

## The Role of Risk Management in Improving the Operational Effectiveness of SMEs: A Systematic Review

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### ABSTRACT

This article reviews the literature and examines research on risk management practices concerning Small & Medium Enterprises (SMEs) to enhance their operational performance. In this study, the research's results indicate that good risk management assists in identifying, assessing and mitigating the levels of risks and provides benefits to SMEs' activities. Moreover, structured risk management frameworks make SMEs more resilient and able to cope with uncertainties. Additionally, linking risk management to innovation practices drives creativity and improves competitiveness. However, the need for more resources and support also raises concerns about SMEs' broader take-up of risk management practices. This paper contributes to the literature by identifying best practices and strategies in risk management for SMEs, specifically its role in fomenting innovation, internal capacities and sustainable development. Technically, the study assumes the risk management practices in SMEs and employs a Systematic Literature Review (SLR) approach to sketching an objective idea of the research's risk management practices.

Article Type: Review Paper

OPEN ACCESS



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Received:  
9 July, 2024

Revised:  
23 July, 2024

Accepted:  
30 July, 2024

Published:  
30 September, 2024

**Keywords:** *Management Risk, SMEs, Effectiveness Operations, Innovation, Systematic Literature Review, Resilient*

**How to cite this article (APA):** Yuwono, M. A., & Rachmawati, D. (2024). The Role of Risk Management in Improving the Operational Effectiveness of SMEs: A Systematic Review. *JISR management and social sciences & economics*, 22(3), 1–25.

## INTRODUCTION

In the current global economy, Small and Medium Enterprises (SMEs) create jobs and contribute to the economy because they are flexible and ready to adopt market trends instantly. Thus, SMEs play a significant role in economic development.

Nevertheless, they are also subject to vast business risks due to scant resources and more ad hoc management than large corporations (Testorelli et al., 2022). This leads to the first engaging learning—monitoring risks with risk management (RM) implementation maintains SMEs' survivability and operational efficiency (Marcelino-Sádaba et al., 2014).

Risk management is essential, yet many SMEs find it challenging to implement. As Snieška et al. () highlighted, a lack of awareness and limited resources are key obstacles. The COVID-19 pandemic has intensified these challenges, leaving many SMEs struggling with declining operational performance. Consequently, SMEs must adopt more effective risk management strategies to navigate an increasingly unpredictable business landscape.

Thus, SMEs' operational stability, growth capability, and innovativeness cannot manage risk well enough. Lack of proper risk management also causes the company to concentrate on lucrative success in short-term problems, causing neglect of long-term growth and sustainability (Leopoulos et al., 2006). This raises the fundamental question of how SMEs can overcome these issues and enhance their operational efficiency over the long term.

This challenge can be overcome only by a systematic analysis of risk management in SMEs. Such an approach involves risk evaluation, identifies mitigation strategies and implements risk management procedures (Santoro et al., 2020). Furthermore, training and capacity development of managers and owners of SMEs taking risk management benefits will strengthen their understanding of the benefits (Prakash et al., 2016). According to Alquier and Tignol (2006), providing government and financial institutions with the necessary resources to assist SMEs in risk management is also important.

Although the literature is replete with discussions on the importance of risk management for small and medium-sized enterprises (SMEs), research investigating how a structured approach to risk management can contribute to innovation, competitiveness, and long-term sustainability is still limited. This gap becomes more apparent when considering SMEs' challenges, such as resource constraints and limited external support, which frequently force them to focus on immediate solutions rather than long-term strategic growth. Therefore, this study seeks to answer a fundamental question: How can SMEs implement effective risk management practices to sustainably enhance

operational efficiency and drive innovation and competitiveness in a constantly evolving business environment?

The study will assume the risk management practices in SMEs and look at two aspects: first, it will review articles between 2006 and 2024 published in peer-reviewed journals (2); second, it is concerned with empirical check regarding the application and impact of risk management practices. After a discarding procedure, 29 articles were selected and critically reviewed for their themes, findings, and research gaps. This paper provides an extensive review of the involvement of risk management in enhancing operational efficiency within SMEs. This research is intended to identify best practices and success factors in risk management for SMEs by investigating existing studies (Rodriguez et al., 2010). Moreover, this study has an extension to investigate the role of risk management in facilitating innovation and capability in SMEs, hence adding value to the knowledge base and contributing to management practice (Roper & Tapinos, 2016).

This scholarship is anticipated to provide an innovative contribution, enabling practitioners and academics to theorize and manage risk in SMEs more efficiently, thus potentially strengthening businesses' operations (Zeiringer et al., 2022).

## **METHODOLOGY**

This study employs the systematic review method proposed by Tranfield et al. (2003). A systematic review serves to identify the significant scientific contributions in a research area or question.

Using pre-defined quality criteria, the authors assessed all relevant studies and extracted findings deemed "fairly adequate" quality.

The process involves:

Research purposes

1. RQ1. How can risk management improve innovation capabilities in SMEs?
2. RQ2. To what extent can the application of risk management improve the internal capabilities of SMEs?

