

Exploring the role of loan default ratio in the SME sector of Pakistan

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The study examines the impact of the lending decision made by Development Finance Institutions (DFIs) on the growth of SMEs, while analysing the low growth rate in the SME sector of Pakistan and the high default rate in finance facilities from the DFIs. The research employs the archival method of reviewing related literature (theoretical, applied and empirical literature). Data was gathered from the designed sample by using a questionnaire distributed among the selected population. The relationship between the default rate in the SME sector of Pakistan and the lending decision process will be analysed, along with other factors which cause the borrower's inability to repay the debt and the markup on the financed amount. The major contributions and findings of this research include the basic reason for SME default based on problems in the lending decision process, the tools used for analysing the capacity of the borrower, and a critical review of deficiencies in the SME lending decision process. This research focuses on the SME lending decision factors due to which the prospective borrowers may be unable to get finance, while on the other hand borrowers with weak creditworthiness may be selected and finance may be disbursed, causing the default. The main contribution of this research is bringing together most of the available literature, focusing on the major causes of loan default in the SME sector of Pakistan and properly analysing potential customers for disbursement of finance.

Keywords: SME sector, lending decision, collateral, markup rate, loan utilization, Pakistan.

JEL codes: E5, H81, L26, G32, D25.

Introduction

The revenue of banks comes from their assets and the prevalence of resources. But it does not mean that all assets create revenue. Bank assets are classified into interest income-generating assets and non-interest income producing assets. Besides this, non-interest income generating assets contain brokerage charges, commissions, fees and return from investment in securities

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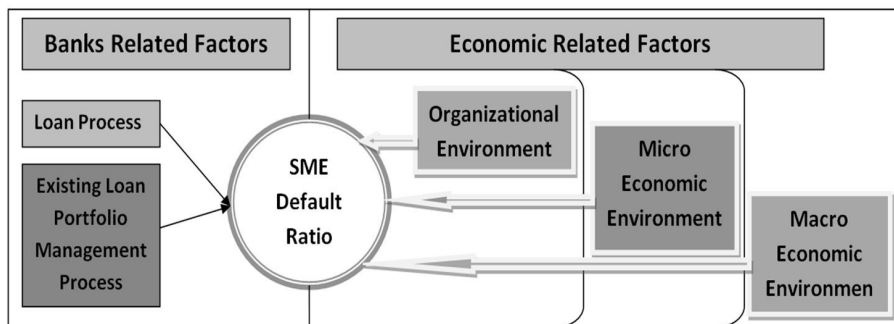
and subsidiaries. The main activity of commercial banks is to give loans to borrowers with preferred business areas at a specific interest rate. Loans have been identified as the highest yielding assets of a bank. They provide the largest portion of revenue and stabilise banking operations (Ahmad et al. 2017; Fashina et al. 2020). However, banks also faced a huge liquidity risk when they advanced loans from the funds deposited by customers. In this regard, a higher risk tends to lead to more profitable revenue for the bank due to a higher interest on income. According to Waitherero et al. (2021), a higher volume of loans reveals a higher liquidity risk. Hence, commercial banks need to find a balance between profitability and liquidity. In an earlier study, Rasiah (2010) argues that a higher volume of loans does not guarantee a higher interest income. If the borrower is unable to pay back the loan, then the interest income will not be earned, and this will have a direct impact on bank profitability.

The loan default is recognised as a universal phenomenon in the SME Sector of Pakistan linked with all types of business organisations. The loan default is highly important for banks because the extension of credit is the exclusive business of banking institutions. The borrower's loan default has a direct negative impact on bank profitability as it reduces cash flows. It has been noticed that, if non-performing loans are not checked or examined for a longer period of time, then most probably such loans will lead to the bankruptcy of the bank (Ensaria–Karabay 2014). Therefore, loan monitoring is highly important towards bank roles and responsibilities (Huynh–Dang 2021). The bank deals with other people's money and needs a quick recovery of loans to make viable business operations.

Loans are identified as major assets on the balance sheet, revealing the success of individual banks. In this way, credit risk management aims to reduce a major proportion of non-performing loans. Additionally, asset quality measured by the asset quality ratio that highlights the level of non-performing loans (Thygersson 1995; Hamdillah et al. 2021) is calculated as:

$$\text{Asset quality} = \text{Total non-performing loans} / \text{Total loans}$$

If the ratio of non-performing loans is higher, that reflects an impulsive lending practice as well as poor credit management. This indicates higher threat on the deposits of customers. On the other hand, a lower ratio of non-performing loans is desirable. Thus, loans which become non-performing reduce the profitability of the bank by altering liquidity with a negative impact on bank earnings.



Source: Own editing

Figure 1. Onion approach according to Bronfenbrenner (1979)

To determine the SME default ratio, there are two factors that need to be considered, namely economic factors and bank-related factors. Under economic factors, the organisational environment as well as microeconomic and macroeconomic environments are recognised as determining the SME default ratio (Figure 1). The ‘onion skin’ paradigm work of Bronfenbrenner (1979) explored economic factors such as inflation, unemployment, GDP, government policy, taxes, interest rates and exchange rates. All these factors have a significant impact on the SME lending and default ratio. On the other hand, bank-related factors are the loan process, the management process and the existing loan portfolio, which are strongly linked to the SME default ratio (Ha et al. 2016).

Literature review and theoretical background

The role of SMEs is becoming increasingly dominant in the current era, contributing significantly to the GDP (Veskaisri 2007). SMEs can establish any type of business activity in both rural and urban areas (Khalique 2011). The role of SMEs is significant towards the economic progress of Pakistan. In Pakistan, 85% of manufacturing companies are recognised as small and medium-sized enterprises, i.e. SMEs. The remaining companies are affiliates of multinational companies. The SMEs’ growth is consistent with the advanced use of the technological environment; therefore it is immensely important for SMEs to identify technological applications to sustain corporate values (Raouf 1998).

