

Unlocking the path to funding: A comparative analysis of factors influencing bank loan access for small and medium enterprises from an entrepreneurial perspective

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Abstract This study aims to examine the influence of determinants such as business location (BL), organizational legal form of the business (OLF), deadline of loan repayment in months (DLR), interest rate (IR), and number of employees (NE) on the Small and Medium Enterprises (SMEs) access to bank loans measured by the loan amount (LA) borrowed by SMEs. To examine the influence of these factors, the research methodology incorporates primary data that were collected through quantitative research conducted on 300 SMEs in the Republic of Kosovo and 300 SMEs in the Republic of North Macedonia. To achieve this goal, the multiple linear regression model was used to assess the influence of the variables on SMEs' access to bank loans based on managers' or entrepreneurs' observations. Findings indicate differences in both countries. In Kosovo, the organizational legal form of the business, deadline of loan repayment, and number of employees positively and significantly influence the SMEs' access to bank loans. Surprising results have resulted in business location and interest rates as they have not expressed a significant influence. In North Macedonia, the results revealed that BL, OLF, DLR, and NE positively and significantly influence the SMEs' access to bank loans. Furthermore, the results in North Macedonia also revealed that the interest rates have no significant influence on SMEs' access to bank loans. In terms of contribution, the study offers novel data using econometric techniques, and provides unique insights into facilitators and inhibitors to access to bank loans for SMEs in Kosovo and North Macedonia.

Keywords: entrepreneurs, SMEs, financing, bank loans, comparison

1. Introduction

SMEs have immense importance for economic growth worldwide. The features of SMEs vary according to the business sector in which they operate, the markets they serve, the products they produce, and their level of involvement and connectivity with support institutions and the macroeconomic environment. SMEs are a heterogeneous universe of highly diverse economic agents (North & Varvakis, 2016). In the last decades of the 20th century, a shift in the production philosophies of the most developed nations occurred. Small businesses, which support individualism and creativity in opposition to the globalization and standardization promoted by large, multinational corporations, replaced the era of giant corporations (Risteska-Jankuloska et al., 2016).

Recognizing the significant impact of entrepreneurship, the European Union reported that SMEs alone provide two-thirds of the total private sector employment in the EU (Saura et al., 2023; Sannikova et al., 2023; Sánchez-Robles et al., 2024), demonstrating the extensive role of entrepreneurship in job creation and economic stability. As studies have shown (Li et al., 2024; Hakhverdyan & Shahinyan, 2022; Khalatur & Dubovych, 2022; Yu & Zheng, 2024), governments should consider financial support such as grants, low-interest loans, tax incentives, and subsidies specifically targeted at green businesses and social enterprises (Kwilinski et al., 2024).

The expansion of SMEs fosters innovation, a variety of products and services available on the market, a decrease in the unemployment rate, and other beneficial aspects of economic development. Nevertheless, they require funding to expand. Determining the variables that influence SMEs' ability to obtain bank loans is crucial to helping in this area. The financing of SMEs and the accessibility of capital are important factors that influence the start of businesses and their growth (Demiri et al., 2021). Numerous empirical studies demonstrate that one of the main obstacles impeding the economic growth of SMEs is a shortage of funding, with the smallest businesses being most severely impacted by this constraint (Jiménez-Rico et al., 2023). The literature reveals that SMEs encounter a different barrier. According to many studies, SMEs struggle with funding,



especially in regard to obtaining debt financing. However, studies also show that there are an extensive variety of barriers, depending on the specific market conditions. Another significant discovery is that several factors influence the growth impediments faced by SMEs and that particular circumstances may differ across different nations (Wang, 2016).

The pecking-order theory and the financial life-cycle theory are two contemporary theories that address studies on how businesses behave when they request financing (credit demand); both theories have been examined in the context of SMEs. Access to bank financing is restricted by a number of factors, which can be broadly categorized into three categories: (a) economic factors related to the nation, (b) banking system constraints, and (c) enterprise-specific factors. Thus, the different studies on this topic center on the viewpoint of the availability or inaccessibility of bank loans (Jiménez-Rico et al., 2023). Hence, the aim of this study is to examine how entrepreneurs perceive the impact of several business and bank factors on SMEs' ability to obtain bank loans. More specifically, the objective of this research is to determine whether business location (BL), the organizational legal form of the business (OLF), the deadline for loan repayment in months (DLR), the interest rate (IR), and the number of employees (NE) influence SME access to bank loans (LAS). The study acquired information from owner-managers of SMEs (manufacturing and commerce) in Kosovo and North Macedonia, adopting a cross-sectional methodology and a quantitative research paradigm. This made it possible for the authors to accomplish the primary goals that had been stated earlier.