Literature Search

Figure 1:

Flow diagrams

## **Literature Search**

### **Figure 1:**

Flow diagrams from studies were searched, screened, and included

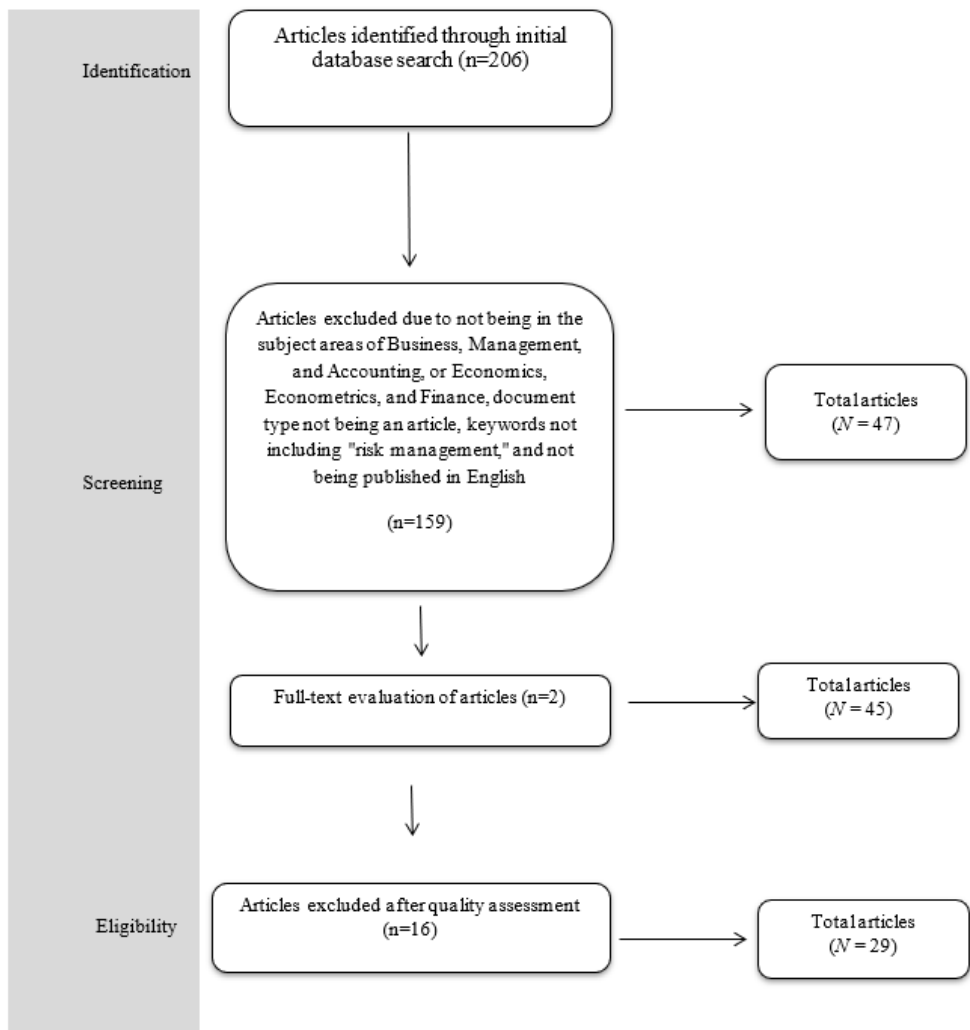


Figure 1: ource (author's processed results)

**Application of Criteria**

The study analyzed articles related to ability manager intermediate identified through a search on the Scopus database. This database was chosen because of its comprehensive coverage, ability to adequately search, and possible desired accuracy (Pascucci et al., 2018). Scopus is an extensive electronic database covering more than 18,000 articles from over 5,000 publishers, including 16,500 peer-reviewed journals in engineering, medicine, and social science (Phillips et

al., 2015).

Search strategy designed: Identify as many possible studies related to the selected database as possible. This strategy covers three Criteria: space scope, method search, and search string. All relevant studies were done from 2006 to 2024. The first article to comply with the criteria selection and owning amount citation is worked by Przychodzen and Przychodzen and Przychodzen (2015), published in the Journal of Cleaner Production—articles from this database accessed through the centre source study author university. At first, the author looks for an article with the term “risk management” AND SMEs AND operations OR innovation OR capabilities in the title. Of these, 206 articles were found in the results search.

### **Selection and Assessment Quality of Primary Studies**

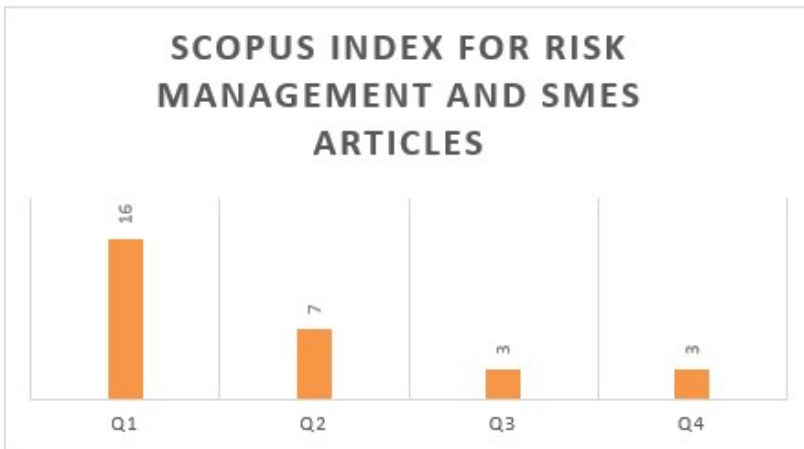
Following guidelines from Tranfield et al. (2003) and consistent with studies reviewed previously in various discipline knowledge management, articles that fulfil all criteria selection chosen as follows: published articles in peer-reviewed journals; articles discussing all or part from variable manager intermediate; articles written in Language English. Relevance studies are determined by reading the title, abstract, and text complete from the article. Articles that are not published in Language England, which do not have subject areas in Business, Management, and Accounting, as well Economics, Econometrics, and Finance, which are not in form articles, and what not originate from the journal, deleted from results search (159 articles deleted) as well articles that do not relevant with topic risk management and SMEs, innovation, capabilities, and operations (two articles deleted). From 206 studies initially, 45 relevant articles were chosen for review.

