

FINANCIAL LITERACY AS A STRATEGIC TOOL FOR ENHANCING RISK RESILIENCE IN SMEs: A STUDY OF LEBANESE ENTERPRISES

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ABSTRACT

This study investigates the influence of financial literacy on risk management practices among small and medium-sized enterprises (SMEs) in Northern Lebanon. Given the region's challenging economic and political landscape, characterized by instability and uncertainty, the ability of SME leaders to effectively manage risks is paramount for their sustainability and growth.

Utilizing a quantitative research methodology, data was collected from a sample of 360 SMEs to evaluate the correlation between financial literacy levels and the capacity to identify, assess, and mitigate various financial and operational risks.

The findings reveal a significant positive relationship between enhanced financial literacy - augmented by continuous training - and the resilience of SMEs in navigating economic crises. This research underscores the critical need for targeted investments in financial education as a strategic approach to bolster the performance and long-term viability of SMEs in Lebanon.

This study confirms the pivotal role of financial literacy in SME risk management and extends existing models by providing empirical evidence from Lebanon's economically volatile environment. The findings offer actionable insights for policymakers, financial institutions, and SME managers to enhance resilience strategies and mitigate systemic financial risks..

Keywords: Financial literacy, Risk management, Small and medium-sized enterprises (SMEs), Continuous training, Lebanon, Financial education, Decision making, Operational risks.

1. INTRODUCTION

Financial literacy is an essential component in the effective management of risks faced by small and medium-sized enterprises (SMEs), particularly in regions characterized by economic and political volatility, such as Lebanon (Yakob et al., 2021). SMEs constitute a vital segment of the Lebanese economy, significantly contributing to employment and national output. However, these enterprises encounter numerous challenges, including restricted access to financing, ongoing political and economic instability, and inadequate regulatory frameworks.

In this challenging landscape, risk management emerges as a critical factor for ensuring the sustainability and growth of SMEs (Aoun., 2023). A robust financial literacy enables SME leaders to grasp fundamental financial concepts and apply this knowledge strategically in their decision-making processes, thereby enhancing their ability to navigate economic uncertainties. Leaders equipped with strong financial literacy are more adept at identifying, evaluating, and mitigating risks, which is crucial for the survival of their businesses.

Operating in Lebanon's unpredictable economic and political environment, SMEs face financial constraints and high exposure to external shocks. Financial literacy, therefore, becomes

a crucial tool for risk mitigation and long-term stability (Makdissi et al., 2024). Enterprises in this region must contend not only with conventional business risks but also with external challenges stemming from economic and political upheavals. Given the financial constraints and limited government support available to SMEs, financial literacy becomes a crucial tool for enhancing business sustainability and risk mitigation. However, while several studies highlight the role of financial knowledge in decision-making, its exact impact on SME resilience in unstable economies remains underexplored.

Existing research extensively examines financial literacy in stable economies, yet its direct impact on SME resilience in politically and economically unstable contexts, such as Lebanon, remains unclear. This study addresses this gap by providing empirical evidence on how financial literacy enhances SME risk adaptation, it bridges this gap by investigating how financial literacy influences SME risk adaptation in Lebanon, an economy facing prolonged financial crises.

The operational environment for SMEs in Lebanon is particularly precarious due to heightened exposure to various risks, including economic fluctuations and political unrest. This situation necessitates that SMEs possess the capability to identify, assess, and manage these risks effectively to ensure their continued viability and growth. Financial literacy is frequently identified as a key determinant of success in risk management; however, many Lebanese SMEs exhibit a significant deficiency in this area. This lack of financial literacy can be attributed to several factors, including limited access to financial education resources, inadequate institutional support, and constrained internal capabilities (Riawan et al., 2024).

Moreover, SMEs often navigate a complex financial landscape characterized by fluctuating credit availability and elevated interest rates. The ongoing economic crisis in Lebanon has exacerbated these challenges by further diminishing financing opportunities and amplifying the financial risks confronting businesses (Makdissi et al., 2023). Therefore, it is imperative to investigate how the financial culture among SME managers influences their risk management abilities (Yahaya., 2024). Gaining insights into these dynamics can facilitate the identification of existing gaps in financial literacy while informing the development of strategies and policies aimed at strengthening this culture within SMEs. Such efforts are crucial for fostering more effective risk management practices and enhancing overall economic resilience.

This paper aims to explore the impact of financial literacy on risk management practices among SME managers in Lebanon (Togun et al., 2023). The overarching research question guiding this study is: What effect does the financial literacy of SME managers have on risk management within their organizations?

The primary objective of this paper is to analyze how financial literacy influences risk management practices within Lebanese SMEs. To achieve this aim, several specific objectives have been delineated: assessing the level of financial literacy among SME managers in Lebanon; identifying and categorizing prevalent risks faced by these enterprises; examining how financial literacy impacts managers' abilities to manage risks; identifying obstacles to improving financial literacy; and proposing actionable recommendations aimed at enhancing the financial literacy of SME managers while improving their risk management strategies (Pontes et al., 2024).

This research posits three main hypotheses: First, there exists a positive correlation between high levels of financial literacy among SME managers and their ability to identify financial risks effectively. Second, ongoing financial training significantly enhances SME managers' capabilities in assessing and mitigating operational risks. Third, SMEs demonstrating

advanced levels of financial literacy exhibit greater resilience when confronted with economic crises.

The relevance of this research is multifaceted. It addresses a pressing issue for SMEs operating within Lebanon's economically unstable environment, a context that amplifies their exposure to various risks. By investigating the relationship between financial literacy and risk management practices, this study seeks to provide valuable insights that can empower SMEs to build resilience against adversity (Zięba., 2024).