An in-depth examination of relevant research carried out by numerous scholars worldwide reveals that numerous investigations have been carried out to look at distinct aspects that affect organizations' ability to obtain bank loans. However, potential determinants of SMEs' access to bank loans have traditionally been examined independently and not in combination with one another. Moreover, previous research on these determinants–bank financing nexuses has analyzed mostly advanced economies. As a result, the findings may have limited use in developing economies such as Southeast European countries. As shown in Table 1, Kosovo's definition is based only on the number of employees, whereas North Macedonia incorporates the number of employees, the amount of income/turnover, and total assets. The SME definition for North Macedonia is the same as that for the European Union, but it uses much lower thresholds for income/turnover and total assets. The European Union definition uses €2 m/€10 m/€50 m for income/turnover and €2 m/€10 m/€43 m for total assets (European Commission, 2024). A medium-sized SME in North Macedonia would be considered a small SME in the European Union category.

Table 1 SME thresholds in the RKS and the RNM.

RKS		RNM	
Categorization	Employees	Income/Turnover (in Mil.)	Balance Sheet Total (in Mil.)
Micro	1-9	≤ 0.5 €	≤ 0.5 €
Small	10-49	≤ 2.0 €	≤ 2.0 €
Medium -Sized	50-249	≤ 10.0 €	≤ 11.0 €

Sources: Official gazette of the RKS, Occasional paper in the RNM.

By highlighting the distinctions between the two countries and determining critical determinants that influence SMEs' access to bank loans, this study contributes positively to the field of financing for SMEs in Western Balkan economies. The study's contribution to the literature is greater than just assessing SME debt financing conditions in these two nations. It also underscores the challenges that emerging economies face in supporting SME financing opportunities. The rest of this research is organized as follows. In the second section, we provide a detailed literature review in the context of the determinants included in the research, which defines the academic foundation of potential drivers of SME access to bank loans. Nevertheless, in the third section, we describe the data and methodology used. Section 4 presents the research econometric results and discusses the findings. Finally, in the last section, we offer some important conclusions in the context of improving policies that facilitate SME access to bank loans.

2. Literature review and hypothesis development

SMEs play an immense role in the development of the economy and significantly contribute to sustainable and inclusive growth (Ahmadov & Valiyev, 2019). Definitions of SMEs vary. Any legal, independent, organized entity of persons, assets, obligations, and economic activities with a focus on making a profit is referred to as an enterprise (Khatuna & Jinoria, 2014). To distinguish between smaller and larger business types, some definitions concentrate on numerical parameters. Others describe SMEs as "a small social collectivity whose participants share a common interest in its survival and engage in collective activities to secure this end". According to this definition, an SME is a social entity that has both strengths and weaknesses in regard to navigating unstable environments (North & Varvakis, 2016). SMEs play a significant role in almost every sector of the economy, including manufacturing, services, retail and wholesale trade, and agriculture (Munro, 2013). Currently, entrepreneurship and SMEs are acknowledged globally as key sources of innovation in every nation (Mudalige, 2015). The main characteristics of SMEs tend to derive from their limitations, including customized management (owner/manager), limitations on resources (organization, finance, human resources, and management), limited market impact, and greater resilience to external factors (Dragnic, 2014). In terms of GDP, employment creation, and overall economic growth, SMEs remain crucial, regardless of whether a country is emerging or industrialized (Gomez et al., 2018). Despite being acknowledged on a worldwide

scale, entrepreneurial SMEs play a particularly significant role in emerging economies (Karadag, 2016). Studies on business development have revealed that failure rates are higher in developing nations than in developed nations, despite the significance of SMEs and their role in economic development. Entrepreneurs must overcome numerous obstacles to survive and grow their businesses (Arinaitwe, 2006).

The success of entrepreneurial SMEs is mostly dependent on their financial sources because they increase opportunities for business expansion. Financial obstacles, such as a lack of money and funding, have been shown in numerous studies to significantly hinder the growth of entrepreneurial SMEs (Beck and Demirguc-Kunt, 2006; Wang, 2016; Mohammed and Bunyaminu, 2021). Infrastructure, management, corruption, and financial and economic restrictions are the main causes of the failure of innovative SMEs. The primary impediment to the development of entrepreneurial SMEs is a lack of capital to operate or start new ones (Khan, 2022). Knowing the importance of bank financing as a key factor for SMEs' growth and development is very important for analyzing determinants that might influence the access of SMEs to bank loans. Consequently, the research hypotheses are established, and the numerous variables included in this study are addressed in the following subsections.