### **Quality Assessment**

Quality assessment aims to evaluate the validity of selected studies, provide appropriate justification, and provide readers with information to identify whether this review strategy can be applied to their research). However, designing and conducting quality studies is a significant challenge in developing a systematic review methodology (Tranfield et al., 2003). In parallel, at this stage, the author refers to Ahmad and Omar (2016) by selecting articles from indexed journals Scopus. Scopus was chosen as it provides broad coverage of suitable, high-quality publications. Among the existing indexed journals is Scopus, which was chosen to be a systematic literature review for being a quality journal of great prestige and impact. These journals are characterized by high standards and rigid peer-review processes for scientifically correct research. Research from it has been used worldwide and cited many times, showing their impact in the field.

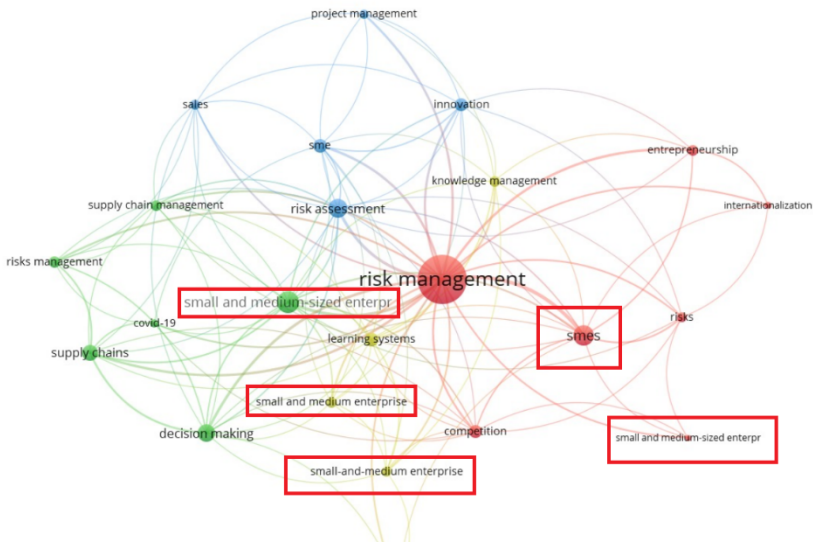
Scopus publishes journals addressing the newest, most relevant research topics, allowing SLR to stay current.

Furthermore, the reliability and objectivity of these journals increase due to their strict peer-reviewed standards and publication ethics. In writing the SLR about risk management and SMEs, evaluating how good articles are is important to ensure that study results are relevant and reliable. According to predetermined quality assessment criteria, 16 articles had to be excluded from this SLR due to limited access by the authors. These barriers to access include paywalled articles with no open versions, print-only pieces, and works where the author has no network power to be available at an institution where they are not. The minimal access likely means that authors must fully evaluate these articles' content, methodology and scientific contribution, with potential impacts on review results. As such, to ensure the SLR quality and its composition scope of work, the authors removed these 16 items from the analysis. This decision was taken after considering the importance of full access to accurately and comprehensively assess each article. Thus, eliminating inaccessible articles is expected to increase the reliability and validity of the results of this SLR study, even though the number of articles analyzed will decrease. The results of both examinations were cross-verified with the results considered by the researchers. After mutual agreement based on the quality criteria established by the study, the number of articles was reduced from 45 to 29. The data extraction process ensured that the information obtained fulfilled objective studies, as seen in Figure 2 below.



**Figure 2:** Comparison of Scopus journals that discuss risk management and SMEs. Source (author's processed results)

The relationship between risk management and SMEs could be measured by VOS viewer analysis [29 related articles]. As visualized in Figure 3, "risk management" serves as a central node closely linked to terms such as "small and medium-sized enterprises," "decision-making," "supply chain management," and "knowledge management." These connections underscore the importance of ERM in enhancing SME resilience and performance analyze and respond to various operational risks. Furthermore, research evidences that implementing Artificial Intelligence for risk assessment will enhance the supply chain agility of Small (Wong et al., 2022)SME performance in different areas of activity — project management, innovation, and human resource management (Kozubíková et al., 2020; Marcelino-Sádaba et al., 2014).