Furthermore, this paper contributes to filling a notable gap in existing literature concerning SME risk management within developing economies. Much of the current scholarship focuses predominantly on developed markets, leaving a significant void regarding the unique challenges faced by SMEs in less stable environments. By centering its analysis on Lebanon, this study offers a distinctive perspective that may resonate with other regions experiencing similar conditions.

Finally, the findings from this research hold practical implications for policymakers, financial institutions, and educational providers. By elucidating factors that influence financial literacy among SME managers and proposing targeted strategies for improvement, this study can inform policy development aimed at supporting SMEs. Ultimately, these efforts may contribute not only to enhanced economic stability but also to sustained development within Lebanon's challenging economic landscape (Gerginova., 2024).

2. LITERATURE REVIEW

Risk management and financial literacy are critical components that underpin the sustainability and success of small and medium-sized enterprises (SMEs), particularly in economically and politically volatile regions such as Lebanon. This section aims to explore these two interrelated concepts in depth, examining their definitions, significance, and the complex relationships that exist between them (Buhari et al., 2024).

Financial literacy is defined as the comprehensive set of knowledge, skills, and attitudes necessary for effective financial management. It includes an understanding of fundamental financial principles, the capability to interpret financial statements accurately, and the ability to make informed decisions regarding financial matters.

This study builds on two key theoretical perspectives. The Financial Knowledge and Behavioral Theory (Lusardi & Mitchell, 2014) posits that financial education influences decision-making, which in turn affects financial stability. Additionally, Risk Perception and Risk Behavior Theory (Sitkin & Pablo, 1992) suggests that individuals with higher financial literacy assess risks differently, making more calculated decisions. Applying these theories, this research examines whether Lebanese SME managers with greater financial literacy demonstrate stronger risk resilience.

For SME leaders, possessing a robust level of financial literacy is essential as it equips them to navigate the complexities of a challenging economic environment. Enhanced financial literacy empowers these leaders to make strategic decisions that optimize resource allocation and bolster their businesses' resilience against economic shocks. Specifically, SME managers who are financially literate are better positioned to assess investment opportunities, manage cash flow effectively, and mitigate financial risks. This competence is particularly vital in Lebanon's volatile

economic landscape, where businesses frequently contend with fluctuations and recurring crises (Urefe et al., 2024).

Moreover, financial literacy plays an indispensable role in effective risk management. A comprehensive understanding of financial concepts allows SME leaders to proactively identify potential risks, assess their implications, and implement appropriate mitigation strategies. By fostering a strong financial culture within their organizations, these leaders can anticipate financial challenges before they escalate into critical issues. While several studies suggest that financial literacy directly enhances SMEs' ability to manage risk (Buchdadi et al., 2020), others argue that external factors, such as government financial policies, institutional support, and access to credit, moderate this relationship (Urefe et al., 2024). Given these differing perspectives, a key question arises: Is financial literacy alone enough to enhance risk resilience, or does it require complementary institutional support? This study aims to bridge this gap by analyzing whether SME leaders with strong financial literacy apply a more proactive approach to risk management, regardless of external challenges. This proactive approach facilitates the development of contingency plans grounded in sound financial analysis rather than relying on intuition or guesswork. Furthermore, a solid foundation in financial literacy enhances relationships with financial institutions by improving access to credit and enabling more favorable negotiation terms (Senaya., 2025).

It is crucial to recognize that financial literacy extends beyond theoretical knowledge; it encompasses practical skills as well. These include the ability to utilize financial tools effectively, interpret economic data accurately, and apply this knowledge in the day-to-day management of their enterprises. SME leaders equipped with these skills are more adept at adapting their strategies in response to market changes and capitalizing on growth opportunities as they arise (Akinsulire et al., 2024).

In contexts like Lebanon, where SMEs face a myriad of external and internal risks, bolstering financial literacy emerges as a key strategy for enhancing resilience and overall performance. Cultivating a strong financial culture is an invaluable asset for SME leaders, enabling them to manage resources more effectively, make informed decisions, and successfully navigate an often unpredictable economic landscape (Sore mekun et al., 2024).

The factors influencing the financial literacy of SMEs are numerous and interact in complex ways to shape the level of knowledge and skills possessed by managers. These factors encompass the level of formal education received by managers, access to financial resources such as credit and grants, institutional support from governments or non-governmental organizations, and the professional experience of managers themselves (Kusmiati., 2022).

Financial education plays a pivotal role in forming robust financial literacy. Leaders who have undergone formal education in finance are generally better equipped to comprehend and apply fundamental concepts in their daily operations. Such education can be obtained through traditional schooling or specialized vocational training programs tailored for business management (Chabaeffe et al., 2024).

Access to financial resources significantly influences the financial literacy levels within SMEs. Companies with limited access to financing often find themselves compelled to develop essential financial skills necessary for effective resource management. Furthermore, having access to external funding sources can encourage managers to enhance their financial literacy to negotiate better terms and manage these resources more efficiently (Stephen., 2024).

Institutional support also plays a significant role in promoting financial literacy among SMEs. Initiatives such as training programs, workshops focused on financial education, and subsidized consultations can empower SME owners by strengthening their understanding of finance. Public policies aimed at enhancing educational outreach and support for SMEs are equally crucial (Abdullahi et al., 2025).

The professional experience of managers is another critical determinant influencing their level of financial literacy. Leaders with prior experience in finance or management roles typically exhibit greater comfort with complex concepts and tools necessary for sound decision-making. This experience allows them to apply their knowledge effectively within their businesses (Damayanti et al., 2019).

Additionally, the broader economic and cultural environment impacts the development of a strong financial culture within SMEs. In stable economies with developed educational systems, SMEs often benefit from enhanced training opportunities that foster stronger financial acumen. Conversely, in regions characterized by volatility and uncertainty, SMEs may need to adapt quickly by developing pragmatic approaches to finance that ensure survival.