The success of SMEs leads to growth in Pakistan’s economy (Saeed–Sameer 2015). According to Khan (2014), SMEs have not only a minor share but also the

Pakistan's whole economy depends on SMEs' pace and productivity. Statistically, approximately 3.2 million (95%) of the enterprises in Pakistan have at least 99 employees in the private industrial sector, which employs 78% of the non-agricultural labour force. Moreover, SMEs economically contribute 25% of the exports of manufacturing goods and 30% of Pakistan's GDP. The growth of GDP is a major driver of economic growth in Pakistan. In this regard, the country's GDP grew by 4.24% in 2015 as compared to 4.14% in 2014. This shows how the economy of Pakistan is growing through investment in the SME sector.

The successive values of small businesses play a dominant role in any country (Yew Wong–Aspinwall 2004). There are numerous factors that lead to the favourable growth of SMEs and to economic growth, reducing poverty and unemployment and increasing the income of financial institutions. In the current research study, the role of the state bank is to provide major insights into the loans granted to SMEs and their recovery actions. For this reason, the State Bank of Pakistan established rules and regulations for SMEs' access to loans in 2003. There are certain constraints in the SME sector on accessing credit based on firm size and growth potential. It is worth mentioning the regulatory framework for SME lending services that are provided by commercial banks (Jasra 2011).

The study reveals the main causes behind loan defaults specifically in the SME sector: hindering obstacles to the collection of loan payments associated with the capital constraints; inability to pay the debt; inexperienced credit risk managers; incompetent management; lack of feasibility reports for SME loans; and inadequate accounting data. Bank-related factors, borrower-related factors and macroeconomic factors are the main causes of loan defaults in the SME sector.

The role of SMEs is in the limelight in different countries, as it enhances economic growth and business sustainability in the long run. In the developing countries, the role of SMEs is quite prominent due to the economic development and the rapid expansion process (Fesharaki 2019). SMEs expansion into several countries illustrates a dramatic process that requires consistent risk mitigation practices (Campos 2016). Regarding the infrastructure development process implemented in various countries, SMEs use different tools to reduce the costs and come up with low-cost products and services for the customers. During this process, these companies contribute to the rapid growth of the economy and

industries. In addition, almost 97% of the production comes from the operations carried out by SMEs in different countries. In South Asia, there is a vast number of such companies. Despite different issues, such as legal complexities, financial risks, and many other problems, these companies have sustained the business in the developing countries (Quader–Abdullah 2009).

There are several factors regarding the loan default and the expansion process. It is a fact that the size of an organisation can be increased to reduce the default risk. Obviously, if the organisations increase their business operations, there will be a great chance for those companies to gain high revenue streams and profits. As a result, the company will be able to repay the loans to different commercial banks (Qureshi 2012). In addition, the authorities have detected different frauds due to inadequate financial or accounting systems (Bilal 2016).

The financial institutions in the country contribute to economic success, as they advance loans to deserving companies to strengthen the economy and stabilise the growth in the long run. It has been revealed that these financial institutions have different systems for making the companies repay their loans (Hyder–Lussier 2016). The turnover ratio, the current ratio, the leverage ratio, the liquidity ratio and the profitability ratio are prominent ratios which have been considered by small and medium-sized enterprises for growth and development. The most important thing is to improve these ratios, and the role of financial institutions is pivotal in this process. When advancing loans to these companies, financial institutions use their systems and procedures to analyse the business and operating characteristics, as it can help to advance secure loans (McCann–McIndoe–Calder 2012).

Now, in this competitive business era, there is a need for effective risk management strategies along with different implementation plans (Gálová 2014). For different banks around the world, the credit risk has emerged as a big issue, and the management has failed to implement appropriate strategies and plans (CBK 2008). It is important to assess and identify the risk, and this has become one of the main issues considered by financial institutions.

The loan monitoring process which is triggered with the resources is another pertinent tool for the management to examine the process and gain information. Furthermore, credit risk control is also a good tool for the management to mitigate the risks and observe the lending process. Customer information, including residents' income level and financial transactions, is necessary to make relevant

decisions in the end (Newman 2016). Bank portfolios seem more pertinent if the management examines the financial statements of the companies during the lending process (SBP 2003).

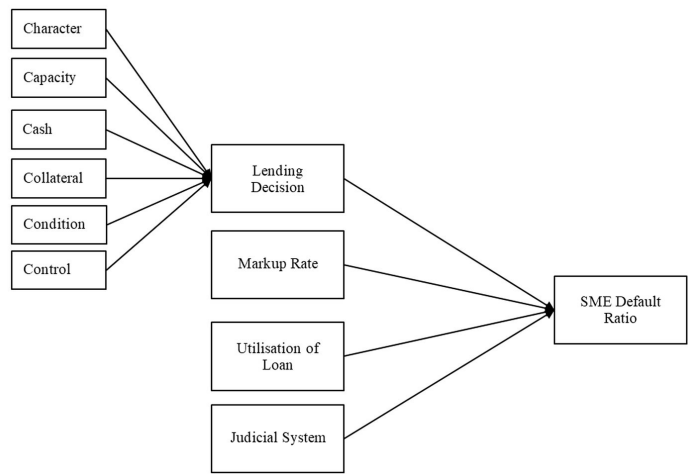
The visibility of non-performing loans in the business environment is due to poor risk management techniques, according to Bindra (1998). Unfortunately, the banks are often not capable of analysing risk factors, and they advance loans to be more lucrative. This is quite destructive for the banks, as bad debts become more visible. According to him, there is a need for professional management systems and techniques for assessing risk factors. To demonstrate the rigor of the investigation process, managers can use the loan monitoring criteria as a pertinent tool for examining information and resource use, just like in the case of performance appraisals - which has not been done, thus far. The bankers have to initiate follow-up plans to speed up the recovery process and reminders for customers to repay their loans on time. Without these important considerations, the banks may fail to sustain the business process in the long run.