2.1. Common barriers for financing SMEs: Weak internal controls and fraud risks

Lending and the terms for lending (e.g., collateral, covenant agreements, and interest rates) are functions of risk and the supply and demand of capital. By demonstrating strong internal controls and anti-fraud measures, SMEs can improve their chances for loan approvals at favorable rates, as they demonstrate comparably lower risks. Banks often request an external audit report as part of providing a loan. Auditors also evaluate internal controls and are allowed to rely on internal controls if their reliability has been verified. By improving internal controls, SMEs can reduce the cost and complexity of the requested external audit and thereby facilitate timely and successful loan application. SMEs cannot influence the demand and supply for capital (supply is typically lower during recessions, as banks reduce their credit portfolios), but they can explore alternative (e.g., peer-to-peer, decentralized finance) options or access foreign capital markets, sometimes even resulting in favorable exchange rate developments. Assuming the typical inability to recover fraud losses, fraud losses are 'bottom line' net income losses (stolen funds represent profit rather than revenue), and to compensate for such losses, a company must sell additional products or services worth the fraud damage divided by its profit margin. This situation explains why even smaller fraud schemes can be bankruptcy events for SMEs and why fraud is a relevant topic for creditors.

According to the Association of Certified Fraud Examiners (ACFE), SMEs are particularly prone to fraud, as they lack proper internal controls (ACFE, 2024). The lack of capital and financing, a type of management that is focused on operational management issues rather than compliance, as well as a lack of knowledgeable employees in compliance, results in overall weak internal controls in SMEs. In Cressy's fraud triangle, which consists of pressure, rationalization, and opportunity, weak internal control represents an opportunity to commit fraud. Perpetrators view a lack of prosecution as an additional opportunity, and developing nations often have weak enforcement mechanisms. Weak governance and extraordinarily long court processing times tend to facilitate fraud. While Transparency International's Corruption Perception Index for Kosovo and North Macedonia has recently improved, they are still ranked poorly at #83 and #76, respectively (Transparency International, 2024). Many effective anti-fraud measures are not expensive, and SMEs may be able to implement segregation of duties (segregation of custody over assets, bookkeeping, and authorizations), dual control (for higher value transactions), and approved vendor lists as preventative controls and whistleblower hotlines and basic data analytics as detective controls. Basic data analytics cross-check databases to ensure that each database is distinct (e.g., the address for an employee should not also be the address for a supplier) and that all entries made are within a certain threshold (e.g., to prevent paying employees who work 120 hours per week). SMEs can use the ACFE's Occupational Fraud Report to identify fraud risks for their industry and geographical region (ACFE, 2024).

2.2. Hypothesis development

2.2.1. Bank Loan

Access to capital in entrepreneurship has been the subject of many years of research. However, the current challenge facing many market-driven economies has constrained access to financing for the majority of SMEs, which hinders their ability to develop competitively (Amadasun and Mutezo, 2022). The literature on entrepreneurship suggests that SMEs support economic growth worldwide. They accomplish this by promoting innovation and creativity and, when funding is available, by greatly increasing GDP (Ghosh, 2016). Unfortunately, the majority of SMEs in emerging countries still have difficulty obtaining bank financing, which restricts their capacity to grow (Amadasun and Mutezo, 2022).

For a business to grow, access to financing (bank loans) is key to business development. Innovation and investment are impossible without enough money. One of the main obstacles to the growth of many organizations, especially SMEs, is the difficulty in obtaining financing. Many SMEs continue to consider access to financing a major issue. The most urgent issue when comparing various company models is financing, especially for microenterprises and innovative companies. The primary source of external financing for SMEs in the EU continues to be bank loans (European Commission, 2014). The most important external financing source for SMEs globally is still bank borrowing. The degree of competition in the banking sector, the regulations

controlling bank lending, and borrowers' ability to repay are some of the factors that affect the availability of bank funding for SMEs (Kunoviku et al., 2021). To analyze the SMEs' access to bank loans, through the data collected, we analyzed whether business location (BL), the organizational legal form of the business (OLF), the deadline of loan repayment in months (DLR), the interest rate (IR), and the number of employees (NE) affected the SMEs' access to bank loans (LA). On the basis of our research review and our hypotheses, we propose the following conceptual framework. The links between variables are presented in the conceptual framework below Figure 1.

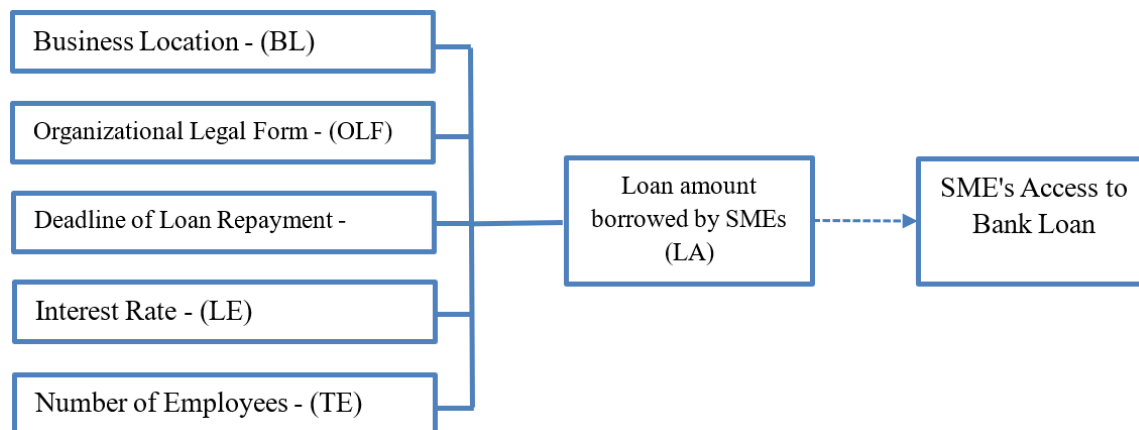


Figure 1 Conceptual framework of the study.

