

MAPPING THE EVOLUTION OF RESEARCH ON STRATEGIC RISK MANAGEMENT

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ABSTRACT

Strategic risk management connects risk management directly to a firm's long-term goals, competitive position, and survival by aligning risk awareness with strategic objectives, improving decision-making quality and supporting competitive advantage. Constant research in this area is needed because organizations, markets, and risk environments constantly evolve, while traditional models and tools may not adequately address complex, systemic, long-term threats. The study offers a comprehensive examination of the evolution, thematic structure, and intellectual foundations of research on strategic risk management through a bibliometric analysis of 1,303 English-language articles and proceeding papers published between 1984 and August 31, 2025, sourced from Clarivate's Web of Science database. The analysis explores the development of publication and citation patterns, the most influential sources, themes, affiliations, and cited works, as well as keyword co-occurrence, topic evolution, collaboration networks, and co-citation structures. The temporal distribution of publications highlights a sustained growth of scholarly interest, accompanied by clear shifts in thematic priorities – from early emphases on foundational managerial concerns toward more contemporary topics such as risk assessment, sustainability, resilience, technology, and digital transformation. This study provides a useful foundation for future research on strategic risk management, offering insights into emerging trends and identifying potential avenues for further inquiry in this field.

KEYWORDS: *bibliometric analysis, citation, co-citation network, collaboration analysis, strategic risk management.*

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1. INTRODUCTION

In the current geopolitical and socio-economic context which is characterized by increased complexity, interconnectivity, instability and uncertainty, driven by numerous global conflicts, pandemics, cyberattacks and climate disasters, all individuals, organizations and governments are constantly exposed to unpredictable events. Risks evolve and manifest at much faster rates than traditional systems can manage, therefore the decisions taken by different organizations can become unsuitable or even disadvantageous from one day to the next. As such, risk management has become a necessity.

A string of corporate failures, global financial crisis, and other public incidents over the past decades have alerted executives and policy-makers to the importance of managing risk events and abrupt changes in the surrounding environment. It has stimulated academic research to uncover dynamic capabilities that can enable organizational responses to rapid environmental changes, and

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deal with turbulent potentially disruptive business contexts (Andersen et al., 2022). Such risks are usually described as being strategic risks.

McConnell (2015) suggests that strategic risks can be defined as those risks that hinder an organization's ability to achieve its objectives, specifically those threats and opportunities that significantly affect an organization's capacity to survive. Despite the proposed definition of strategic risk, there is no commonly accepted definition of the term. Strategic risks generally fall into one of the following categories: regulatory and compliance risks, competition-related risks, economic risks, political risks, and technological risks (Bromiley et al., 2016). Dhlamini (2022) further elaborated on these categories. Regulatory and compliance risks are events that result from non-compliance with defined regulatory norms or standards, or with codes of conduct and associated compliance requirements. Competition-related risks are events or actions undertaken by an organization's competitors that could significantly impact its ability to achieve its objectives. Economic risks arise from broader macroeconomic conditions and social factors that extend beyond competition, and include events related to the overall status of a country's monetary policy, fiscal policy, exchange rates, demographics, inflation, unemployment rates, interest rates, and related government regulations. Political risk can be defined as an event with high uncertainty associated with changes in domestic policy, foreign policy, social activism, terrorism, cyber threats, and shifts among public administration professionals and their subsequent influence on domestic and foreign policy; it also includes the costs and/or benefits associated with changes in domestic and foreign policy, insofar as these affect organizations. Technological risks refer to the impact of uncertain events associated with the adoption or use of appropriate technology at the right time.

The aim of this research is to explore the evolution of risk management, determine the main themes related themes to the field, as well as the different affiliations and sources publishing those papers and the connections between them. After the introduction the research highlights the importance of strategic risks to organizations and the role of strategic risk management in an organization's activity through a theoretical approach. In the second part we explain the chosen research methodology, the main research objectives and questions, and how we have extracted the data to be processed. In the final part we discuss the main findings of our study, as well as present the conclusions while also suggesting future research directions.

2. THE IMPORTANCE OF STRATEGIC RISK MANAGEMENT: EVIDENCE FROM THE LITERATURE

Similar to traditional risk categories, strategic risks evolve progressively in response to the continuous transformation of organizational ecosystems and society at large. Consequently, strategic risk management must likewise adapt to these shifting conditions, necessitating the adoption of new methodologies and instruments capable of addressing emerging forms of uncertainty. Amidst the era of widespread digitalization, a new category of strategic risks intensifies its presence, the cyber risks. The exploration of the interrelationship between cybersecurity risk management and strategic management reveals a nexus of paramount importance for contemporary organizations. Recent events illuminate the evolving landscape of cyber threats and attacks, necessitating a cohesive approach that synergizes cybersecurity risk management with broader strategic initiatives. The growing threats also highlight the significance of a proactive stance, emphasizing the need for organizations to intertwine risk mitigation strategies into their overall strategic framework. Furthermore, effective cybersecurity risk management plays a significant role in bolstering resilience, enabling organizations to effectively navigate the intricate terrain of digital challenges (Mizrak, 2023).