Theoretical framework

The lending decision process is based on Peter S. Rose's "Loans in a Troubled Economy" (Rose 1983), advancing the basic theory for lending to industrial clients, including to SME clients. He provided the six C's for lending to industrial clients, namely the prospective borrower's Character, the prospective borrower's Capacity to perform the business activities, the prospective borrower's Cash – including the cash flow of the firm, Collaterals provided by the prospective borrower as security in case of default, Conditions of the industry in which the prospective borrower is currently working, and Control, including the checks of controlling authorities on the prospective borrower and banks (Figure 2).

We formulated the following hypotheses:

- **H₁:** Creditworthiness factors are the major reasons for the high default ratio in the SME sector of Pakistan.
 - **H₂:** The Markup Rate offered is the major reason for the high default ratio in the SME sector of Pakistan.
 - **H₃:** Improper utilisation of the loan is the major reason for the high default ratio in the SME sector of Pakistan.
 - **H₄:** The weak judicial system of banking courts is the major reason for the high default ratio in the SME sector of Pakistan.
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Source: Own editing

Figure 2. Theoretical framework

Research design and methodology

Quantitative research belongs to objectivist epistemology and seeks to develop explanatory universal laws in social behaviours which are assumed to be the static reality, and these are measured by the application of statistical measurement tools. Quantitative research endorses the theory that social and psychological phenomena are objective realities and independent from the subject being studied and that the researcher and the subject under study are independent and separated from each other during the research process (Yilmaz 2013). Our research is a cross-sectional study based upon the different events affecting SME clients who are offered loans from the banks and the data is obtained from the different individuals working in the specialised field of SME financing diversified activities. All the data related to the borrowers’ character, capacity, financial position, markup rate offered to the client are collected at the same time.

Study setting and context

Researchers have proposed that epistemology, methodology, theoretical perspectives and methods are the essentials elements that must be addressed during the research process, while choosing the research approach for the study,

i.e. quantitative or qualitative research (Crotty 1998). Quantitative and qualitative research designs are further differentiated on the basis of epistemological, methodological and theoretical underpinnings. The quantitative research methodology places emphasis on the measurement and analysis of the causal relationship between isolated variables within a framework which is logical, deterministic and reductionist based on prior theories. This methodology requires the researcher to use a pre-constructed standardised instrument or predetermined response categories which cover participants' varying experiences and perspectives. One of the characteristics of the quantitative research design is that it demands randomly selected samples from the population under study to generalise the findings.

The use of a close-ended questionnaire during research helps the researcher view broader and generalised results and findings and ultimately present these results parsimoniously (Yilmaz 2013). The quantitative research design has dominated the field of social sciences as it uses standard tools and techniques to generate validated and reliable data for research purposes (De Vaus 2001). This research design elaborates observable facts in numbers by constructing the variables that can be measured to explore correlation, connections and cause and effects between variables under study. There are various ways to collect data from the samples, such as self-administered questionnaires, online surveys and phone interviews (Ary et al. 2018). This study can be considered a quantitative study as (self-administered) pre-structured standardised instruments are used to collect data, and numerical data is used for checking the association between variables. The instruments used for data collection look at variables like the SME default ratio, the creditworthiness of the borrower, utilisation of loan, markup rate charges and the judicial system of Pakistan.

Population and sampling

The population will include the branch networks of the top five commercial banks in Pakistan, i.e. HBL number of branches: 1,643, NBP number of branches: 1,446, MCB number of branches: 1,244, UBL number of branches: 1,320, and ABL number of branches: 1,059. There are 6,712 branches in total. It is impossible to collect data from the whole population, that is why we use judgmental sampling or purposive sampling for the defined population. Sample size: 364 branch officials were selected for collecting data regarding the credit portfolio (Krejcie–Morgan 1970; Monkey survey, Confidence level 95%).

Content and face validity

Content validity is checked through brainstorming sessions with bankers who are diversely experienced in dealing with SMEs. To improve understanding and thematic categorization, all the questions are/were cross-examined, the purpose was established, and any questions with unclear themes were removed/changed. For content validity, a master of English reviewed the questionnaire to ensure there were no grammatical errors.

Data collection

For the purpose of data collection, a cross-sectional survey design was adopted, which include the creditworthiness of the borrower, the markup rate offered to the borrower, utilisation of loan, the judicial system of Pakistan and the SME default ratio. The employees were also asked about demographics like gender, current working experience, bank and academic and professional qualification. The 5-point Likert scale was used for constructs like the creditworthiness of the borrower, the markup rate offered to the borrower, utilisation of loan, the judicial system of Pakistan and the SME default ratio.

Data analysis and results***Descriptive statistics***

Descriptive or demographic statistics are the first step for data analysis, containing demographic questions to build individuals' interest and get information about the demographic stats of the target audience. According to research type and demand, the present study contains four demographic questions, i.e. respondent's gender, the bank where they are working, education, and experience. For the purpose of data analysis based on these questions, the descriptive frequency analysis was made through SPSS.

Table 1 shows the results of the first section of the questionnaire regarding four demographic questions. The results reveal that, from a total of 270 valid responses, the majority of respondents are male, namely 168 respondents. Next, the employees from the national bank of Pakistan are on top, namely 114 respondents. Thirdly, most of respondents (a total of 186) have a post-graduate education. The last question was about their experience; here, the majority of respondents (37%) fall in the slot of 1-5 years.