Technology also plays an increasingly important role in enhancing financial literacy among SME managers. The availability of digital tools such as accounting software, online platforms for managing finances, and educational resources accessible via the internet enables managers to improve their skills independently (Buhimila et al., 2018).

Despite the recognized importance of financial literacy for effective SME management, several barriers hinder its advancement. These obstacles can be categorized into educational deficiencies, economic constraints, lack of institutional support, and cultural attitudes toward finance (Jude., 2024).

A significant barrier is the limited access many SME managers have to formal education in finance. Many have not had opportunities for training during their educational journeys, resulting in gaps in understanding essential concepts that are crucial for effective management practices (Hulu et al., 2024).

Additionally, limited financial resources pose challenges for SMEs seeking to invest in training programs that could enhance their managers' understanding of finance. Often operating under tight budgets exacerbated by economic pressures, these businesses struggle to allocate funds for necessary educational initiatives.

The absence of adequate institutional support further complicates efforts to improve financial literacy among SMEs. Training programs or government initiatives designed to promote such education may be lacking or poorly coordinated, leaving businesses without essential resources needed for skill development (Nukavarapu et al., 2024).

Moreover, the complexity of available financial information can deter SME leaders from pursuing further education; technical jargon may render information inaccessible or irrelevant to their specific contexts.

Lastly, attitudes towards finance among SME leaders can significantly influence their willingness to engage with concepts related to financial management. Some may underestimate its importance or feel intimidated by complex information, which can hinder proactive efforts toward improvement. Day-to-day operational pressures represent a significant barrier to enhancing financial literacy among SME leaders. The myriad demands of running a business can often overwhelm these leaders, leaving them with insufficient time and energy to focus on improving

their financial knowledge and skills (Lytvyn et al., 2024). This constant state of busyness restricts their capacity to engage in training programs or seek out relevant financial information that could bolster their understanding and management of finances. Consequently, the operational burdens faced by SME managers can perpetuate a cycle of limited financial literacy, hindering their ability to make informed decisions that are vital for the sustainability and growth of their enterprises.

To address the pressing need for improved financial literacy among small and medium-sized business leaders, several targeted strategies can be implemented. These strategies encompass a range of educational initiatives, institutional support programs, technological tools, and practical approaches specifically designed to meet the unique needs of SMEs (Gomes., 2025).

Continuing education programs in financial management are essential for enhancing financial literacy. These programs can be delivered by academic institutions, chambers of commerce, or professional associations and may include workshops, seminars, and online courses (Jalota et al., 2024). By participating in continuous training, SME managers can remain updated on the latest financial practices and develop practical skills necessary for effective financial management.

Mentoring and personalized support also play a crucial role in fostering financial literacy among SME leaders. Mentorship programs enable less experienced managers to gain insights from seasoned professionals in the financial sector (Sohn et al., 2022). Personalized coaching can further assist these leaders in applying financial principles to their specific business contexts, thereby enhancing their understanding and confidence in managing finances.

The integration of technology offers numerous solutions for improving financial literacy within SMEs. Accounting software and online training platforms provide easy access to educational resources that can empower SME owners to enhance their financial skills independently. Additionally, mobile applications and digital platforms can deliver real-time financial analytics, enabling leaders to make informed decisions based on current data (Şakalar et al., 2024).

Strategic partnerships with local financial institutions are also vital for addressing the challenges SMEs face in accessing finance. In Lebanon, where many SMEs struggle with financing issues, collaboration with commercial banks can facilitate access to credit tailored to their needs. The Central Bank of Lebanon has initiated several programs aimed at supporting the SME sector through grants and low-interest loans. These institutions often provide valuable training in financial management and advisory services that help SME managers improve their financial literacy and strengthen their risk management capabilities. Such partnerships are essential for enhancing the economic resilience of SMEs operating in an unstable environment.

Awareness and outreach programs serve as another avenue for democratizing financial education among SME leaders. By making financial concepts more accessible and understandable, these initiatives can empower managers with the knowledge they need to improve their businesses' financial health. Strategies may include distributing practical guides, publishing educational content on social media platforms, and organizing awareness campaigns that promote inclusive financial literacy (Ebrahim et al., 2024).

Supportive public policies play a critical role in fostering an environment conducive to improving financial education among SMEs. Governments can implement policies that integrate financial education into school curricula, create tax incentives for businesses investing in financial literacy initiatives, and support local programs aimed at enhancing this crucial skill set. Well-crafted public policies can significantly contribute to the continuous improvement of financial literacy within the SME sector (Bufalo et al., 2023).

Finally, collaboration among SMEs through networks and associations can enhance financial literacy by facilitating knowledge sharing and best practice exchanges between businesses. Leaders can learn from one another through discussion groups, forums, and networking events, thereby strengthening the local business community while promoting sound financial practices across various sectors (Priyadarshanie., 2024).

By implementing these comprehensive strategies, it is possible to significantly improve the financial literacy of SME leaders, thereby enhancing their ability to manage risks effectively and navigate the complexities of today's economic landscape (Buchdadi et al., 2020).

On the other hand, risk management is a critical process for the survival and growth of SMEs, involving the identification, assessment, and implementation of strategies to mitigate the potential adverse effects associated with various types of risks. These risks can be classified into several categories, each possessing distinct characteristics and implications for SMEs.

Financial risks pertain to the management of an enterprise's financial resources and encompass various aspects such as credit risk, liquidity risk, interest rate risk, and foreign exchange risk. SMEs are particularly susceptible to these financial risks due to their limited access to financing options and dependence on cash flow for operational sustainability. For instance, fluctuations in exchange rates can significantly impact the costs associated with imported raw materials, while variable interest rates can escalate the cost of servicing loans (Alrawad et al., 2023).