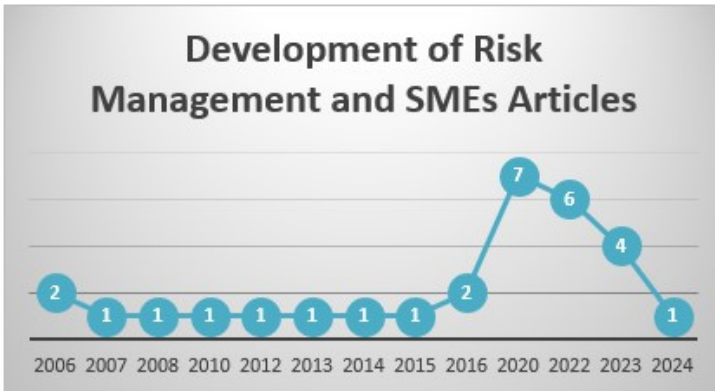


**Figure 3:** *Bibliometric analysis from the perspective of risk management — SME relationship and visualization. Source(author’s processed results)*

Better risk control will also help increase the competitiveness of small and medium-sized enterprises, which is undoubtedly dangerous in times of crisis, such as COVID-19. By intellectual capital and responsive risk management solutions (Rustiarini et al., 2023). Further, Toth et al. (2022) state that it assists in enhancing corporate financial literacy and decision-making influenced by risk management, ultimately enabling more excellent financial stability and sustainability of SMEs. In internationalization, SMEs implementing comprehensive risk management strategies tend to be more successful in managing knowledge from internationalization experience, improving their global performance (Rodriguez et al., 2010). Applying the Resource-Based View

(RBV) theory also shows that internal solid risk management capabilities are essential in SMEs' export intentions and international success (Civelek et al., 2024).

**Reporting and dissemination of findings:**



**Figure 4:** *Development of risk articles management and SMEs. Source (author's processed results)*

As time has been researched in terms of management, the risks to SMEs have significantly increased in 2015. This describes published articles every year from 2006 to 2024. In 2006, (Leopoulos et al., 2006) article proposes innovative and generic management risk, (Alquier & Tignol, 2006).

2007 featured One article discussing the role of the government in pushing innovation in the SME sector through provision financing-based claim sales, which can stimulate the growth and activity of innovative SMEs (Kaivanto & Stoneman, 2007). In 2008, an article explained the daily challenges faced by SMEs in operation that result from internal and external disturbances as a healthy, necessary approach for identifying and overcoming potency risk (Islam et al., 2008). One article in 2010 explored the internationalization process in companies, especially SMEs, and emphasized the importance of tool management risk For managing knowledge gained from experiencing internationalization previously (Rodriguez et al., 2010).

In 2012, one article introduced management models for customized risks and crises for SMEs, which aims to increase adaptation management and performance finance during stage crises (Yiannaki, 2012).

A 2013 article explores development capability management risks in SMEs through social capital theory, emphasizing the role of cognitive capital in building capability management risk (Gao et al., 2013). In 2014, an article on methodology management designed projects for SMEs that run outside their normal operations, including tool simple, templates, and checklists risk with recommended actions and indicators (Marcelino-Sádaba et al., 2014). In 2015, there was a connection between activity innovation ecology and performance finance in companies registered in Poland and Hungary, as well as essential capability assets and finances For development innovation ecology (Przychodzen & Przychodzen, 2015). In 2016, two articles studied the connection between an uncertain environment and behaviour-taking risk companies in Innovation Green and analysis of collaboration chain supply below various factor risks (Prakash et al., 2016; Roper & Tapinos, 2016). Several articles in 2020 discussed the importance of management risk in SME operations and the roles of management risk in increasing performance, as well as analysis of perception risk-related implementation of Industry 4.0 in SMEs (Dankiewicz et al., 2020; Prioteasa et al., 2020; Snieška et al., 2020).

In 2022, articles explored the framework of Work management risk projects for SMEs and typologies of behaviour risk in the chain supply of SMEs in Europe. 2023 displays several articles discussing the adoption intelligence (Testorelli et al., 2022; Zeiringer et al., 2022) in management risk chain supply and its impact on resilience operations and innovation in SMEs (Civelek et al., 2024; Dey et al., 2023). By 2024, an article investigated the connection between management risk chain supply and performance innovation in SMEs and the impact of turbulence technology on relationships (Foli et al., 2024).

## RESULTS

### Theoretical basis

Various theoretical bases have been used to understand how risk management can be implemented effectively in SMEs, covering multiple aspects such as innovation, capability, and operational effectiveness. Each article contributes a unique perspective that enriches our understanding of risk management in SMEs. The following table summarises the theoretical basis of the 29 articles that have been analyzed, along with a brief explanation of each theory.

**Table 1.**

Summary of Theory and Research Related Management Risks in SMEs

Theoretical basis	Explanation Short	Author
AI-Based Supply Chain Risk Management	Research impact adoption artificial intelligence. (AI) in management risk chain supply and agility chain supply in SMEs.	Wong et al., 2022
AI-Oriented Talent Management	Investigate how AI can manage talent and improve management source Power people in SMEs.	Faqihi and Miah (2023)
Investigate how AI can manage talent and improve management source Power people in SMEs.	Develop a management model that customizes risks and crisesfor SMEs using a balanced scorecard to increase adaptation management and performance.	Yiannaki (2012)
Develop a management model that customizes risks and crisesfor SMEs using a balanced scorecard to increase adaptation management and performance.	Explain development capability management risks in SMEs through Integrating cognitive capital theorycommunication, knowledge, relationships, and learning.	Gao et al., 2013
Competitive Advantage Theory	Explore role management risk and intellectual capital in increasing SMEs' superiority competitiveness and performance during the COVID-19 pandemic.	Rustiarini et al., 2023
Corporate Financial Culture	Explore the connection between literacy finance company, management risk company, and retrieval decision finance in Hungarian SMEs.	Toth et al., 2022
Disturbance Management Framework	Develop a work theory framework for managing internal and external disruptions SMEs face in daily operations.	Islam et al., 2008