Table 1. Descriptive statistics

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	168	62.2	62.2	62.2
	Female	102	37.8	37.8	100.0
	Total	270	100.0	100.0	
Bank	HBL	34	12.6	12.6	12.6
	NBP	114	42.2	42.2	54.8
	ABL	37	13.7	13.7	68.5
	UBL	42	15.6	15.6	84.1
	MCB	43	15.9	15.9	100.0
	Total	270	100.0	100.0	
Education	Postgraduate	76	28.1	28.1	28.1
	Graduate	86	31.9	31.9	60.0
	Other	108	40.0	40.0	100.0
	Total	270	100.0	100.0	
Experience	1-5 years	100	37.0	37.0	37.0
	6-10 years	77	28.5	28.5	65.6
	11-15 years	61	22.6	22.6	88.1
	16-20 years	32	11.9	11.9	100.0
	Total	270	100.0	100.0	

Source: Own editing

Reliability and convergent validity

The reliability of the construct has been assessed by using Cronbach's Alpha, rho_A and composite reliability values to measure the internal consistency of data. Its value should be greater than 0.7. In our research, the values for all constructs met the threshold value of Cronbach's Alpha, but as its composite reliability meets the criteria to be reliable, satisfaction can be considered a reliable construct. In our research, the values for all constructs met the threshold value of Cronbach's Alpha (Table 2), so we consider it a reliable and valid construct.

Convergent validity determines all those confluences of pointers that show how a construct compares the items evaluating the other constructs. Convergent validity is evaluated by means of item indicator reliability and the factor loading value. It is also evaluated by a measure known as Average Variance Extracted (AVE), proposed by Fornell–Larcker (1981). The variable inter reliability, also known as factor loading value, has to be greater than 0.6 (Hair et al. 2014), whereas the AVE values need to be greater than 0.5 for the acceptability of the

convergent validity. Convergent validity can be defined as a degree to which all the compound items of the model are being used to evaluate and assess the very same concept (Surienty et al. 2014). For this purpose, you can take a look at the outer loading shown in Table 3. The threshold value for convergent validity in outer loading should be greater than 0.6.

Table 2. Reliability statistics

	Cronbach's Alpha	rho_A	Composite Reliability
Judicial System	0.907	0.941	0.915
CWa	0.893	0.898	0.916
CWb	0.874	0.878	0.905
CWc	0.943	0.947	0.953
CWd	0.862	0.919	0.896
CWe	0.709	0.939	0.802
CWf	0.847	0.865	0.907
Markup Rate	0.800	0.847	0.868
SME Default Ratio	1.000	1.000	1.000
Utilisation of Loan	0.809	0.982	0.858

Source: Own editing

Indicator reliability is being measured through outer loading. It explains the degree of indicators' consistency regarding what they intend to measure. Henseler et al. (2009) argued that minimum 50 percent of indicator variance of measure must be explained by the latent variable. Chin (1998) claims that factor loadings should be significant at the 0.5 level and ideal above 0.7. On the other side, lower values, such as 0.45, are acceptable for exploratory research (Lewis et al. 2005). The analysis shows outer loading values after deleting unreliable questions. JS1 to JS8 show that the questions are reliable and they create the construct for the reflective variable Judicial System as the values are above the threshold figure. Similarly, the questions for CWa1 to CWa7 show that the questions are reliable and they create the construct for the formative variable Character; the questions from CWb1 to CWb6 show that the questions are reliable and they create the construct for the formative variable Capacity. All these questions have satisfactory values to meet the criteria.

Table 3. Reliable outer loadings

	Judicial System	CWa	CWb	CWc	CWd	CWe	CWf	Markup Rate	SME Default Ratio	Utilisation of loan
JS1	0.785									
JS2	0.758									
JS3	0.846									
JS4	0.795									
JS5	0.793									
JS6	0.714									
JS7	0.655									
JS8	0.695									
CWa1		0.780								
CWa2		0.843								
CWa3		0.823								
CWa4		0.725								
CWa5		0.655								
CWa6		0.840								
CWa7		0.793								
CWb1			0.754							
CWb2			0.837							
CWb3			0.812							
CWb4			0.778							
CWb5			0.744							
CWb6			0.772							
CWc1				0.864						
CWc2				0.817						
CWc3				0.824						
CWc4				0.925						
CWc5				0.825						
CWc6				0.935						
CWc7				0.847						
CWd1										
CWd2					0.761					
CWd3					0.741					
CWd4					0.740					
CWd5					0.890					
CWd6					0.840					
CWe1						0.779				
CWe2						0.691				
CWe3						0.688				
CWe5						0.886				
CWf1							0.905			
CWf2							0.834			
CWf3							0.884			
MUR1								0.730		
MUR2								0.707		
MUR3								0.891		
MUR4								0.820		
SMEDR									1.000	
UL1										0.918
UL2										0.662
UL4										0.787
UL5										0.722

Source: Own editing

Table 4. Average Variance Extracted

	Average Variance Extracted
Judicial System	0.574
CWa	0.612
CWb	0.614
CWc	0.746
CWd	0.635
CWe	0.578
CWf	0.765
Markup Rate	0.625
SME Default Ratio	1.000
Utilisation of Loan	0.605

Source: Own editing

Average Variance Extracted (AVE) basically supports the results of convergent validity (Joseph et al. 2014). The value of each variable should be greater than 0.5 and all variables in our research met the minimum value requirement, except Image which shows an insignificant value. From the results of the average variance extracted shown in Table 4, we can see that the value for the variable Judicial System is 0.574. The average variance extracted for the formative variables of Creditworthiness is as follows: for Character (CWa) it is 0.612, for Capacity (CWb) it is 0.614. for Cash (CWc) it is 0.746, for Collaterals (CWd) it is 0.635, for Conditions (CWe) it is 0.578, for Control (CWf) it is 0.765. The average variance extracted for the markup rate is 0.625, the average variance extracted for the SME default ratio is 1.00 and the average variance extracted for utilisation of loan is 0.605. All the results for average variance extracted clearly show that the value is above the threshold level, so this proves the convergent validity of the construct.

Discriminant validity

Fornell-Larcker validity

Discriminant Validity (DV) is defined as the degree to which the pointers of several latent variables (constructs) are dissimilar to each other (Urbach–Ahlemann 2010). In the PLS approach, DV can be evaluated by two measures, i.e. cross-loadings and the Fornell-Larcker criterion (Fornell–Larcker 1981). In order to attain cross-loadings, the score of each construct is being correlated with the rest of the indicators (Chin 1998). DV can be defined as when the loadings of an indicator are higher for the construct measured as compared to

any of the other constructs and also each of the constructs loads the highest of the value with the allocated indicators. Fornell-Larcker criteria entails that a construct comprehends added variance with its assigned indicators as compared to any other construct. For the sake of this, the AVE of each latent variable must be more significant than the construct's utmost squared correlation with any other construct.