Source: own study.

2.2.2. Business location

While choosing a location is frequently a one-time option, a small business owner may later decide to move their enterprise to save money on running expenses or take advantage of other benefits. The great expense of a traditional physical store and the inconvenience of relocating an established firm emphasize the importance of the first choice about the precise spot of a location such as this. In addition, even with sufficient funding and excellent management skills, the business might never succeed if the location is unfavorable. National chains know how important the location is, so much so that they invest hundreds of thousands of dollars in site investigations before opening new locations (Longenecker et al., 2012). Mason and Harrison demonstrated in their research that there is no objective proof that, for instance, rural businesses are more likely than urban businesses to have been refused or charged with higher financial costs while financing through bank loans (Curran & Storey, 2016). According to research by (Bakhadirov et al., 2020), companies with headquarters in rural or urban locations have more (less) difficulty obtaining financing than other companies do. On the basis of the above discussion, we propose the following hypothesis.

H1. Business location significantly influences access to bank loans borrowed by SMEs.

2.2.3. Organizational legal form of SMEs

One of the first executive decisions to be made is what kind of legal form to use for operating a business. Since it would define the legal consequences for the business, the decision is extremely important to its success or failure. Entrepreneurs need to understand the nature and future prospects of their companies, how to close the company, and the obligations pertaining to compliance, reporting, tax obligations, and personal culpability. Above all, it is essential for entrepreneurs to ensure that the legal structure aligns with the company's growth plan (Yeboah & Koffie, 2016). Access to capital and legal form did not significantly correlate, according to the research. This finding indicates that financial institutions do not consider the legal structure of SMEs when providing loans to them; in other words, SME operators have an equal chance of obtaining funds from financial institutions regardless of their legal structure, including sole proprietorship, partnerships, and companies.

In contrast to limited liability organizations, Kira and He (2012) argued in their study that sole proprietorships and partnerships encounter greater barriers to obtaining outside funding because lenders view them as riskier businesses (Kira & He, 2012). We propose the following hypothesis in light of the debate above.

H2. The organizational legal form of a business significantly influences access to bank loans borrowed by SMEs.

2.2.4. Deadlines for loan repayment

Brownbridge (2002) reported that repayment terms are a major factor in lending-related issues. The loan length has an effect on the income of lending organizations (banks), credit applicants' repayment plans, consumer costs, and the long-term sustainability of using finance products. The length of the loan and its amount typically provide barriers to obtaining bank financing. In reality, there are three different payback terms for loans: short-term (less than a year), mid-term (repayment

within three years), and long-term (repayment more than three years) (Falkena et al., 2001). Short-term debt is defined as debt with a maturity date of less than a year, whereas long-term debt is defined as debt with a maturity date of more than a year (Mahembe, 2011; Osano & Languitane, 2016). The influence of the deadline for loan repayment in months on access to bank financing has not been explored much through research. The longer the deadline for repayment of loans is, the higher the costs for banks, and the less access to debt financing for SMEs. In light of the information provided in the previous discussion, we propose the following hypothesis.

H3. The deadline for loan repayment significantly influences access to bank loans borrowed by SMEs.

2.2.5. Interest rate

Financial institutions have paid attention to several SME obstacles that prevent them from receiving all of the financing products they need. The lack of clear financial planning, accounting reports, high interest rates, and the absence of collateral requirements are some of the barriers that SMEs must overcome (MIC, 2007; Osano & Languitane, 2016). A binomial logit regression model was employed by Lassana and Thione (2020) to assess a few key factors influencing cotton producers' ability to obtain financing. Age, marital status, and interest rates have an impact on credit access and are significant at the 5% level.

The majority of small firms are discouraged from applying for bank credit because of the high interest rates that banks impose (Diagne and Zeller, 2002; Foltz, 2004) (Osano & Languitane, 2016). Important factors that affect credit availability include credit size, duration, number of credits obtained, consumption, savings, collateral security, and interest rates (Bin, 2021; Vu & Ho, 2021). We propose the following hypothesis in light of the debate above.

H4. The interest rate significantly influences access to bank loans borrowed by SMEs.