*Continued on next page*

*Table 1 continued*

Eco-Innovation Financial Performance Linkage	Explore the connection between activity innovation ecology and performance finance in SMEs, especially in Poland and Hungary.	Przychodzen & Przychodzen, 2015
Endogenous and Exogenous Risk Management	Explore management of Endogenous and exogenous risks in SMEs, using analysis statistics to understand businessman to risk.	Dankiewicz et al., 2020
Entrepreneurial Risk Management	Research risk business people in maritime SMEs in Cape Town, South Africa, focusing on sustainability operations and risk ecology.	Jobo and Phyllis (2020)
Environmental Uncertainty and Risk Perception	Research connection between uncertainty environment and behaviour-taking risk company in context innovation green.	Roper & Tapinos, 2016
Human Resource Risk Management	Evaluate the primary risk source of Power humans in the Visegrad Four (V4) countries and the differences in perceptions between these countries.	Kozubíková et al., 2020
Industry 4.0 Risk Perception	Survey and analysis statistics will be used to analyze the perception risk related to implementing Industry 4.0 in SMEs in Slovakia and Poland.	Snieska et al., 2020
Internationalisation Process Model	Explores the internationalization process in SMEs and its importance in tool management risk for managing knowledge from experience internationalization.	Rodriguez et al., 2010
Internationalization Risk Management	Analyse management strategies and risks Spanish SMEs use in the internationalization process to increase performance.	González Calzadilla et al., 2022

*Continued on next page*

*Table 1 continued*

Knowledge Risk Management	Identify risk-emerging knowledge while adopting innovative technology and propose several action prevention strategies.	Temel & Durst, 2020
Management by Risk	Serve approach innovation that integrates management risk as a global process for pushing business process innovation in SMEs.	Alquier & Tignol, 2006
Open Innovation Theory	Investigate micro-foundations involvement in innovation open in SMEs and how characteristics of business people influence trend openness.	Santoro et al., 2020
Project Risk Management Framework	Serve framework Work management risk expanded project for SMEs, which includes election strategic and evaluation project and communication systematic risk.	Testorelli et al., 2022
Project Risk Management Methodology	Serve methodology management designed projects particular for SMEs with tool simple, templates, and checklists risk.	Marcelino- Sádaba et al., 2014
Quantitative Risk Analysis Tools	Explain the use of tool analysis risk to increase operation projects and reduce costs, especially in the SME context.	Leopoulos et al., 2006
Resource Orchestration and Knowledge-Based View	Research bottomless AI adoption management risk chain supply and impact on resilience operations and innovation in SMEs.	Dey et al., 2023
Resource-Based View (RBV) Theory	Investigate impact capability management internal risks to intention SMEs export in various countries using RBV theory.	Civelek et al., 2024

*Continued on next page*

*Table 1 continued*

Risk Behaviour Typology	Conceptualise typology behaviour risk in chain supply of SMEs in Europe based on analysis cluster.	Zeiringer et al., 2022
Sales Contingent Claim (SCC)-backed Finance	Analyze the role of financing-based claim sales in pushing innovation in SMEs and how instruments can support the growth of SMEs.	Kaivanto & Stoneman, 2007
Strategic Purchasing and Supplier Selection	Identify effective purchasing strategies and criteria for selecting suppliers in context management risks in SMEs.	Ferreira & Silva, 2022
Structured Risk Management Approach	Emphasize the importance of managing structured risk to increase the performance of SME operations in Romania	Prioteasa et al., 2020
Supply Chain Collaboration and Risk Management	Analyze the collaboration chain supply below various risk factors and use the TOPSIS approach to evaluate the collaboration strategy.	Prakash et al., 2016
Supply Chain Risk Management (SCRM) Framework	Explore the connection between management risk chain supply and performance innovation in SMEs and impact turbulence technology.	Foli et al., 2024

The table presents a variety of foundational theories that can be used to explore risk management in small and medium-sized enterprises (SMEs). These theories offer different lenses through which we can understand and apply risk management practices. For example, quantitative risk analysis tools can help us develop cost-effective strategies to improve SME operations.

The Balanced Scorecard (BS) model is another helpful tool to enhance financial adaptability and performance, especially during challenging times.

The Resource-Based View (RBV) theory is a popular framework that examines how a company's internal risk management capabilities can influence its export ambitions.

The Resource Orchestration and Knowledge-Based View theory highlights the potential of AI to improve supply chain resilience and drive innovation.

By combining these various theories, we can better understand how risk management can benefit SMEs regarding operations, innovation, and internal capabilities.

Quote regarding risk management and SMEs.

Then, to get a picture of the influence.

### **Quote Regarding Risk Management and SMEs**

Then, to get a picture of the influence and contribution of research in the field management risks and SMEs, the table shows the most articles quoted in this domain. Articles are chosen based on the number of quotes they accept, which reflects influence and relevance in community academics.