Table 5. Fornell-Larcker criteria

	JS	CW _a	CW _b	CW _c	CW _d	CW _e	CW _f	CW	MUR	SME DR	UOL
JS	0.758										
CW_a	-0.002	0.782									
CW_b	0.124	0.819	0.783								
CW_c	-0.062	0.099	0.097	0.864							
CW_d	0.122	0.060	0.032	0.106	0.797						
CW_e	0.038	-0.646	-0.502	-0.053	0.018	0.761					
CW_f	0.013	-0.032	-0.004	0.053	-0.040	-0.008	0.875				
CW	0.046	0.711	0.738	0.493	0.139	-0.393	0.475	0.714			
MUR	0.050	0.957	0.847	0.099	0.051	-0.594	-0.005	0.134	0.790		
SME DR	-0.119	0.149	0.148	0.097	0.019	-0.032	0.093	0.236	0.132	1.000	
UOL	0.231	0.057	0.136	0.004	0.134	-0.019	-0.160	0.007	0.048	-0.038	0.778

Note: JS= Judicial System, CW= Creditworthiness, MUR= Markup Rate, SME DR= SME Default Ratio, UOL= Utilisation of loan

Source: Own editing

According to the threshold, the value of Fornell-Larcker should be equal to or greater than 0.708 and, according to the analysis, all the independent variables like Creditworthiness, including all its formative variables, Character value is 0.782, Capacity value is 0.783, Cash value is 0.864, Collaterals value is 0.797, Conditions value is 0.761 and Controls value is 0.875 with other independent variables Markup rate value is 0.790, Utilisation of loan value is 0.778 and Judicial System value is 0.758 shows higher values then threshold which again tells the loadings that the rest results are valid (Table 5).

Cross-loading

Cross-loading is fundamentally being used to show that the loading value of one indicator is the highest with its own construct and lower with the other constructs/variables.

Table 6. Cross-loading

	JS	CW _a	CW _b	CW _c	CW _d	CW _e	CW _f	CW	MUR	SME	DR	UL
JS1	0.785	0.018	0.082	-0.083	0.089	0.049	0.000	0.023	0.043	-0.134	0.137	
JS2	0.758	-0.052	0.097	-0.069	0.130	0.100	-0.078	-0.027	0.000	-0.059	0.204	
JS3	0.846	0.021	0.139	-0.017	0.098	-0.009	0.043	0.086	0.068	-0.115	0.212	
JS4	0.795	-0.006	0.096	-0.043	0.107	0.016	-0.002	0.029	0.036	-0.082	0.181	
JS5	0.793	-0.049	0.051	-0.005	0.106	0.035	0.020	0.024	-0.010	-0.043	0.221	
JS6	0.714	0.012	0.083	-0.008	0.085	-0.006	0.088	0.079	0.070	-0.030	0.228	
JS7	0.655	-0.023	0.122	0.053	0.132	0.039	0.091	0.121	0.032	0.016	0.240	
JS8	0.695	-0.016	0.116	-0.045	0.053	0.034	0.073	0.062	0.038	-0.036	0.183	
CW _a 1	0.053	0.780	0.607	0.029	0.018	-0.579	-0.064	0.516	0.662	0.101	0.106	
CW _a 2	-0.132	0.843	0.597	0.103	0.111	-0.552	-0.077	0.569	0.700	0.200	0.046	
CW _a 3	-0.113	0.823	0.595	0.088	0.034	-0.526	-0.031	0.537	0.693	0.103	0.013	
CW _a 4	0.032	0.725	0.596	0.037	-0.001	-0.419	0.029	0.535	0.730	0.087	-0.031	
CW _a 5	0.175	0.655	0.545	0.112	0.088	-0.372	0.009	0.496	0.707	0.075	0.077	
CW _a 6	0.043	0.840	0.752	0.068	0.065	-0.471	-0.031	0.627	0.891	0.134	0.061	
CW _a 7	-0.051	0.793	0.754	0.103	0.011	-0.603	-0.007	0.592	0.820	0.108	0.042	
CW _b 1	-0.051	0.493	0.754	0.103	0.011	-0.603	-0.007	0.592	0.820	0.108	0.042	
CW _b 2	0.053	0.801	0.837	0.082	0.049	-0.533	-0.044	0.641	0.789	0.169	0.119	
CW _b 3	0.068	0.713	0.812	0.067	-0.014	-0.450	0.019	0.627	0.751	0.146	0.029	
CW _b 4	0.233	0.507	0.778	0.051	0.039	-0.249	0.001	0.523	0.538	0.042	0.126	
CW _b 5	0.143	0.458	0.744	0.096	0.010	-0.248	0.034	0.516	0.499	0.055	0.178	
CW _b 6	0.174	0.514	0.772	0.053	0.057	-0.208	-0.019	0.552	0.528	0.167	0.162	
CW _c 1	-0.033	0.062	0.066	0.864	0.118	-0.063	0.024	0.404	0.053	0.099	-0.023	
CW _c 2	-0.039	0.097	0.049	0.817	0.087	-0.035	0.050	0.401	0.096	0.090	0.007	
CW _c 3	-0.075	0.115	0.097	0.824	0.153	-0.022	0.073	0.441	0.119	0.068	0.014	
CW _c 4	-0.076	0.095	0.123	0.925	0.090	-0.061	0.068	0.481	0.101	0.094	-0.002	
CW _c 5	-0.050	0.077	0.065	0.825	0.058	-0.021	0.033	0.381	0.074	0.030	0.027	
CW _c 6	-0.047	0.112	0.090	0.935	0.072	-0.059	0.030	0.464	0.105	0.130	0.010	
CW _c 7	-0.050	0.034	0.088	0.847	0.060	-0.056	0.036	0.395	0.038	0.065	-0.006	
CW _d 1	0.063	0.001	-0.038	0.037	0.455	0.074	-0.019	0.021	-0.007	-0.021	0.070	
CW _d 2	0.129	0.007	-0.041	0.091	0.761	0.029	0.017	0.073	0.016	-0.049	0.093	
CW _d 3	0.042	0.091	0.105	0.069	0.741	0.019	-0.173	0.101	0.085	0.037	0.050	
CW _d 4	0.070	0.062	0.085	0.064	0.740	0.057	-0.193	0.064	0.061	0.018	0.082	
CW _d 5	0.129	0.055	0.027	0.092	0.890	-0.002	-0.020	0.142	0.041	0.050	0.142	
CW _d 6	0.100	0.034	-0.011	0.098	0.840	0.004	0.077	0.134	0.021	0.001	0.133	
CW _e 1	0.048	0.308	0.223	-0.061	-0.017	0.779	-0.082	0.083	0.301	-0.038	0.176	
CW _e 2	0.037	0.259	0.225	0.007	0.013	0.691	0.079	0.162	0.251	-0.019	0.060	
CW _e 3	0.068	0.273	0.236	-0.040	0.010	0.688	0.087	0.155	0.289	-0.039	0.078	
CW _e 5	-0.094	0.710	0.534	0.087	-0.035	0.886	-0.053	0.434	0.633	0.067	-0.026	
CW _f 1	-0.047	0.005	0.020	0.086	-0.060	-0.012	0.905	0.475	0.032	0.123	-0.177	
CW _f 2	0.060	-0.052	-0.041	-0.005	-0.003	-0.001	0.834	0.355	-0.034	0.076	-0.125	
CW _f 3	0.037	-0.046	0.000	0.045	-0.034	-0.006	0.884	0.404	-0.022	0.039	-0.113	
MUR1	0.032	0.725	0.596	0.037	-0.001	-0.419	0.029	0.535	0.730	0.087	-0.031	
MUR2	0.175	0.655	0.545	0.112	0.088	-0.372	0.009	0.496	0.707	0.075	0.077	
MUR3	0.043	0.840	0.752	0.068	0.065	-0.471	-0.031	0.627	0.891	0.134	0.061	
MUR4	-0.051	0.793	0.754	0.103	0.011	-0.603	-0.007	0.592	0.820	0.108	0.042	
SMEEE	-0.119	0.149	0.148	0.097	0.019	-0.032	0.093	0.236	0.132	1.000	-0.038	
UL1	0.204	0.054	0.139	0.022	0.123	-0.055	-0.162	0.007	0.041	-0.042	0.918	
UL2	0.080	0.007	0.121	0.020	0.124	0.036	-0.058	0.039	0.018	0.000	0.662	
UL4	0.177	0.029	0.088	-0.017	0.112	0.066	-0.079	0.022	0.029	-0.025	0.787	
UL5	0.208	0.067	0.084	-0.020	0.083	-0.044	-0.158	-0.028	0.063	-0.013	0.722	

