267	267	267
Accessibility	Pearson correlation	.244**	1	.385**	.388**	.489**
	Sig. (two-tailed)	.000		.000	.000	.000
	N	267	267	267	267	267
Expected reliance	Pearson correlation	.295**	.385**	1	.229**	.413**
	Sig. (two-tailed)	.000	.000		.000	.000
	N	267	267	267	267	267
Facilities	Pearson correlation	.403**	.388**	.229**	1	.273**
	Sig. (two-tailed)	.000	.000	.000		.000
	N	267	267	267	267	267
Terms and conditions	Pearson correlation	.222**	.489**	.413**	.273**	1
	Sig. (two-tailed)	.000	.000	.000	.000	
	N	267	267	267	267	267

\*\*Correlation is significant at the 0.01 level (two-tailed)

### Normality assessment

According to the suggestions of Pallant (2001) and Hair et al. (2010), in order to meet up with the assumption of a multivariate analysis, the normality of the data needs to be checked. There are two major ways of assessing normality: graphical and numerical. To check with the graphical method, the histogram is to be examined by looking at the shape of data distribution (Tabachnick, Fidell, & Ullman, 2007) while for numerical method, the K-S test (sample size more than 2000) or S-W test ( $7 < \text{sample size} \leq 2000$ ) is to be used.

Figure 1 depicted the histogram which indicates that the normality assumption has been achieved because the histogram gave a bell shape 'normal curve'.

Table 2 and Table 3 are showing the result of the normality test conducted for this study. In Table 2, the absolute value of skewness is 0.738 (0.110/0.149) and kurtosis is 0.502 (0.149/0.297). The values of both skewness and kurtosis in this study fall within the range of  $\pm 1.96$  with the significant value of the Shapiro-Wilk test greater than 0.05.

**Table 5** Multicollinearity test based on tolerance and VIF values

	Co-linearity statistics	
	Tolerances	VIF
Availability	.792	1.262
Accessibility	.663	1.509
Expected reliance	.754	1.326
Facilities	.745	1.342
Terms and conditions	.696	1.437

**Table 6** KMO and Bartlett's test

Kaiser-Meyer-Olkin measure of sampling adequacy		0.864
Bartlett's test of sphericity	Approx. chi-square	2738.5
	df	231
	Sig.	0

So, the above test is indicating that the data was normality distributed. So, the normality assumptions of this study were not violated.

#### Linearity assessment

Next, linearity assessment has been examined through the graph-legacy diagrams-scatter/dot-simple scatter procedures with the help of SPSS 22 software. The linearity of data could be tested by examination of scatter plots or linearity residual plot (Hair et al., 2010; Pallant, 2013).

Hence, linearity exists between the dependent variables and the independent variables. No serious deviations from linearity have been observed in the scatter plots. The graphs for linearity assessment have been presented in Fig. 2.

#### CMV assessment

The researcher feels it necessary to conduct a test to make sure that there is no variance in observed scores and the correlations are not inflated because of the common method variance (CMV) effect. Hence, the researcher has used a test known as Harman's one-factor test (Podsakoff et al., 2003). An unrotated factor analysis with the entire 39 variables has been conducted. The test result shows that 33.723% of the total variance was accounted for by the single factor; it indicates the absence of common method bias in this study. According to Podsakoff et al. (2003) and Lowry and Gaskin (2014), the common method bias is present when the single factor can explain more than 50% of the variance.

#### Multicollinearity assessment

In this study, multicollinearity was tested first by examining correlation matrix and secondly by tolerance and variance inflation factor (VIF) level for the independent variables. The correlation matrix of the independent variables was examined to find out if there was any indication of high correlations among the variables. According to Hair

**Table 7** Communalities and total variance explained

Factor	Communality extractions	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings
		Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total
1	0.628	6.755	30.706	30.706	6.317	28.7	28.715	4.683
2	0.455	2.763	12.559	43.266	2.336	10.6	39.334	3.83
3	0.605	2.053	9.332	52.598	1.632	7.42	46.753	3.734
4	0.566	1.488	6.763	59.361	1.063	4.83	51.585	3.724
5	0.543	1.431	6.506	65.867	1.001	4.55	56.136	3.945