Standard articles cited in the risk management and SME domains

The table above displays articles with the highest field management risks and SMEs. The article by Przychodzen & Przychodzen and Przychodzen (2015) occupies the top position with 230 quotes, showing significant influence in literature. Other articles, such as Marcelino-Sádaba et al. (2014) and Roper and Tapinos (2016), also have enough quotes, 155 and 131 citations, respectively, confirming the importance of study in the field. High quotes show that works are often referred to by researchers, signifying relevance and significant contribution to development theory and practice management risk in the SME context. Articles that have quoted a little still give valuable contributions, though possibly more specific or new in academic discussion.

### **Object State Risk Management and SMEs Research**

The following table summarises various countries' research on management risks and impacts on SMEs. The study covers different aspects of management

**Table 2.**

<b>Authors</b>	<b>Total Citations</b>
Przychodzen & Przychodzen, 2015	230
Marcelino- Sádaba et al., 2014	155
Roper & Tapinos, 2016	131
Gao et al., 2013	69
Wong et al., 2022	63
Alquier & Tignol, 2006	57
Santoro et al., 2020	45
Leopoulos et al., 2006	42
Dankiewicz et al., 2020	34
Yiannaki, 2012	32
Temel & Durst, 2020	27
Rodriguez et al., 2010	25
Kaivanto & Stoneman, 2007	22
Dey et al., 2023	21
Islam et al., 2008	19
Snieška et al., 2020	17
Faqihi & Miah, 2023	10
Folie et al., 2024	8
Testorelli et al., 2022	8
Toth et al., 2022	8
Zeiringer et al., 2022	7
Prakash et al., 2016	6
González Calzadilla et al., 2022	4
Kozubíková et al., 2020	4
Rustiarini et al., 2023	3
Ferreira & Silva, 2022	2
Jobo & Phyllis, 2020	2
Civelek et al., 2024	-
Prioteasa et al., 2020	-

risk, the start of mitigation strategies, risk entrepreneurship, the influence of social capital, the adoption of technology such as AI, and the implementation methodology management designed riskparticular for SMEs. Following is a discussion of several main findings identifiedin the study. This

Countries that are the objects of Risk Management and SMEs

Research conducted by Jobo and Phyllis

**Table 3.**

Country	Authors	Total
South Africa	Jobo & Phyllis, 2020	1
China	Gao et al., 2013	1
Hungary	Przychodzen & Przychodzen, 2015; Toth et al., 2022	2
India	Prakash et al., 2016	1
Indonesia	Rustiarini et al., 2023	1
English	Roper & Tapinos, 2016	2
Italy	Testorelli et al., 2022	2
Malaysia	Wong et al., 2022	1
Multi Countries in Europe	Civelek et al., 2024; Kozubíková et al., 2020; Zeiringer et al., 2022	3
Poland	Dankiewicz et al., 2020	1
Portugal	Ferreira & Silva, 2022	1
French	Alquier & Tignol, 2006	1
Romania	Prioteasa et al., 2020	1
New Zealand	Islam et al., 2008	1
Cyprus	Yiannaki, 2012	1
Slovakia and Poland	Snieska et al., 2020	1
Spanish	González Calzadilla et al., 2022; Marcelino- Sádaba et al., 2014; Rodriguez et al., 2010	3
Not mentioned in a way Specific	Faqihi & Miah, 2023; Temel & Durst, 2020	2
Türkiye	Folie et al., 2024	1
Vietnamese	Dey et al., 2023	1
Greece	Leopoulos et al., 2006	1

In South Africa sheds light on the environmental, technological, and financial risks maritime SMEs face in Cape Town, emphasising the urgent need for robust mitigation strategies. Meanwhile, in China,

it was found that social capital, including informal networks and knowledge sharing, is crucial in developing SMEs' risk management capabilities.

In Europe, studies from Hungary reveal a positive correlation between effective risk management and financial performance. Przychodzen and Przychodzen (2015) and Toth et al. (2022) highlight that eco-innovative companies, in particular, benefit from strong risk management practices, achieving higher returns on assets and equity. Across the Atlantic, Roper and Tapinos

observed that environmental uncertainty and innovation-related risks can drive firms to embrace green innovation, underscoring the pivotal role of risk management in sustainable development.

In the digital age,

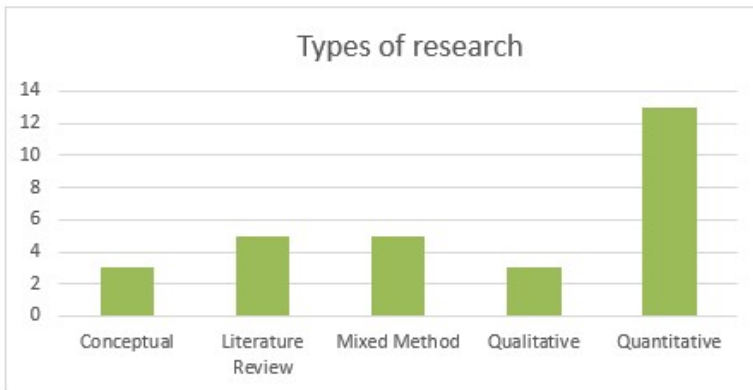
it was demonstrated how AI-powered supply chain risk management can significantly enhance SMEs’ agility and operational efficiency in Malaysia. In Indonesia, Rustiarini et al.

highlighted the synergistic relationship between risk management and intellectual capital—human, structural, and relational capital—in driving SMEs’ competitive advantage and performance. These findings underscore the critical role of structured risk management in fostering innovation, improving operational performance, and supporting SMEs’ growth and sustainability across various regions.