Source: Own editing

Cross-loading is used to compare the value of each element with its own construct as well as with other constructs. Here, the value of an item should be the highest with its own variable and lower with other variables; in our research, all items met the requirement. The results show that all the questions have the highest values for their own variables and lower values with other constructs (as shown in Table 6).

Collinearity statistics

The Variance Inflation Factor (VIF) measures the extent to which the variance of the estimated regression coefficients is enhanced as comparatively to the situation when the predictor variables are not being linearly related. The VIF of the outer model is known as Outer VIF. It depicts the correlation amongst the elements, and it should have a value of less than 5 (Hair et al. 2014). According to the threshold value, VIF should be less than 5, hence all the results show significant values (Table 7).

Table 7. VIF

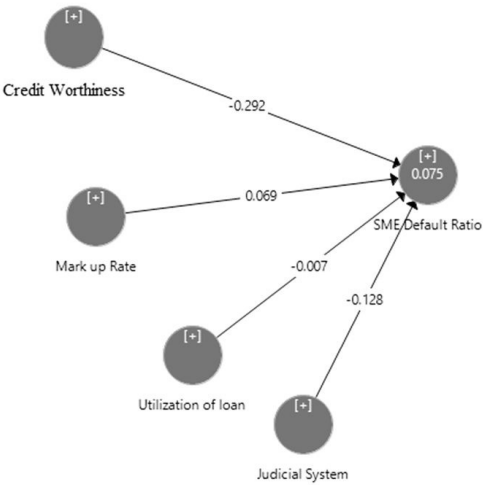
	VIF
Judicial System	1.059
CWa	3.957
CWb	3.057
CWc	1.025
CWd	1.022
CWe	1.735
CWf	1.009
Lending Decision	2.042
Markup Rate	2.046
SME Default Ratio	1.000
Utilisation of Loan	1.060

Source: Own editing

PLS-SEM Structural Model

The impact of the independent variable Creditworthiness on the SME Default Ratio has a value of -0.292, which shows an inverse relationship (Figure 1). The model indicates that if Creditworthiness increased by 100 percent then SME default ratio will decrease by 29.2 percent. From all the independent variables, creditworthiness has the highest impact on the SME default ratio. The impact of the independent variable Markup Rate on the SME Default Ratio has a value of +0.069, which shows a positive relationship. The model indicates that if markup rate is increased by 100 percent then SME default ratio will increase by 6.9 percent.