Operational risks arise from internal processes within a company, including supply chain management, production activities, and day-to-day operations. These risks can stem from system failures, human errors, or unforeseen events like natural disasters. For SMEs, inadequate management of operational risks can result in service disruptions, financial losses, and damage to their reputation (Hudáková et al., 2023).

Strategic risks are linked to managerial decisions regarding the company's direction and long-term objectives. These encompass risks associated with market dynamics, technological advancements, and competitive pressures. SMEs must remain agile in adapting their strategies to maintain competitiveness; failure to do so may lead to diminished market share and reduced profitability.

Compliance risks involve adherence to legal and regulatory obligations that companies must fulfill. This category includes risks stemming from changes in regulations, potential penalties for non-compliance, and litigation issues. In Lebanon's complex regulatory landscape, SMEs must ensure compliance with all relevant laws to avoid incurring costly fines or facing operational interruptions.

Reputational risks pertain to public perception and stakeholder trust in a company. Poor management of other risk types can lead to reputational harm that adversely affects relationships with customers, suppliers, and financial partners. For SMEs, maintaining a positive reputation is essential for attracting and retaining clients as well as fostering trust with business associates.

External risks are associated with factors outside a company's direct control, such as economic fluctuations, political instability, environmental changes, pandemics, or natural disasters. In Lebanon's context, SMEs encounter significant external risks due to ongoing political and economic turmoil (Glowka et al., 2024).

By recognizing and managing these diverse types of risks effectively, SMEs can enhance their resilience and capacity to navigate challenges. A robust risk management framework not only protects businesses from potential losses but also enables them to identify opportunities for growth

amidst adversity.

The specific management processes and strategies necessary for addressing the six identified risk types, financial, operational, strategic, compliance, reputational, and external, require tailored approaches that consider the unique characteristics of each risk category. For example, managing financial risk may involve strategies such as diversifying investments or implementing robust cash flow management practices. In contrast, operational risks may be mitigated through strong internal controls and comprehensive business continuity plans. Addressing external risks necessitates continuous monitoring of the political and economic landscape along with a readiness to adapt quickly to emerging changes (van den boom., 2024).

The first step in any effective risk management process is hazard identification. This involves recognizing all potential risks that could impact the business. Techniques such as SWOT (Strengths, Weaknesses, Opportunities, Threats) analyses or brainstorming sessions with stakeholders can be employed to uncover both internal and external threats. Additionally, tools like risk questionnaires or checklists can facilitate this identification process for SMEs.

Following hazard identification is the assessment and analysis of these risks based on their likelihood of occurrence and potential impact on the business. This evaluation allows SMEs to prioritize which risks require immediate attention based on their potential disruption levels. Risk matrices can be utilized to visualize and rank these threats according to their severity and frequency. For more precise assessments, quantitative techniques such as scenario analysis or Monte Carlo simulations may also be applied (Latief et al., 2024).

Once risks have been assessed, SMEs should develop appropriate strategies for mitigation. These strategies typically fall into four main categories: avoiding risk by altering plans or processes; reducing risk through improved business practices or employee training; transferring risk via insurance or outsourcing; or accepting risk with contingency plans in place for low-impact scenarios.

The implementation phase is crucial for ensuring that selected risk management strategies are effectively integrated into daily operations. This requires allocating sufficient resources and clearly defining responsibilities within the organization to facilitate successful execution. Utilizing technologies such as integrated risk management software can assist in ongoing tracking and management of identified risks.

Monitoring and review constitute an ongoing aspect of effective risk management that necessitates regular oversight and periodic evaluations of strategies' effectiveness. Establishing key performance indicators (KPIs) allows SMEs to assess how well their risk management efforts are performing over time (Hassan et al., 2024). Regular internal audits along with reviews can help identify new threats while adjusting strategies accordingly based on feedback from employees and stakeholders.

Lastly, effective communication coupled with continuous training is vital for successful risk management practices within SMEs. Leaders must ensure that all employees are aware of existing risks while understanding their roles within the overall risk management framework. Regular training sessions combined with clear communication channels can significantly enhance the organization's risk management culture.

By adopting these comprehensive processes and strategies tailored specifically for their needs, SMEs can bolster their resilience against various challenges while effectively managing risk—an essential component for ensuring sustainability and growth in today's dynamic business

environment (Buganová et al., 2023).

The impact of financial literacy on risk management is a critical area of exploration, particularly for small and medium-sized enterprises (SMEs) navigating the complexities of today's economic landscape. This section examines how robust financial literacy can enhance SMEs' capabilities in identifying, assessing, and mitigating risks, supported by real-world examples and case studies that underscore this vital connection.

A strong financial culture is instrumental in fostering effective risk management within SMEs. It empowers leaders to gain a comprehensive understanding of the financial dimensions of their operations, which directly translates into an enhanced ability to identify, assess, and mitigate risks. The development of a well-rounded financial culture significantly contributes to these three essential components of risk management (Bong., 2024).

In terms of hazard identification, leaders who possess a strong financial acumen are adept at recognizing early warning signs of potential financial and operational difficulties. This proficiency arises from their capacity to conduct detailed analyses of financial statements, pinpoint key performance indicators, and detect adverse trends before they escalate into significant issues. For instance, a thorough understanding of cash flow dynamics enables executives to foresee liquidity challenges, which is crucial for preventing interruptions that could jeopardize business operations. Regular evaluations of critical financial ratios—such as solvency and liquidity ratios—can also unveil potential solvency concerns, allowing leaders to implement proactive measures to bolster the company's financial health (Uddin et al., 2024). Furthermore, financial literacy equips managers with insights into how external economic conditions can impact their operations. For example, fluctuations in interest rates or currency exchange rates can substantially influence financing costs and profit margins. Informed executives can utilize scenario analyses to anticipate the repercussions of these shifts and devise mitigation strategies such as currency hedging or restructuring debt obligations.