Application Methodological

**Application Methodological**

This paper has conducted many studies on managing risk in SMEs and its implications for operations and strategy.



**Figure 5:** *Types of research. Source (author’s processed results)*

The analysis results indicate that numerous risk management tactics are employed in the SME environment. All are derived from diverse researchers who used distinct research methodologies yet offered varying angles and outcomes equally.

Defining and developing new theories and frameworks on risk management effectivity research conceptual studies are pivotal. An example was the article by Alquier and Tignol (2006), which outlined the PRIMA method—a proactive risk management process targeting the offering phase of the product life cycle. Temel and Durst (2020) analyzed the types of risks to technological innovation that can be felt, identified these risks, and proposed the actions that should be taken in practice for each knowledge risk.

They are often used as qualitative approaches that provide a deep understanding of the phenomena, usually with interviews, case studies, and thematic analysis. Gao et al. (2013) analyze how SMEs build risk management capabilities, employing qualitative research methods while exploring the role of Social Capital during this process. The research shows that SMEs employ informal means to develop this capability, and cognitive capital is central. The analysis conducted by G Calzadilla et al. (2022), based on the experience of Spanish SMEs adopting a qualitative methodology, explored how risk management, resulting from SME internationalization strategies, can help to achieve better performance.

A quantitative approach uses statistical data to test hypotheses and measure relationships between variables. Roper and Tapinos (2016) used quantitative methods to evaluate how firms' perceptions of environmental uncertainty and innovation risk influence their willingness to undertake green innovation. Using PLS-SEM and artificial neural networks (ANN) to examine the influence of AI on supply chain risk management in SMEs, this study demonstrates that the use of AI can increase supply chain agility. Literature research reviews provide a comprehensive overview of existing research and identify gaps or areas for further research. Leopoulos et al. (2006) present essential risk management tools and their main features and case studies to show how they can benefit the company. Testorelli et al. (2022) also employ a literature review methodology for building an exhaustive project risk management framework applicable to the SME sector.

In this paper, the mixed approach adopts qualitative and quantitative research methods to achieve a fuller picture. Rodriguez et al. (2010) outline the main factors that can hamper this success. Rodriguez et al. (2010) developed a conceptual model to support risk and knowledge management during internationalization projects. Zeiringer et al. (2022) apply a mixed method for characterizing risk behaviour patterns of SMEs, classifying small and medium enterprises (SMEs) into four groups based on their risk behaviour. Those studies exemplify that adequate risk control is paramount for ensuring the survival of micro, small and medium enterprises while also being a catalyst for innovation and performance enhancement. These studies offer a more expansive and in-depth view of risk management in SMEs by applying different study methods.

## DISCUSSION

Over the years and recently, much attention has been given to risk management (RM) in increasing innovation and creativity within SMEs. Sound RM practices diminish the effects of vulnerabilities and create environments that support innovation, invention, and creativity. Discussing this will revise how RM can better help SMEs drive innovation and creativity to improve performance.

### Management Risks and Capabilities Innovation

Ability Innovation in SMEs refers to capabilities in which they develop new products, services, or processes that add value and deliver competitive superiority. RM plays a vital role in pushing innovation through a structured approach to identify and reduce associated risks with new initiatives. By proactively managing risk, SMEs can create a stable environment where innovation can develop. Previous studies show that SMEs with robust RM frameworks are more Ready To do innovative projects. Otache (2024) discusses the importance of supporting the government in a moderate connection between ability innovation and the performance of SMEs, showing how effectively RM can increase innovation during a crisis in the economy.

The ability to innovate in SMEs can be improved through application management and effective risk management. Wong et al. (2022) show that using AI to manage risk chain supply can increase agility chain supply and capability manipulation. This confirms that adopting technology supported by strong RM can strengthen innovation in SMEs (Wong et al., 2022). In addition, research by Prioteasa et al. (2020) finds a positive correlation between level application practice management risk in activity operational SMEs and upgrading involvement holder interest in management risk, which can increase capacity innovation.

### Management Risk and Creativity

Creativity is the process of generating new and valuable ideas, which is the predecessor of innovation. The creative process in SMEs involves several stages, including the identification of problems, the search for information, idea generation, and implementation. RM facilitated this by promoting culture tolerance, encouraging risk experimentation, and an appetite for out-of-the-box thinking ideas. It is the attitude; the daring to take risks needs courage. In change, creativity is an innovative product! As mentioned in C Castillo-Vergara and García-Pérez-De-Lema (2021), studies confirmed that SMEs' changing creative ideas and evolving innovation positively impact business performance, especially those not afraid of risk. This task has been addressed, as evidenced by the research of Yusuf et al., which demonstrates a positive correlation between risk-taking, creativity, and behavioural innovation in SMEs.