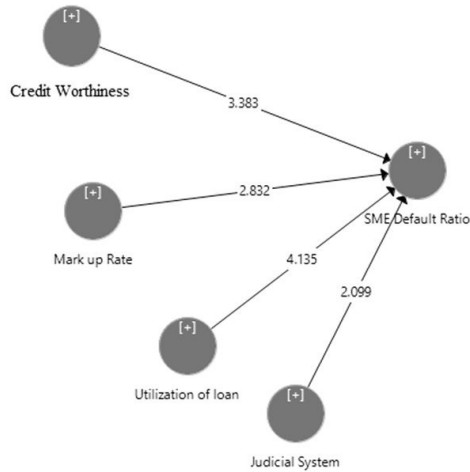
The markup rate is the only independent variable which has a positive relationship among all the variables. The impact of the independent variable Utilisation of Loan for its specific purpose on the SME Default Ratio has a value of -0.007, which shows an inverse relationship. The model indicates that if the utilization of the loan increased by 100% then the SME default ratio would decrease by 0.7%. The SME default ratio with the value of -0.128 indicates if the Judicial System in respect of recovery of default amount performs better by 100 percentage then SME default ratio is decreased by 12.8 percent. The judicial system for loan default recovery has the second largest impact on the SME default ratio.



Source: Own editing

Figure 3. Structural Model

After bootstrapping, the impact of the independent variable Creditworthiness on the SME Default Ratio has a value of 3.383 (Figure 4). The impact of the independent variable Markup Rate on the SME Default Ratio has a value of 2.832. The impact of the independent variable Utilisation of Loan for its specific purpose on the SME Default Ratio has a value of 4.135. For the last variable, Judicial System for loan default recovery, the impact on the SME Default Ratio has a value of 2.099. After bootstrapping, all the values are above the acceptable range. The highest value is for utilisation of the loan for the purpose for which the loan was requested.



Source: Own editing

Figure 4. Bootstrapping

Table 8. Path Coefficient

	Original Sample	Sample Mean	T Statistics (O/STDEV)	P value
Judicial System -> SME Default Ratio	-0.128	-0.125	2.099	0.036
Creditworthiness -> SME Default Ratio	-0.292	-0.286	3.383	0.001
Markup Rate -> SME Default Ratio	0.069	0.067	2.832	0.006
Utilisation of Loan -> SME Default Ratio	-0.007	-0.007	4.135	0.003

Source: Own editing

For hypothesis acceptance the T value should be greater than 1.96 and the P value should be less than 0.05. Results presented in Table 8 show that for the Judicial System, T statistics are 2.099 and P value is 0.036; for Creditworthiness, T statistics are 3.383 and P value is 0.001; for the Markup Rate, T statistics are 2.832 and P value is 0.006; and for Utilisation of Loan, T statistics are 4.135 and P value is 0.003. All the results of independent variables are within the acceptable range. This indicates that hypothesis H_1 is accepted and H_0 is rejected.

Conclusion

The construct regarding the lending decision and the SME default ratio is valid and reliable based on the analysis of multiple statistical tools, as shown in the above-mentioned results. The lending decision process consists of four variables:

Creditworthiness, Markup Rate, Utilisation of Loan and Judicial System. There is a correlation between all independent and dependent variables. Creditworthiness and the judicial system have a major impact on the SME default ratio. All the independent variables have an inverse correlation with the SME default ratio, except the markup rate. The markup rate has a positive correlation with the SME default ratio. In the lending decision process, creditworthiness has the highest impact on the SME default ratio; it includes its formative variables: character of the borrower, capacity to repay the loan, cash related to the financial soundness of the borrower, collaterals offered by the borrower, conditions of the industry and control regulated by the authorities specific to the borrower.

Managerial implications

The current findings revealed the various factors which influence the SME default ratio in dealing with lending decisions. This type of study is not only fruitful for financing companies, i.e. microfinance banks, but also beneficial for practitioners in the SME sector. The findings indicate that creditworthiness is the most significant factor. This seems as practicing while making decisions about financing in debt or equity. This factor should also be considered by microfinance banks when disbursing loans.

Limitations and future directions

This study provides a solid foundation for future research. Every study has some limitations due to various factors, mainly due to human thinking patterns. These limitations can be utilised by researchers to consolidate the existing research and add value to literature. The current research has some limitations as well. Firstly, as far as contextual factors are concerned, the current research targets only the SME sector of Pakistan, which could be a hurdle for the global generalizability of the results. Secondly, the study didn't consider the factors strengthening or weakening the relationship between the lending decision-making elements. It is recommended that future research should also consider risk factors while replicating the current model in other cultures and contexts. Lastly, the current study utilises a structured close-ended questionnaire, which could deter the respondents from fully expressing their perceptions regarding the lending decision. Therefore, future research should consider focus group discussions with business experts and should use qualitative research methods.

References

- Ahmad, N. H.–Ramajah, T.–Halim, H. A.–Rahman, S. A. 2017. *Handbook of Research on Small and Medium Enterprises in Developing Countries*. IGI Global.
- Ary, D.–Jacobs, L. C.–Irvine, C. K. S.–Walker, D. 2018. *Introduction to Research in Education*. Boston, MA: Cengage Learning.
- Bilal, A. R. 2016. Constraints to Growth: A Cross Country Analysis of Chinese, Indian and Pakistani SMEs. *Chinese Management Studies* 10(2), 365–386.
- Bindra S. 1998. Banking Crisis. *The East African* 1998(October), 19–25.
- Bronfenbrenner, U. 1979. *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Campos, H. M. 2016. The role of creativity in mediating the relationship between entrepreneurial passion and entrepreneurial alertness. *Review of Business Management* 18(61), 457–472.
- CBK 2008. *Bank Supervision Annual Report 2008*. <https://www.centralbank.go.ke/images/docs/Bank%20Supervision%20Reports/Annual%20Reports/bsd2008R.pdf>, downloaded: 19.10.2017.
- Chin, W. W. 1998. The partial least squares approach for structural equation modeling. In: Marcoulides, G. A. (ed.) *Modern methods for business research*. Lawrence Erlbaum Associates Publishers, 295–336.
- Crotty, M. 1998. *The Foundations of Social Research: Meaning and Perspective in the Research Process*. London: SAGE Publications Inc.
- De Vaus, D. 2001. *Research Design in Social Research*. London: Sage.
- Ensaria, M.–Karabay, M. E. 2014. What Helps to Make SMEs Successful in Global Markets. *Procedia - Social and Behavioral Sciences* 150, 192–201.
- Fashina, A. A.–Abdilahi, S. M.–Fakunle, F. F.–Ahmed, M. H. 2020. Exploring the extent to which SMEs can realize a better organizational performance when various project management practices are linked together. *PM World Journal* 9, 1–22.
- Fesharaki, F. 2019. Entrepreneurial passion, self-efficacy, and spiritual intelligence among Iranian SME owner-managers. *Psychological Studies* 64(4), 429–435.
- Fornell, C.–Larcker, D. F. 1981. Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research* 18, 382–388.
- Gálová, J. 2014. Selected Business Aspects of The Emerging Market of Ukraine. *Journal of Central European Green Innovation* 2(1), 51–59.
- Ha, S.T.–Lo, M.C.–Wang, Y.C. 2016. Relationship between Knowledge Management and Organizational Performance: A Test on SMEs in Malaysia. *Procedia - Social and Behavioral Sciences* 224, 184–189.
- Hair Jr., J. F.–Sarstedt, M.–Hopkins, L.–Kuppelwieser, V.G. 2014. Partial Least Squares Structural Equation Modeling (PLS-SEM): An Emerging Tool in Business Research. *European Business Review* 26, 106–121.