Source: Authors' Calculation

**Table 8** Pattern matrix<sup>a</sup>

Factor 1		Factor 2		Factor 3		Factor 4		Factor 5	
AVL1	0.721	ACC1	0.859	ER1	0.803	F1	0.761	TC1	0.733
AVL2	0.728	ACC2	0.647	ER2	0.613	F2	0.715	TC2	0.552
AVL3	0.757	ACC3	0.751	ER3	0.650	F3	0.635	TC3	0.771
AVL4	0.719	ACC4	0.741	ER4	0.827	F4	0.787	TC4	0.777
AVL5	0.846	ACC5	0.859						

Extraction method: maximum likelihood; rotation method: Promax with Kaiser normalisation

<sup>a</sup>Rotation converged in six iterations

et al. (2010) and Pallant (2010), multicollinearity exists when the correlation between independent variables is 0.9 and higher. Pallant (2010) also suggested the correlation value above 0.7 as a threshold for multicollinearity among independent variables. The result, in Table 4, shows that the correlation values are within .218 to .489, i.e. not higher than the threshold of 0.7. It is, therefore, concluded that there was no problem of high correlation among the variables.

Secondly, multicollinearity was tested through the examination of tolerance and VIF using regression results provided by the SPSS co-linearity diagnostics result as recommended by Hair et al. (2010) and Pallant (2010). In Table 5, it is clear that all the tolerance values range between 0.663 and 0.792, substantially greater than 0.1, and all the values of VIF are acceptable being less than 3. Therefore, there is no question about multicollinearity.

### Exploratory factor analysis

Exploratory factor analysis (EFA) was used to ensure the dimensional structure of factors contributing to the loan service in the MSME business borrowers.

The EFA results shown in Tables 3 and 4 reveal the five dimensions as factors having eigenvalue greater than 1 with 65.867% of the total variance, which is satisfactory, as suggested by different researchers (Salta and Tzougraki, 2004: 47%; Spinner and Fraser, 2005: 42%). The factor loading of each item or variable was greater than 0.5.

### Confirmatory factor analysis

Exploratory factor analysis is a useful preliminary technique for developing the survey instrument (questionnaire), but a subsequent confirmatory factor analysis is necessary to refine the resulting instrument for unidimensionality.

Now, the confirmative factor analysis was used to compare the factors emerging from the EFA in an attempt to validate the factor structure of loan service (Tables 6, 7, and 8).