The ability to identify risks extends beyond mere financial considerations; a strong financial culture encompasses an understanding of operational risks as well. This includes awareness of potential supply chain disruptions, technological vulnerabilities, and human resource management challenges. A financially astute leader may establish robust internal controls designed to prevent fraud and errors while also formulating comprehensive business continuity plans to address unforeseen interruptions.

Once risks have been identified, a solid financial culture facilitates a more precise assessment of their likelihood and potential impact. This evaluation is essential for grasping the true nature of the risks involved and for developing appropriate management strategies. Leaders equipped with advanced financial skills can employ various analytical tools and techniques to quantify risks effectively and prioritize their management efforts, ensuring that resources are allocated efficiently. Risk matrices serve as valuable visual aids in assessing both the likelihood and severity of identified risks. By categorizing risks according to their probability and potential impact, leaders can discern which threats warrant immediate attention while identifying those that may be tolerable or require ongoing monitoring. This prioritization helps streamline risk management initiatives toward those risks that pose the most significant threat to business continuity. Scenario analysis is another technique that aids in evaluating how different potential futures could affect the organization. By considering a range of scenarios—from best-case to worst-case—leaders can

better understand the implications associated with various risks and develop tailored contingency plans for each situation. For example, an SME might employ scenario analysis to predict the effects of interest rate fluctuations or shifts in regulatory policies, preparing specific responses for each eventuality. Monte Carlo simulation represents a sophisticated statistical method that utilizes computer models to simulate numerous potential outcomes associated with a decision or process. By executing thousands of simulations, leaders can generate a distribution of possible outcomes and achieve greater accuracy in risk identification. This technique proves particularly beneficial when assessing complex financial risks related to investments and market dynamics. Effective risk assessment necessitates a blend of qualitative and quantitative methodologies. Qualitative approaches, such as expert interviews and SWOT analyses, provide valuable contextual insights that complement quantitative data. For instance, discussions with managers across different departments may reveal operational risks not immediately evident through numerical analyses alone. Risk assessment is not merely a one-time task; it is an ongoing process requiring continuous monitoring of both internal and external environments for emerging threats or changes in existing risks. Regular internal audits combined with periodic risk reviews ensure that assessments remain current and relevant, thereby enhancing the effectiveness of risk management strategies. Modern technologies - including risk management software and data analytics platforms - greatly facilitate the risk assessment process. These tools streamline data collection, expedite analysis, and provide clear visualizations of identified risks. Additionally, they offer automated alerts and real-time reporting capabilities that enable leaders to respond swiftly to new developments.

Financial literacy plays a pivotal role in the development and execution of effective risk mitigation strategies within small and medium-sized enterprises (SMEs). Leaders who are well-informed possess a comprehensive understanding of the various tools and techniques available for managing risk, enabling them to select and implement the most suitable methods to safeguard their businesses. One of the most prevalent strategies for risk mitigation is insurance, which allows companies to transfer certain types of risk to third parties. Executives with a robust financial background can identify specific areas where insurance coverage is necessary, such as liability risks, asset losses, or business interruptions. Their thorough knowledge of insurance products and coverage options enables them to negotiate policies that are tailored to their unique needs, while also helping to minimize costs by avoiding redundant or insufficient coverage. Diversification serves as another key strategy for mitigating financial risks. Leaders who understand the importance of spreading investments across various asset classes, industry sectors, and geographic regions can significantly reduce exposure to specific risks associated with any single investment. This diversification strategy extends beyond financial investments; it also includes diversifying trading partners and markets, thereby reducing dependence on any one supplier or customer and minimizing the risks linked to market fluctuations. The implementation of internal controls is essential for preventing fraud, errors, and operational inefficiencies. Leaders who are financially literate are equipped to design and implement effective internal control systems that incorporate measures such as segregation of duties, regular audits, and internal compliance checks. These controls facilitate proactive risk management by enabling early detection of anomalies and allowing for swift corrective actions before issues escalate. Business continuity plans (BCPs) are critical in ensuring that organizations remain resilient in the face of unplanned disruptions such as natural disasters, cyberattacks, or pandemics. A strong financial culture empowers leaders to develop comprehensive BCPs that identify critical functions, outline data backup strategies, and

establish emergency communication protocols. These plans ensure that businesses can either continue operations or quickly resume activities following significant interruptions. Furthermore, financially literate executives are capable of negotiating more favorable financing terms with financial institutions. This includes securing contractual clauses designed to minimize financial risks—such as variable interest rates or stringent collateral requirements, and establishing flexible lines of credit along with other financial instruments that provide additional liquidity when necessary. Such arrangements help mitigate liquidity risks and enhance overall financial stability. The integration of advanced technologies and data analytics into risk management practices allows leaders to monitor risks in real-time and respond swiftly to changes in the business environment. Risk management software, business intelligence platforms, and predictive analytics tools offer valuable insights that enable organizations to anticipate emerging risks and adjust their strategies accordingly. Companies that effectively incorporate these technologies into their risk management frameworks are better prepared to tackle the complexities inherent in today's dynamic business landscape. Lastly, fostering a culture of continuous training and awareness among employees at all levels is vital for effective risk management. Leaders can facilitate regular training sessions focused on risk management practices, updates on new regulations, and industry best practices. A well-trained workforce is more cognizant of potential risks and can actively contribute to the organization's risk mitigation efforts.

A robust financial culture equips SME leaders with a strategic and multifaceted approach to risk mitigation. By leveraging a combination of insurance strategies, diversification techniques, internal controls, business continuity planning, proactive financial relationship management, advanced technologies, and ongoing employee training initiatives, companies can better protect their assets, stabilize operations, and ensure resilience in the face of diverse threats.