2.2.6. Number of employees

As we elaborated above, SME size is determined in both countries according to the number of employees. In this context, we also decided to analyze the influence of the number of employees on SMEs' access to financing. The larger the business is, the greater the probability that it will be able to produce enough revenue to pay back the loan. This is because larger businesses tend to be more developed or expanded. Similarly, larger businesses can collect more assets to use as collateral for loans, which is why there is a positive correlation between the size of the business and the possibility of obtaining a loan (Botello, 2015).

According to Cowling et al. (2012), the greatest factor affecting an enterprise's ability to acquire bank credit is its size, which explains why financing options for microenterprises are limited. Given that the number of employees is an important characteristic for SME categorization for both Kosovo and North Macedonia, we propose the following hypothesis.

H5. The number of employees significantly influences access to bank loans borrowed by SMEs.

3. Research Method

3.1. Study sample

Through a cross-sectional analysis-based survey of SME owners and managers, the study employed measurable methodology. The justification for the use and collection of cross-sectional data is that there is an advantage in avoiding numerous interrelated features during the use of data extracted from different time points, such as residual series. Additionally, this methodology has the additional advantage of eliminating inference regarding the stability of the interactions within variables during the data analysis stage. Nonetheless, this does necessitate exercising caution when extrapolating outcomes obtained from one time period across different times. To accomplish the previously stated aims, a quantitative research paradigm was adopted through questionnaires targeting SMEs in two neighboring countries with advanced economic relations. The sample included in this study is 600 SMEs, where each country is represented by 300 questionnaires. Data were collected between June 2021 and March 2022. With respect to every region of Kosovo and North Macedonia, the target population for this research comprises commercial operations and manufacturing businesses. The sample was selected by applying a random stratification sample, which ensured that all SMEs had equal opportunities and probabilities. The sample stratum comprised the attributes that followed and offered the most exhaustive depiction: active businesses, the size of the business, and the industry in which they conduct business. Constraints related to money, time, resources, and other areas can also affect sample size decisions (Bartlett et al., 2001). Owing to limited financial resources, it is often difficult for researchers to physically access a geographically dispersed community. It requires time and money to travel to different regions to collect data or employs experts to obtain a sufficient and representative sample (Memon et al., 2020). Previous research has offered recommendations and proposals for the minimal sample size required to perform specific studies. For example, exploratory factor analysis cannot be carried out if the sample has fewer than 50 observations (which are still subject to other factors), but standard regression analysis requires at least 50 samples and usually 100 samples for most cases (Hair et al., 2018). In simple terms, in this scenario, an absolute minimum of 200 samples is required for a Pearson correlation evaluation (Memon et al., 2020). Therefore, in light of these assumptions, we conclude that 300 questionnaires for each country can be considered an adequate number for our study since the sample size is determined within the criteria highlighted by the aforementioned

authors. The research questionnaire includes 25 questions that are organized into three sections: the first section contains business questions; the second section contains questions related to the experience of SMEs during bank financing; and the third section consists of general questions regarding business owners. We employed a semistructured questionnaire that incorporates open questions.

3.2. Measurements and selection of variables

The research relied on a linear econometric approach to measure the effects of the abovementioned determinants, namely, business location (BL), the organizational legal form of the business (OLF), the deadline of loan repayment in months (DLR), the interest rate (IR), and the number of employees (NE), on SME bank loan access (LA), specifically, which of them has a positive or negative influence on financing through bank loans. Thus, the data were gathered from the owners or managers of 300 SMEs in the Republic of Kosovo and from 300 SMEs in the Republic of North Macedonia. The respondents were asked to offer information about the questions reflected in the semistructured questionnaire to analyze the effects of BL, OLF, DLR, IR, and NE on SMEs' access to bank loans.

When developing approaches for establishing a perception-based criterion to examine the variables influencing SMEs' ability to obtain bank loans, it is imperative to underscore the need for additional research in this domain. Other studies that have analyzed SMEs' access to bank financing have also employed a multiple linear regression model for empirical analysis (Osano & Languitane, 2016; Demiri et al., 2021). Therefore, by evaluating the abovementioned determinants and the nature of the data provided, the study was designed in line with the quantitative approach for predicting what is expected on the basis of owners' or managers' answers regarding bank financing for SMEs.