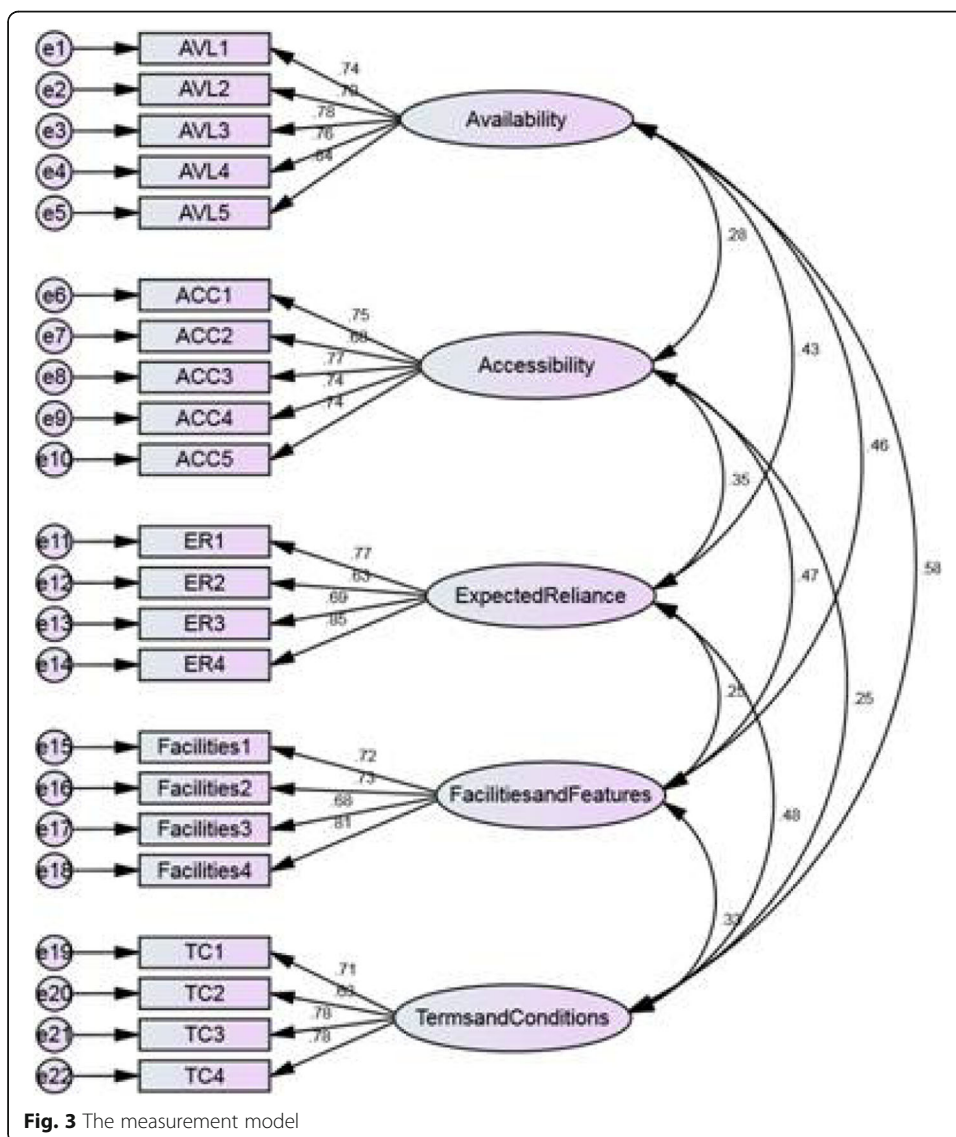
**Table 9** Model fit indices

Measure	Estimate	Threshold	Interpretation
CMIN	322.921	–	–
DF	199	–	–
CMIN/DF	1.623	Between 1 and 3	Excellent
CFI	0.952	> 0.95	Excellent
SRMR	0.047	< 0.08	Excellent
RMSEA	0.048	< 0.06	Excellent
P close	0.599	> 0.05	Excellent

**Table 10** Model validity

	CR	AVE	MSV	ASV
Availability	0.876	0.585	0.338	0.202
Accessibility	0.855	0.541	0.222	0.120
Expected reliance	0.826	0.546	0.235	0.151
Facilities	0.825	0.542	0.222	0.151
Terms and conditions	0.819	0.532	0.338	0.187

All the unobserved variables (latent variables) used were obtained from exploratory factor analysis. The CFA shows the interrelationship between the indicators and the unobserved variables. All the indicator variables have a standardised regression weight either above 0.7 or very close to 0.7. By convention, these regression weights have to be 0.7 or higher. To establish the CFA model, the model fitness and validity are shown in Tables 9 and 10 respectively.



**Table 11** Summary of reliability

Questionnaire	Items	Inter-item consistency (using Cronbach's alpha)
Availability	5	.854
Accessibility	5	.874
Expected reliance	4	.822
Facilities and features	4	.823
Terms and conditions	4	.812
Utility of loan service	22	.891
Utilisation of fund	7	.801
Capital formation	6	.762

The resulting model fit indices of measurement model is shown in Table 9 (Fig. 3). The estimated value of chi-square equivalent in confirmatory factor/degrees of freedom (CMIN/DF) (1.623), comparative fit index (CFI) (0.952), standardised root mean square residual (SRMR) (0.047), root mean square error of approximation (RMSEA) (0.048), and *P* close (0.599) are excellent which meet the cut-off criteria, and it is a perfect fit for the CFA model according to Hu and Bentler (1999) and Gaskin and Lim (2016).

#### Convergent validity

To establish convergent validity, Table 10 shows that the composite reliability (CR) score is greater than 0.70 of all the constructs and the average variance explained (AVE) is greater than 0.50. And CR is greater than AVE in the entire latent variable. Therefore, these meet the threshold as suggested by Gaskin and Lim (2016). The above two criteria have confirmed the convergent validity.

#### Discriminant validity

To establish discriminant validity, Table 10 shows that maximum shared variance (MSV) is less than AVE in case of all the factors and MSV is greater than average shared variance (ASV). Hence, these two criteria support the discriminant validity.