The intrinsic connection between financial literacy and effective risk management is further illustrated through various examples and case studies that highlight this relationship. For instance, a Lebanese SME operating in the information technology sector made significant investments in continuous financial training for its key executives and employees. This initiative enabled the company to identify currency risks associated with its international contracts effectively. By implementing hedging strategies against exchange rate fluctuations, the firm was able to stabilize its profit margins while avoiding potential losses.

Numerous case studies reinforce the notion that enhanced financial literacy serves as a critical factor in successful risk management endeavors. SMEs that prioritize improving the financial literacy of their leaders and employees demonstrate greater preparedness in identifying, assessing, and mitigating risks. This proactive approach not only strengthens their resilience but also enhances their capacity to thrive amidst volatile economic conditions.

The literature review emphasizes the indispensable role of financial literacy in shaping effective risk management practices within SMEs. A strong financial culture empowers leaders to identify potential risks accurately, assess their implications comprehensively, and implement robust mitigation strategies that foster business resilience and sustainability. While barriers such as limited access to financial education and insufficient institutional support exist, targeted strategies, including continuous training programs, mentoring initiatives, utilization of financial technologies, and supportive public policies, can significantly enhance the financial literacy landscape for SMEs.

The findings underscore the necessity for further empirical research aimed at quantifying the impact of financial literacy on risk management within SMEs. Practically speaking, these insights highlight the importance of promoting financial education initiatives alongside developing support programs tailored specifically for SMEs - helping them navigate uncertain economic environments more effectively while positioning themselves for future growth opportunities.

3. METHODS

This section presents the methodology employed in this research study. A quantitative approach was selected, facilitating a systematic exploration of the relationships between independent and dependent variables through data collected via a structured questionnaire. Additionally, this section outlines the analytical tools utilized for data analysis, specifically highlighting the use of the Statistical Package for the Social Sciences (SPSS) software. This software is essential for conducting regression analyses, correlation assessments, and other relevant statistical tests necessary for validating the research hypotheses. The final part of this section addresses the ethical considerations pertinent to this research, ensuring that all aspects of the study adhere to established ethical standards and practices.

The design of this study is based on a quantitative approach aimed at objectively measuring the impact of the financial culture of SME managers on their capacity to manage the risks faced by their companies. This quantitative methodology allows for the quantification of relationships between variables through numerical data collected from a representative sample of SMEs located in Lebanon. Such a design is particularly well-suited to the objectives of this research, which seeks to establish correlations and causal links between financial literacy and risk management within these enterprises.

The research variables include the financial literacy of SME managers and their continuing education in financial matters as independent variables, while the dependent variables consist of their ability to identify financial risks, assess and mitigate risks, and demonstrate resilience in the face of economic crises.

The conceptual framework is grounded in theories of risk management and financial literacy, positing that the financial literacy of executives directly influences their ability to manage various risks effectively, with continuous training serving as a factor that enhances this capacity.

The target population for this study comprises small and medium-sized enterprises in Lebanon, which play a crucial role in local economic development. This population includes SMEs operating across various sectors such as trade, services, industry, and agriculture. To ensure representativeness, stratified random sampling was employed, categorizing enterprises by sector and size. The determined sample consists of 360 SMEs, a size that allows for statistical analyses such as regression and correlation while minimizing potential sampling bias. Companies were randomly selected within each defined stratum to enhance the external validity of the results.

Data for this study were collected using a structured questionnaire, which was distributed online to 360 SMEs located in the Lebanon region. This method was chosen for its effectiveness in gathering standardized information that is easy to quantify and analyze using statistical tools. The questionnaire was organized into three sections: demographic information, independent variables (financial literacy and continuing education), and dependent variables (financial and operational risk management, as well as resilience to economic crises). Each section employed a

5-point Likert scale to measure respondents' attitudes and perceptions, a format commonly used in quantitative research due to its ability to capture the intensity of opinions.

The decision to utilize an online questionnaire administered via Google Forms offered several advantages. Firstly, it provided accessibility and ease of use, allowing participants to complete the form at their convenience, thereby reducing the constraints associated with physical data collection. Additionally, this approach resulted in cost and time savings by minimizing logistics expenses related to travel or printing while facilitating rapid data collection. Furthermore, Google Forms enabled the automation of responses, allowing for seamless integration with analytics tools like SPSS, ensuring efficient and error-free data transmission.

The questionnaire was distributed via email to the financial managers or executives of the selected SMEs. Participants were informed about the study's purpose and the significance of their contributions. To enhance the response rate, follow-up reminders were sent to participants who had not responded within one week.

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) software, a widely recognized tool for statistical data analysis in quantitative research. Initially, descriptive analyses were performed to provide an overview of the demographic characteristics of respondents and the variables under study. Means, standard deviations, frequencies, and percentages were calculated to describe SME demographics—such as size and industry—as well as responses related to financial literacy and risk management.

Subsequently, Pearson correlations were employed to assess the strength and direction of relationships between independent and dependent variables. This method is particularly suitable for evaluating linear relationships between continuous variables, such as financial literacy and the ability to identify financial risks. The correlation coefficient (R) indicates the strength of these relationships, with values close to 1 or -1 signifying strong correlations, while values near 0 suggest weak or nonexistent relationships.

To test the main hypotheses of the study, multiple linear regression analysis was conducted. This technique allows for determining the impact of one or more independent variables (financial literacy and continuing education) on dependent variables (risk management and resilience). The reliability of the scales used for measuring both independent and dependent variables was assessed using Cronbach's alpha coefficient, which evaluates the internal consistency of the Likert scales employed in the questionnaire. A Cronbach's alpha value greater than 0.7 is generally considered acceptable for ensuring result reliability.