3.3. Data analysis approach

To accomplish the aims of our research and address our research inquiries, we employed the multiple linear regression approach as presented in Table 7. Regression algorithms can be categorized into various types, including linear regression, logistic regression, regression using polynomials, stepwise regression, ridge regression, LASSO regression, and elastic net regression (O'Gorman & MacIntosh, 2015). Nonetheless, the selection of the dependent variables largely determines the type of regression model that is employed. The data that were gathered, which in this case were categorical (or nominal) and the dependent variable had three ranks (ranked 1, 2, and 3), led to the development of this method. Since most research has employed an identical approach, there is additional justification to adopt the applied approach. We chose to use multiple linear regression to analyze the effects of business location (BL), the organizational legal form of the business (OLF), the deadline for loan repayment in months (DLR), the interest rate (IR), and the number of employees (NE) in the predicted variable of this examination, which is access to bank loans by SMEs. Finding the model's overall fit (variance explained) and the proportional contributions of each predictor to the total variance explained are also possible via multiple regression. Multiple linear regression seeks to predict the associations between two or more explanatory variables and a response variable by fitting a linear equation to the observed data. Given n observations, the multiple linear regression model is as follows:

$$y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_n x_{in} + \varepsilon_i \dots \quad (1)$$

where y_i is the predicted variable, $\beta_1 - \beta_n$ represents the constants of the parameters encompassed in the investigation, and ε_i represents the errors in the model. On the basis of formula (1), the actual algorithm offered in our scenario is formulated as follows:

$$Y_i = \beta_0 + \beta_1 BL_1 + \beta_2 OLF_2 + \beta_3 DLR_3 + \beta_4 IR_4 + \beta_5 NE_5 + \varepsilon_i \dots \quad (2)$$

4. Results and Discussion

4.1. Descriptive statistics

Relying on the obtained overall data as presented in Table 2, LA has a mean value of 1.887 in the instance of Kosovo and 2.174 in the instance of North Macedonia, with standard deviations of 0.731 and 0.737, respectively.

Table 2 Descriptive statistics.

Variables	N		Minimum		Maximum		Mean		Std. Deviation	
	RKS	RNM	RKS	RNM	RKS	RNM	RKS	RNM	RKS	RNM
LA	158	172	1.000	1.000	3.000	3.000	1.886	2.174	0.731	0.737
BL	300	300	1.000	1.000	2.000	2.000	1.223	1.097	0.417	0.296
OLF	300	300	1.000	1.000	4.000	9.000	1.907	3.833	1.373	1.763
DLR	158	172	6.000	12.000	120.000	240.000	39.272	58.535	17.074	40.360
IR	158	172	2.000	1.000	21.000	13.000	7.133	6.355	2.481	2.320
NE	300	300	1.000	1.000	8.000	10.000	1.120	1.887	0.780	1.998

For BL, there is a slight disparity across the two countries. In Kosovo, the mean value is 1.223. In North Macedonia, however, it is 1.097. For OLF, which represents a more pronounced disparity, in North Macedonia, the mean value is 3.833, and in Kosovo, the value is 1.907, with a standard deviation of 1.763 and a standard deviation of 1.373. A parameter that is closely associated with concerns of finance, DLR in the instance of Kosovo has resulted in a mean value of 39,272, whereas in the instance of North Macedonia, it is 58,535. For IR, Kosovo has a mean value of 7.133, whereas North Macedonia has a value of 6.355. Finally, the NE has a mean value interval of 1.120 in Kosovo and 1.887 in North Macedonia. Additionally, Table 1, in a detailed manner, offers a summary of other evaluations.

4.2. Correlation Analysis and Collinearity

As shown in Table 3, Spearman's rank-order correlation was employed to explore the relationships between access to bank loans (LA) and BL, OLF, DLR, IR, and NE. The results obtained in the Kosovo scenario revealed weak positive correlations between LA and OLF ($r=.336^{**}$), DLR ($r=.354^{**}$), and NE ($r=.302^{**}$). Furthermore, the results obtained in the North Macedonia scenario revealed a moderate positive relationship between LA and DLR ($r=.489^{**}$) and NE ($r=.430^{**}$), a weak positive relationship between LA and OLF ($r=.315^{**}$), and a weak negative relationship between LA and IR ($r=-.280^{**}$).

Table 3 Spearman correlation analysis.

			BL	OLF	DLR	IR	NE
RKS	Bank Loan	Correlation Coefficient	-0.037	.336**	.354**	-0.027	.302**
		Sig. (2-tailed)	0.647	0.000	0.000	0.732	0.000
RNM	Bank Loan	Correlation Coefficient	0.095	.315**	.489**	-.280**	.430**
		Sig. (2-tailed)	0.214	0.000	0.000	0.000	0.000

The vector inflation factor (VIF) analysis was also applied, and the results presented in Table 4 reveal that no individual variable exceeds the value of more than 1.246, which verifies the arguments provided below. The individual value according to this analysis is not considered problematic if the data do not exceed the value of 5 (Wooldridge, 2012).

Table 4 Multicollinearity and vector inflation factor (VIF) analysis.

	Republic of Kosova		Republic of North Macedonia	
	Collinearity Statistics		Collinearity Statistics	
	Tolerance	VIF	Tolerance	VIF
BL	0.959	1.042	0.988	1.012
OLF	0.928	1.078	0.803	1.246
DLR	0.979	1.021	0.89	1.123
IR	0.989	1.011	0.952	1.051
NE	0.939	1.066	0.743	1.346

a. Dependent Variable: Bank Loan.