**Table 12** Correlation between the factors of utility of loan service and the capital formation

	Availability	Accessibility	Expected reliance	Facilities	Terms and conditions	Financial performance
Availability Sig.	1					
Accessibility Sig.	.244** .000	1				
Expected reliance Sig.	.295** .000	.385** .000	1			
Facilities Sig.	.403** .000	.388** .000	.229** .000	1		
Terms and conditions Sig.	.222** .000	.489** .000	.413** .000	.273** .000	1	
Capital formation Sig.	.413** .000	.588** .000	.576** .000	.485** .000	.547** .000	1

Number of observation = 267

\*\*Correlation is significant at the 0.01 level (two-tailed)

**Table 13** Regression model for loan service and capital formation

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	Sig.
1	.772 <sup>a</sup>	.595	.588	76.778	.000 <sup>b</sup>

<sup>a</sup>Dependent variable: capital formation

<sup>b</sup>Predictors: (constant), five factors of utility of loan service

### Reliability

The most popular test of inter-item consistency reliability is Cronbach's coefficient alpha (Cronbach's alpha: Cronbach, 1951) which is used for multipoint scaled items. The higher the coefficients, the better the measuring instrument. In this study, the researcher has calculated the alpha value for different dimensions as well as overall reliability statistics.

Table 11 shows the summary of reliability about the value of the coefficient of Cronbach for the research scale ULF where UF is above 80% and CF is above 70%. The researcher has also checked the alpha value of the five constructs of ULF to be above 80% which implies a great internal consistency of items in the constructs being assessed. To check the reliability, an alpha value greater than 0.60 is accepted and closer to 1 is highly desirable.

The study hypothesised that the factors of utility of loan fund service influence the capital formation in the enterprise. Correlation is used to find out the relation between the factors of utility of loan service and the capital formation. After that, a linear regression is used to test the hypothesis. The below equation describes the linear regression.

Capital formation =  $\beta_0 + \beta_1$  (availability) +  $\beta_2$  (accessibility) +  $\beta_3$  (expected reliance) +  $\beta_4$  (facilities) +  $\beta_5$  (terms and conditions) +  $\varepsilon$

### Results and discussions

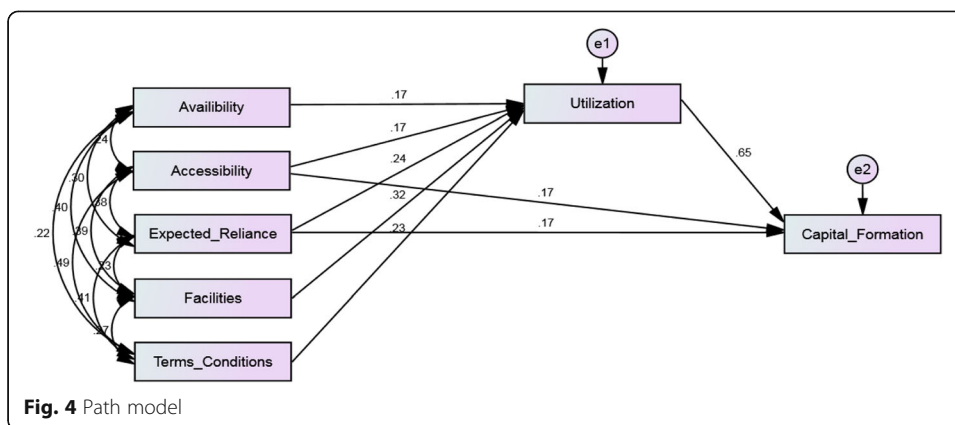
From Table 12, it is found that there are positive significant correlations between all the factors of utility of loan services and the capital formation. The correlation range is 0.413 to 0.588. That is, the factor 'accessibility' is highly positively associated and 'availability' is lowly positively associated with capital formation.

Regression fitted: capital formation = 7.269 + .099 (availability) + .184 (accessibility) + .316 (expected reliance) + .199 (facilities) + .221 (terms and conditions)

The value of  $R$  is 0.772 and the value of  $R^2$  is 0.597 in the model. It states that 59.7% of the capital formation can be attributed to loan service. The regression result indicates that there is a strong direct positive relation between loan service and capital

**Table 14** Coefficient

Model 1	Unstandardized coefficients		Standardised coefficients Beta	t	Sig.
	B	Standard error			
Constant	7.269	.892		8.150	.000
Availability	.099	.033	.132	2.974	.003
Accessibility	.184	.035	.256	5.293	.000
Expected reliance	.316	.047	.305	6.728	.000
Facilities	.199	.040	.205	4.501	.000
Terms and conditions	.221	.050	.210	4.455	.000



formation with significant value less than 0.01. Thus, the alternative hypothesis  $H_{11}$  is accepted, and the null hypothesis  $H_{01}$  is rejected (Tables 13 and 14).