The stratified random sampling method ensured equitable representation of SMEs from various sectors and sizes, allowing all companies a fair opportunity to participate in the study. There was no discrimination in participant selection, aligning with principles of fairness and equity in research practices.

4. RESULT AND DISCUSSION

In this section, we present the results gathered from the 360 SME managers in Lebanon. The study indicates that 61.11% of respondents are men, while 38.89% are women. The majority of respondents fall within the 30-39 age group, accounting for 38.89%, which reflects a balance between dynamism and experience. Individuals under 30 represent 25% of the sample, suggesting the emergence of a new generation of leaders, while those aged 40 to 49 comprise 22.22%,

contributing stability and strategic insight. Finally, the age group of 50 and over constitutes 13.89%. Regarding educational qualifications, the majority of respondents hold a Master's degree (38.89%), followed by those with a Bachelor's degree at 36.11%. Additionally, individuals with a PhD account for 5.56%, while those with less than a Bachelor's degree represent 19.44%. The data reveals that most companies operate within the trade sector, comprising 41.67% of respondents, closely followed by the service sector at 38.89%. The industrial sector accounts for 16.67%, and agriculture is the least represented, with only 2.78%. This distribution indicates a strong prevalence of commercial and service activities among SMEs in Lebanon. In terms of experience, managers with between 5 and 10 years represent the largest proportion at 30.56%, while those with less than 5 years and those with between 11 and 20 years of experience each account for 27.78%. Lastly, 13.89% of managers have more than 20 years of experience.

Reliability analysis is conducted using Cronbach's alpha, a statistical coefficient that assesses the internal consistency of a set of questions or scales, indicating the degree of consistency among variables related to the same factor. A factor is deemed reliable when Cronbach's alpha exceeds the threshold value of 0.7. The reliability test results show very high values for all factors, ranging from 0.955 to 0.970, which are well above the acceptable threshold, indicating excellent internal consistency among the questions related to each factor. This confirms both the reliability of the questions used and the relevance of the measures applied in this study.

In this research, we conducted a regression analysis following the validation of factor reliability, taking into account the sample size exceeding 30, which allows for the application of the central limit theorem to assess the normality of the distribution. We examine three key impacts: the influence of SME managers' financial literacy on their ability to identify financial risks, the effect of continuous financial education on their capacity to assess and mitigate operational risks, and the impact of advanced financial literacy on SMEs' resilience to economic crises.

Regarding the impact of financial literacy on the ability to identify financial risks, we establish two hypotheses: H0 posits that there is no impact of the financial culture of SME managers on their ability to identify financial risks, while H1 suggests that such an impact exists. The regression results reveal a strong relationship between the financial literacy of SME managers and their ability to identify financial risks, with a correlation coefficient of $R=0.928$ indicating a very high positive association. The coefficient of determination ($R^2 = 0.861$) shows that 86.1% of the variations in risk identification ability can be attributed to the financial culture of managers. The F statistic of 210.623 confirms that the regression model is statistically significant, and the significance value (Sig.) of 0.000 is well below the conventional threshold of 0.05, reinforcing that the influence of financial culture on risk identification is highly significant and leading us to reject the null hypothesis. The coefficient for financial culture is 0.956, indicating that for each unit increase in financial literacy, the ability to identify financial risks increases by 0.956 units. This relationship is further supported by a t-value of 14.513 and a significance level of 0.000, underscoring its importance.

Hence the regression equation is: Ability to identify financial risks = $0.956 * \text{Financial literacy of SME managers} - 0.029$.

Next, we analyze the impact of continuous financial education on assessing and mitigating operational risks. We set up similar hypotheses: H0 asserts no impact from continuous financial

training on this ability, while H1 suggests a positive impact exists. The regression results indicate a strong relationship between ongoing financial education and the capacity to assess and mitigate operational risks, with a correlation coefficient $R=0.828$ reflecting a very high positive association. The coefficient of determination ($R^2 = 0.861$) indicates that ongoing financial education explains 86.1% of variations in risk assessment and mitigation ability.

The F statistic stands at 74.130 with an alpha significance level ($\text{sig}=0.000$) less than 5%, confirming that this regression model is statistically significant. This value suggests that there is an impact of continuing financial education on the ability to assess and mitigate operational risks. The coefficient of continuing training in financial matters is 0.923, which shows that for every increase in continuing training, the ability to evaluate increases by 0.923 units with a constant increase of 0.017. This affirms the acceptance of the alternative hypothesis H1.

Hence the equation of the regression is: Ability to assess and mitigate operational risks = $0.923 * \text{Continuing education in financial matters} + 0.017$

Finally, we explore the impact of advanced financial literacy on SMEs' resilience to economic crises using similar hypotheses: H0 states there is no impact from advanced financial literacy, while H1 posits there is an effect. The regression results demonstrate a strong relationship between advanced financial literacy and resilience to economic crises, with a correlation coefficient $R=0.911$ indicating a very strong positive association. The coefficient of determination ($R^2 = 0.830$) reveals that advanced financial literacy accounts for 83% of the variations in resilience to economic crises.

The F statistic is recorded at 166.581 with a significance level ($\text{sig}=0.000$) below 5%, indicating statistical significance in this regression model as well. The coefficient for advanced financial literacy is 0.926, showing that for each increase in this area, resilience increases by 0.926 units along with a constant increase of 0.245.

The coefficient of continuing education in financial matters is 0.926, which shows that for every increase in advanced financial literacy, resilience to economic crises increases by 0.926 units with a constant increase of 0.245. This affirms the acceptance of the alternative hypothesis H1.

Hence the equation of the regression is: Resilience to economic crises = $0.926 * \text{Advanced financial literacy} + 0.245$

The discussion of the results obtained provides critical insights into the role of financial literacy, continuous training, and the expertise of SME managers in effective risk management. Each validated hypothesis sheds light on how these financial skills influence the performance and resilience of SMEs.