The results strongly indicate that the applied data have not faced any multicollinearity difficulties. Wooldridge (2012) offered evidence that in scenarios where the results of this examination have a value ($VIF \leq 5$), it is regarded as an acceptable result, as each coefficient is within the threshold and the model is presumed to be stable.

4.3. Model fitting

To examine whether the data are suitable for this research, we perform R² (Table 5) and ANOVA (Table 6) to determine whether the model matches the data. On the basis of the information obtained, our R² reveals that our independent variables explain 29.6% of the variability in bank loans within Kosovo and 33.9% of the variability in bank loans within North Macedonia.

To analyze whether the data applied to the observations have any concern with serial correlation, we performed the Durbin–Watson test. The examination begins under the premise of testing the null hypothesis that the residual values within a regression analysis are not associated with the alternative idea that the remaining residual values follow a process. Therefore, Durbin–Watson has been accepted as an adequate evaluation test for this concern, which elaborates its results within the range of 0–4, and in circumstances where the value of this evaluation is within the range of 1.5–2.5, it is considered that the outcomes do not have such concerns (Krämer & Sonnberger, 2012). Its necessary application is in cases where we are dealing with data known as time series, and their observation period is limited. Considering the conclusions of the researchers previously mentioned, the number of outcomes discovered in the instance of Kosovo is 1,618; meanwhile, in the instance of North Macedonia, it is 2,019. Additionally, the outcomes in both instances confirm the premise on which the estimation technique is based; we prove this because both instances revealed outcomes that are exactly within the specified interval. Through this, we eliminate any suspicions that the applied data may have concerns regarding autocorrelation.

Assuming the observed outcomes, we prove that our approach demonstrates that the explanatory variables statistically and significantly affect the predicted variable nevertheless in Kosovo instances with $p < 0.000$ and in North Macedonia instances with $p < 0.000$, as evidenced by the ANOVA results.

Table 5 Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
RKS	.545 ^a	0.296	0.273	0.623	0.296	12.812	5	152	0.000	1.618
RNM	.582 ^a	0.339	0.319	0.608	0.339	17.034	5	166	0.000	2.019

Table 6 ANOVA.

Model		Sum of Squares	df	Mean Square	F	Sig.
RKS	Regression	24.891	5	4.978	12.812	.000 ^b
RNM	Regression	31.457	5	6.291	17.034	.000 ^b

Table 7 Empirical results.

Model	RKS			RNM		
	Standardized Coefficients Beta	t	Sig.	Standardized Coefficients Beta	t	Sig.
(Constant)		3.006	0.003		4.471	0.000
BL	-0.030	-0.429	0.668	0.146	2.296	0.023
OLF	0.315	4.456	0.000	0.179	2.543	0.012
DLR	0.393	5.721	0.000	0.355	5.311	0.000
IR	-0.014	-0.206	0.837	-0.092	-1.428	0.155
NE	0.154	2.197	0.030	0.206	2.814	0.005

4.4. Findings and Interpretation

According to our econometric model analysis, displayed in Table 5, the findings revealed that BL positively influences SMEs' access to bank loans in North Macedonia, whereas there is no significant influence of BL on SMEs' access to bank loans in the RKS. This argument is based on the coefficient (RNM: $\beta = 0.146$, with probability $p = 0.023$; RKS: $\beta = -0.030$, with probability $p = 0.668$), which is statistically significant at the 5% confidence level. Our findings for SMEs in North Macedonia are in line with the results of Bakhadirov et al. (2020) research, who show that firms headquartered in rural (urban) areas experience greater (lower) problems in accessing finance than other firms do, and the results are also in line with the results of Kärnä & Stephan (2022), who showed that urban regions offer more accurate access to bank offices, increasing the likelihood of interpersonal banking and minimizing asymmetric information, as well as access to alternative sources of finance, for example, venture capital. Additionally, our results for Kosovo's SMEs are consistent with those of Mason and Harrison's research, which demonstrates that there is no objective proof that rural businesses are more likely than urban businesses to have had their funding requests denied or to have paid higher financing rates (Curran & Storey, 2016).

The second hypothesis (H_2) was used to measure the influence of OLF on LA. The multiple linear regression analysis shows a β value of 0.315 and a p value of 0.000 for the SMEs in RKS and a β value of 0.179 and a p value of 0.012 for the SMEs in RNM, which are statistically significant at the 1% confidence level, confirming the second hypothesis. Our results for both countries are in line with those of Kira (2012), who claimed in his research that limited liability companies have a greater probability of obtaining outside funding than sole proprietorships or partnerships because lenders view them as riskier businesses. This means that the organizational legal form influences access to bank loans. Since our findings show no significant relationship between legal structure and financial availability, they do not align with the findings of these studies (Yeboah & Koffie, 2016). This implies that financial institutions do not consider the legal structure of SMEs before providing loans to them; in other words, SME operators have an equal chance of obtaining cash from financial institutions regardless of their legal structure, including sole proprietorship, partnerships, and companies.