Let us examine the role of utilisation of loan fund acting as a mediator to the relationship between the factors of loan service and capital formation. Path analysis has been used to check the abovesaid relationship (Fig. 4). The independent variables and moderator variable are the same like the previous one. But here, capital formation acts as dependent variable.

From Table 15, the regression weight of path analysis noticed that eight out of 11 path coefficients are significant in order to the significant level of  $p$  value. Therefore, it is found that all the factors are directly influencing the utilisation but only two factors are directly influencing the capital formation. In Table 16, we have also found that the utilisation of fund has been generating an additional indirect effect to the relationship between the utility of loan service and capital formation. Therefore, the utilisation of fund works as a mediating variable in this relationship.

### Conclusion

Utilisation of loan is playing a mediating role in the relation between utility of loan service and capital formation. Entrepreneurs have sufficient reason to emphasise on utilisation of fund for the future growth and performance of their enterprise.

**Table 15** Regression weights

Path coefficient	Estimate	S.E.	C.R.	$P$	Standardised regression
Utilisation <--- availability	.181	.045	4.037	***	.172
Utilisation <--- accessibility	.175	.047	3.732	***	.174
Utilisation <--- expected reliance	.347	.063	5.479	***	.240
Utilisation <--- facilities	.440	.060	7.375	***	.325
Utilisation <--- terms and conditions	.340	.067	5.082	***	.231
Capital formation <--- accessibility	.120	.027	4.390	***	.167
Capital formation <--- expected reliance	.175	.039	4.514	***	.169
Capital formation <--- utilisation	.465	.030	15.764	***	.651



**Table 16** Direct, indirect, and total effect

Path coefficient	Direct effect	Indirect effect	Total effect
Utilisation <--- availability	0.172	0.000	0.172
Utilisation <--- accessibility	0.174	0.000	0.174
Utilisation <--- expected reliance	0.240	0.000	0.240
Utilisation <---facilities	0.325	0.000	0.325
Utilisation <---terms and conditions	0.231	0.000	0.231
Capital formation <--- availability	0.000	0.112	0.112
Capital formation <--- accessibility	0.167	0.113	0.280
Capital formation <--- expected reliance	0.169	0.156	0.325
Capital formation <--- facilities	0.000	0.211	0.211
Capital formation <--- terms and conditions	0.000	0.151	0.151
Capital formation <--- utilisation	0.651	0.000	0.651

Loan service is playing a significant role in utilisation and formulation of capital formation in the MSME sector. This is utmost important for the government and public sector banks to ensure strong access of loan fund to enhance the growth of MSME sector.

There is a strong inter-chain relationship among the factors of utility of loan service, utilisation of fund, and capital formation. If the MSME sector is strongly supportive by financial assistance especially in terms of availability and accessibility of loan funds, MSMEs envisage a promising sector in the region under the study.

#### Abbreviations

ASV: Average shared variance; AVE: Average variance explained; CFA: Confirmatory factor analysis; CF: Capital formation; CFI: Comparative fit index; CMIN: Chi-square equivalent in confirmatory factor; CMV: Common method variance; CR: Composite reliability; DF: Degrees of freedom; DIC: District Industries Centre; EFA: Exploratory factor analysis; MSME: Micro, small, and medium enterprise; MSV: Maximum shared variance; RMSEA: Root mean square error of approximation; SME: Small and medium enterprises; SRMR: Standardised root mean square residual; SSI: Small-scale industries; UF: Utilisation of fund; ULS: Utility of loan service; VIF: Variance inflation factor

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#### Authors' contributions

SI designed the study and analysed the data collected for the study and prepared the manuscript while DG edited the draft and provided technical support in mentoring SI. Also, both the authors read and approved the final manuscript.

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#### Availability of data and materials

The datasets used and analysed during the present study are available from the corresponding author on reasonable request.

#### Competing interests

The authors declare that they have no competing interests.

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