For H1, which posits that a high financial culture among SME managers is positively correlated with better identification of financial risks, the results reveal a strong correlation ($R = 0.928$) between the financial literacy of SME managers and their ability to identify financial risks. This indicates that leaders with a robust financial literacy are better equipped to recognize and assess the various risks their companies encounter. The high F statistic (210.623) and significance value (Sig.) of 0.000 confirm that this impact is statistically significant. This finding emphasizes that financial literacy enhances the understanding of financial risk signals, suggesting that risk identification is not merely a technical skill but also a strategic approach linked to the financial culture of managers. This positive relationship underscores the importance of developing educational programs for SME owners to strengthen their financial literacy, thereby contributing

to improved risk management in the current economic context. Thus, H1 is accepted.

For H2, which states that continuous financial training significantly improves the ability of SME managers to assess and mitigate operational risks, the study shows a significant correlation ($R = 0.828$) between ongoing education in financial matters and the capacity of SME managers to assess and mitigate operational risks. The F statistic (74.130) and significance value (0.000) further validate this relationship, indicating that continuous learning enables leaders to develop updated skills and tailored strategies for effective operational risk management. Given the evolving nature of economic and technological environments, regular knowledge updates are essential. Therefore, continuous learning emerges as a vital tool for leaders aiming not only to react to risks but also to anticipate them and implement mitigation strategies. This finding validates hypothesis H2, highlighting the importance of training as a means to optimize risk management practices and calling for further promotion of training programs focused on risk management in SMEs. Hence, H2 is accepted.

For H3, which asserts that SMEs with advanced financial literacy exhibit higher resilience to economic crises, regression results indicate a strong relationship between advanced financial literacy and resilience in facing economic challenges ($R = 0.911$). The F statistic (166.581) and significance level (Sig.) of 0.000 reinforce the notion that advanced financial literacy plays a crucial role in how an SME can withstand and adapt to adverse economic conditions. Advanced financial culture encompasses not only technical knowledge but also an ability to anticipate market fluctuations, diversify investments, and optimize financial resources. The validation of this hypothesis confirms the significance of advanced financial literacy in enhancing organizational resilience, suggesting that SMEs with deep financial skills are better prepared to cope with economic shocks and adjust their strategies accordingly. This discussion encourages SME managers to invest in developing their financial skills to bolster their companies' stability and sustainability. Thus, H3 is accepted.

The discussion emphasizes the importance of strong financial literacy, continuous training, and advanced expertise among SME managers. The validation of all three hypotheses highlights these elements' central role in effectively managing financial risks, mitigating operational risks, and enhancing resilience in times of economic crises. These findings suggest that strengthening managers' financial knowledge can serve as a strategic lever for improving the performance and sustainability of SMEs.

This section highlights the significance of financial literacy, continuous training, and the expertise of SME managers in effective risk management and resilience during economic crises. The statistical analyses conducted validated the hypotheses, demonstrating that managers with high financial literacy are better equipped to identify financial risks, that continuous training enhances their ability to assess and mitigate operational risks, and that an advanced financial culture strengthens the resilience of SMEs. These results underscore the necessity of investing in the development of financial literacy to ensure the sustainability and performance of SMEs.

5. CONCLUSION

The findings of this research underscore the pivotal role of financial literacy in enhancing risk management capabilities within small and medium-sized enterprises (SMEs) in Lebanon. The results clearly demonstrate that a robust financial culture equips leaders with the necessary skills

to effectively identify, assess, and mitigate risks, thereby significantly improving the resilience of their organizations in the face of an unstable economic and political landscape. The validation of the primary hypotheses reveals that managers with strong financial literacy are not only better positioned to manage financial and operational risks but also that continuous education is instrumental in enhancing these competencies.

These insights carry profound implications for SMEs, policymakers, and financial institutions alike. For SMEs, investing in the development of financial skills among their leaders is essential for anticipating and navigating the myriad risks they encounter. Policymakers should prioritize initiatives aimed at strengthening financial education at the corporate level, particularly in regions characterized by persistent economic instability. Furthermore, financial institutions can play a crucial role by providing tailored training programs and financial tools specifically designed to meet the unique needs of SMEs.

This paper contributes significantly to the existing literature by elucidating the intricate relationship between financial literacy and risk management in SMEs, particularly within the context of a developing economy. It offers valuable insights into how financial literacy can bolster organizational resilience, highlighting the need for further exploration into other contextual factors that may influence risk management practices.

Based on the results of this study, several targeted recommendations emerge to enhance risk management among SMEs in Lebanon through improved financial culture.

First, SME leaders should engage in ongoing financial education programs that address practical aspects of risk management tailored to local contexts.

Second, institutional support from governments and chambers of commerce should be strengthened through workshops and seminars on risk management, as well as offering free or subsidized consultations to encourage better practices among SMEs.

Third, fostering collaboration between SMEs and financial institutions is vital; banks should work closely with SMEs to provide appropriate financial tools for effective risk management, including insurance products and flexible credit lines.

Additionally, SMEs should be encouraged to adopt advanced technologies such as risk management software that facilitates real-time monitoring of risks.

Finally, cultivating an organizational culture that prioritizes risk management is crucial; this can be achieved by involving all employees in training sessions and establishing internal protocols for managing risks.

Strengthening financial literacy among SME managers emerges as a strategic lever for enhancing performance and sustainability in Lebanon's challenging economic environment. By fostering a culture of continuous learning and proactive risk management, SMEs can not only safeguard their operations but also position themselves for long-term success amidst uncertainty. This research not only highlights the critical need for investment in financial education but also serves as a call to action for all stakeholders involved in supporting the growth and resilience of SMEs in Lebanon.

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