The risk attitude in an entrepreneurial and risk-taking environment will affect the original SMEs' creativity. Openness to open innovation (OI)- Thus, trust in internal and external partners, along with your approach towards risk-taking, affects openness to OI based on creativity (Santoro et al., 2020). Secondly, modern risk management in Modern SMEs in Poland must be characteristic of the operational running-off business, and research has demonstrated how the approach to risk by business people can affect creative and innovative decisions (Dankiewicz et al., 2020).

### **Improving SME Performance through Innovation and Creativity**

The final goal of integrating RM with innovation and creativity processes in SMEs is to increase performance. Innovation product, driven by a managed creative process with good, leads to excellent competition like enhanced market share, satisfaction customers, and performance finance. Otache (2024) discusses How flexibility, strategic, and capability innovation, supported by effective RM, can increase SMEs' performance even in an environment-challenging economy.

Integrating RM into SMEs' innovation and creativity processes is crucial for fostering growth and strengthening competitiveness. By cultivating a culture that supports risk-taking and innovation, SMEs can boost creative output, develop innovative products, and enhance their overall performance. Research has consistently shown that effective RM practices can drive core innovation and creativity in SMEs, ultimately leading to a sustainable competitive advantage. This is also reflected in previous studies, such as one examining how Spanish SMEs manage risks arising from internationalisation to improve performance through innovation strategies.

Others also support that supply chain risk management (SCRM) can influence performance innovation. The level of SCRM maturity positively affects the ability to manage risk, and turbulence technology is favourable to performance innovation (Foli et al., 2024). Next, management risk and intellectual capital influence superior competitive SMEs, ultimately increasing performance (Rustiarini et al., 2023).

### **Study in the Century will come.**

A literature study has shown the role of significant management risk in increasing innovation and creativity in SMEs, which positively impacts performance. To deepen understanding of this, future research can focus on several areas. One is developing an integrative model that combines various aspects of management risk, innovation, and creativity. This model can help understand the complex interaction between factors in the context of SMEs. Additionally, an analysis of exploratory contextual factors, such as how context-specific Factors like industry, culture, organization, and environment economy influence the con-

nection between management risk and innovation in SMEs, is also essential. For example, whether There is a significant difference in approach management risk between SMEs in the sector technology high versus sector traditional.

Further study is required to understand How technology such as AI, blockchain, and the Internet of Things (IoT) influences SMEs' management risks and innovation processes. the Internet of Things (IoT) is a technological revolution that connects devices and systems, enabling them to collect and exchange data. This leads to increased efficiency and innovation across various industries. Furthermore, the IoT empowers SMEs to enhance their operational efficiency, enabling them to compete more effectively in the global market through advanced automation and data-driven decision-making. Longitudinal studies can provide an outlook on the impact. of adopting technology. Additionally, studies using quantitative and qualitative methods to test the generated hypotheses from this SLR can provide strong evidence about the connection between management risks and capabilities innovation and creativity in SMEs. Studying experimental test effectiveness of various intervention management risks in increasing innovation and creativity in SMEs can also give a practical guide for the perpetrator's business.

### **Theoretical Implications**

Research that has been done has several implications and is theoretically critical. Findings study. This strengthens the RBV theory by showing that capability management risk is a source of crucial internal power to increase SMEs' superiority, competitiveness, and performance. Additionally, research integrates theory innovation with theory management risk, showing that these two domains are related and can be strengthened. This matter can open the road for development theory, a hybrid combining second perspectives. The discussion discussed the importance of social and cognitive capital in building capability management risk and innovation in SMEs, which can enrich the literature about the role of social capital in context management risk.

### **Implications Practical**

Implications practical for the following SLR are very relevant for entrepreneurs, managers, and makers' policy. SMEs must develop capability management of substantial risk to create a supportive environment of innovation and creativity. Training and developing employees in management risk and adopting RM technology can become step-effective practices. Building a culture that supports an organization's risk tolerance and encourages experimentation can increase SMEs' creativity and innovation. Business people and managers must push employees to take measurable risks and explore new ideas.

In addition, SMEs must actively build and utilize social and professional networks to source the required power and knowledge for managing risk and innovation. Collaboration with external partners, such as institutions, research, universities, and other companies, can make profit competitive.

## CONCLUSION

With 29 articles that focused on various aspects of management risks and their application in SMEs, they discovered that a structured and proactive approach to management risk is possible for SMEs to create a supportive environment, innovation, and creativity. The reviewed article shows that capability management of substantial risk helps SMEs overcome threats and uncertainty and encourages them to take measurable risks. Hence, they can competitively develop empowered new products, services, and processes.

Implications are theoretical from findings. This strengthens the RBV theory, which discusses the importance of internal power, such as capability management risk, in reaching superior competitiveness. Additionally, integration theory innovation with theory management risk opens opportunities for development theory to be more hybrid-comprehensive. Implications practically cover recommendations for SMEs to develop a culture supporting organizationstaking risks and innovation, building a network of intense social and professional skills, and adopting technology that can help manage risks and innovation processes.

This SLR gives a strong foundation for future research to deepen understanding of the connection between management risks and capabilities, innovation, and creativity in SMEs. More studies are required to develop an integrative model, conduct an analysis, and test interventions practically to increase SMEs' performance through effective risk management. Thus, the findings contribute to the academic literature and deliver a practical guide for entrepreneurs, managers, and makers' policies for supporting growth and power competitive SMEs.

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