- Hamdillah, D. N.–Purwanto, B.–Ermawati, W. J. 2021. The Effect of Asset Quality and Financial Performance on Non Performing Loans (NPLs) of Rural Banks in Indonesia.
- Henseler, J.–Ringle, C.–Sinkovics, R. 2009. The Use of Partial Least Squares Path Modeling in International Marketing. *Advance in International Marketing* 20, 277–319.
- Huynh, J.–Dang, V. D. 2021. Loan portfolio diversification and bank returns: Do business models and market power matter? *Cogent Economics & Finance* 9(1), 1891709.
- Hyder, S.–Lussier R. N. 2016. Why Business Succeed or Fail: A Study on Small Businesses in Pakistan.”. *Journal of Entrepreneurship in Emerging Economies* 8(1), 82–100.
- Jasra, J. M. 2011. Determinants of Business Success of Small and Medium Enterprises. *International Journal of Business and Social Science* 2(2). 274–280.
- Khalique, M. I. 2011. Challenges for Pakistani SMES in a Knowledge-Based Economy. *Indus Journal of Management & Social Sciences* 5(2), 74–80.
- Khan, M. W. 2014. An Overview of Small and Medium Enterprises in Malaysia and Pakistan: Past, Present and Future Scenario. *Business and Management Horizons* 2(2), 38.
- Krejcie, R. V.–Morgan, D. W. 1970. Determining sample size for research activities. *Educational and Psychological Measurement* 30(3), 607–610.
- Lewis G. P.–Schrire, B.–Mackinder, B.–Lock, M. 2005. *Legumes of the world*. Richmond, USA: Royal Botanic Gardens, Kew.
- McCann, F.–McIndoe-Calder, T. 2012. Determinants of SME Loan Default: The Importance of Borrower-Level Heterogeneity. *Central Bank of Ireland Conference The Irish SME.0*.
- Newman, D. 2016. *The Changing Role of IT in the Future of Business*. <https://www.forbes.com/sites/danielnewman/2016/07/26/the-changing-role-of-it-in-the-future-of-business/#239a27b8525d>, downloaded: 19.10.2017.
- Quader, S. M.–Abdullah, M. N. 2009. Constraints to SMEs: A Rotated Factor Analysis Approach. *South Asian Studies* 24(2), 334–350.
- Qureshi, J. A. 2012. Financial Quota of Loans for the SME Sector in Pakistan: A Survey in Karachi. *Interdisciplinary Journal of Contemporary Research in Business* 4(5).
- Raouf, A. 1998. Development of Operations Management in Pakistan. *International Journal of Operations & Production Management* 18(7), 649–650.
- Rasiah, D. 2010. Review of Literature and Theories on Determinants of Commercial Bank Profitability. *Journal of Performance management* 23(1), 23–49.
- Rose, P. S. 1983. Loans in a Troubled Economy. *The Canadian Banker* 90(3), 55–64.
- Saeed, A.–Sameer, M. 2015. Financial Constraints, Bank Concentration and SMEs: Evidence from Pakistan. *Studies in Economics and Finance* 32(4), 503–524.
- SBP 2003. *Banking Supervision Department Circulars 2003*. <https://www.sbp.org.pk/bsd/2003/index.htm>, downloaded: 19.10.2017.
- Surienty, L.–Ramayah, T.–Lo, M.–C.–Tarmizi, A. N. 2014. Quality of Work Life and Turnover Intention: A Partial Least Square (PLS) Approach. *Social Indicators Research* 119(1), 405–420.

Thygeson, K. J. 1995. *Management of Financial Institutions (1st edition)*. New York, NY: Harpercollins College Div.

Urbach, N.–Ahlemann, F. 2010. Structural Equation Modeling in Information Systems Research Using Partial Least Squares. *Journal of Information Technology Theory and Application* 11, 5–40.

Veskaisri, K. C. 2007. Relationship Between Strategic Planning and SME Success: Empirical Evidence from Thailand. *Asia and Pacific DSI* 2007(July).

Waitherero, K. F.–Muchina, S.–Macharia, S. 2021. The role of liquidity risk in augmenting firm value: lessons from savings and credit cooperatives in Kenya. *International Journal of Financial, Accounting, and Management* 2(4), 295–304.

Yew Wong, K.–Aspinwall, E. 2004. Characterizing knowledge management in the small business environment. *Journal of Knowledge Management* 8(3), 44–61.

Yilmaz, K. 2013 Comparison of Quantitative and Qualitative Research Traditions: Epis-temological, Theoretical, and Methodological Differences. *European Journal of Education* 48, 311–325.