Furthermore, the third hypothesis (H_3) was used to analyze the influence of DLR on LA. The econometric analysis shows a β value of 0.393 and a p value of 0.000 for the SMEs in RKS and a β value of 0.355 and a p value of 0.000 for the SMEs in RNM, which are statistically significant at the 1% confidence level, confirming the third hypothesis for both countries. Our findings are in full agreement with the study of Brownbridge (2002), who noted that loan terms are an important element in regard to lending issues.

The fourth hypothesis (H_4) explored the influence of IR on LA. Multiple linear regression analysis revealed a β value of -0.014 and a p value of 0.837 for the SMEs in RKS and a β value of -0.092 and a p value of 0.155 for the SMEs in RNM. Accordingly, we confirm that the influence of IR on LA is not significant, and in this regard, we reject the null hypothesis and accept the alternative hypothesis, which means that the IR has no significant influence on LA. Our findings are not in line with Bin's (2021)

findings, which show that the size of credit, duration of credit, number of credits obtained, usage of credit, savings, collateral security, and interest rate act as important components that influence access to credit.

The last hypothesis (H5) analyzed the influence of NE on LA. The results revealed a β value of 0.154 and a p value of 0.030 for the SMEs in RKS and a β value of 0.206 and a p value of 0.005 for the SMEs in RNM, which are statistically significant. In this context, we confirm the null hypothesis. Our results are completely consistent with those of Nyanzu & Quaidoo (2017) and Muhindi et al. (2021), who reported that the number of employees significantly affects bank financing availability.

5. Conclusion

This paper examines the impacts of several factors, such as business location, the organizational legal form, the deadline for loan repayment in months, the interest rate, and the number of employees, on SMEs' access to bank loans. To our knowledge, this is one of the first papers to do so because many other researchers have analyzed these variables separately. Moreover, the influence of the deadline of loan repayment has not been elaborated very much directly in previous research.

To explore the effects of independent variables on dependent variables, we used multiple linear regression analysis. The results revealed that the organizational legal form of the business, the deadline for loan repayment in months, and the SMEs' number of employees positively and significantly influence the SMEs' access to bank loans in Kosovo. Surprising results have resulted in business location and interest rates, as they do not have a significant influence. However, in North Macedonia, the results revealed that business location, the organizational legal form of the business, the deadline for loan repayment in months, and SMEs' number of employees positively and significantly influence SMEs' access to bank loans. Furthermore, the results in North Macedonia also revealed that the interest rate has no significant influence on SMEs' access to bank loans. In Kosovo and North Macedonia, access to financing is a significant issue for SMEs. This is compounded by underdeveloped financial markets and limited awareness of alternative funding sources. The results revealed that in Kosovo and North Macedonia, loan interest rates have no significant influence on SMEs' access to bank loans. This can be explained by SMEs in both countries having bank loans as the main source of external financing, and regardless of the level of interest rates, SMEs use bank loans as external sources of financing.

The findings are valuable to developing countries' SMEs and policymakers. The information that follows is a summary of the recommendations and policy implications that can be examined in light of the research findings. First, when applying for bank financing, entrepreneurs must be aware of the factors identified that positively influence access to bank loans. Government intervention can have a significant effect on the growth and development of SMEs, facilitating smoother access to bank loans. Such intervention could involve implementing policies and special programs for financial support for SMEs and encouraging banks to offer more favorable loan terms to SMEs. Financial institutions should promote awareness of available financing options. Addressing the issue of high interest rates requires regulatory measures to promote competition among financial institutions. This can be achieved by developing special funds that would provide support for the payment of interest rates of SME loans. Such support is especially important, as loan activity results in a multiplier effect for the economy: additional employees can be hired who then spend their salary, which in turn provides demand to other businesses, allowing those businesses to invest more as well. Additionally, efforts should be directed toward providing other support to SMEs, with a focus on special areas such as business planning, financial management, mentoring, networking, and market access. Additionally, we exclusively studied Kosovan and North Macedonian businesses because of our restricted ability to collect data. To validate what we discovered in the current study, we encourage other researchers to incorporate data from other developing economies. Despite these limitations, the present investigation makes important contributions to the existing literature.

Ethical considerations

All the respondents in this study were SME owners or managers. When the respondents were informed that the data from this survey were confidential, only the results were used for academic and research purposes. They agreed to complete the questionnaire, explain the purpose of the research, and state their rights as participants. This study did not involve any ethical concerns. The authors have complete responsibility for the content and conduct of the research.

Conflict of interest

The authors declare that they have no conflicts of interest.

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