Conventional risk management procedure explains that all risks need to be identified and known to determine their severity and management style. The risks will then be analyzed and prioritized, to plan for mitigation strategies. A risk management professional will need to monitor and evaluate the

usefulness of the selected management strategies. The risk management process arguably needs to be systematic for efficiency. The greater advantages of a systematic risk management approach include the ability to rank risks, identifying opportunities to improve project performance, and making informed decisions on mitigation plans. It also includes defining the roles of the enterprise and other stakeholders in risk-sharing and transfer. Enterprises need adequate risk management principles to survive. The requirement can be achieved through long-term planning and strategic thinking. An enterprise needs to identify its risk appetite to develop a hierarchy of strategies (Baloyi & Ozumba, 2020).

The increased complexity of strategic risks compared to traditional risks requires new approaches to manage, more thorough and comprehensive than existing ones, such as enterprise risk management (ERM). The corporate failures and global crises induced the development of ERM described as a systematic approach to identify, analyse, assess, treat, monitor, and report major exposures that might derail the achievement of strategic objectives (Andersen et al., 2022). Whereas traditional risk management narrowly focuses on insurance, financial, and compliance risks, ERM is an enhanced approach that takes a company-wide perspective and aims to incorporate both strategic and traditional risks (Slagmulder & Devoldere, 2018). Enterprise risk management can be defined as the process of analysing the portfolio of risks facing the enterprise to ensure that the combined effect of such risks is within an acceptable tolerance. ERM usually happens due to high-profile companies failing and suffering significant losses; as a result, corporate governance should be expanded to include the management of the firm's risks as well as a larger role for shareholder value models in strategic planning. Therefore, this approach suggests conducting risk management based on a holistic approach rather than a silo-based approach by integrating risk management into corporate governance as well as business strategies (Fuzy et al., 2022). The underlying objective of ERM is to increase shareholder value and firm performance by reducing costly lower-tail outcomes that may cause financial distress. ERM not only protects against negative outcomes but should also support the ability to recognize and tap new opportunities. It is not just about reducing or mitigating downside risk outcomes but also about how to turn these exposures into opportunities (Sax & Andersen, 2019). ERM practices can assist the firm by providing current updates on the changing risk landscape and develop an aggregated view on how to manoeuvre the enterprise. The risk considerations can pinpoint the need for financial slack to pursue adaptive opportunities and risk management can reduce the reliance on buffers thereby releasing cash for investments required under dynamic conditions (Sax & Andersen, 2019).

Krewski et al. (2022) identified ten principles that organizations should adhere to in order to ensure that a risk management system effectively supports the treatment of strategic risks and enhances strategic decision-making. First, risk management resources should be allocated in accordance with both the likelihood of occurrence and the potential consequences of each risk. Second, when potential consequences are substantial, uncertainty should not impede the decision-making process. Third, certain risks may be tolerated if their anticipated effects are minimal. Fourth, risk reduction measures should be implemented in a manner that maximizes the return on investment in risk management activities. Fifth, organizations should make sustained efforts to reduce risks to a level at which they become acceptable. Sixth, in most circumstances, the pursuit of a zero-risk outcome is neither realistic nor achievable. Seventh, risks that cannot be eliminated should be distributed equitably, ensuring that no particular group or individual bears a disproportionate burden. Eighth, all relevant stakeholders should have the opportunity to participate in the decision-making process. Ninth, risk management decisions must be taken in an open and transparent manner, with the underlying rationale clearly articulated. Finally, such decisions should remain flexible and subject to revision as new information emerges.

Munyao et al. (2025) highlighted in their study the significant role that strategic risk management plays in the performance of organisations. Given their findings, they proposed several recommendations to enhance the effectiveness of strategic risk management practices, thereby

improving the overall performance of organisations. One of the key recommendations of their research is the strengthening of governance structures. Effective governance risk management is critical to organizational performance. The presence of strong governance mechanisms ensures that decision-making processes are transparent, roles are clearly defined, and there is accountability in operations. Given that governance risks, such as weak oversight and internal conflicts, negatively affect performance, it is crucial for organisations to establish well-defined internal controls and conduct regular reviews of governance policies. Additionally, organisations need proactive reputation management. Their research underscores that public perception and stakeholder trust significantly impact the operational success of organisations. It is recommended that they engage in continuous monitoring of their reputation, leveraging social media and other platforms to manage public relations and mitigate negative publicity. Another vital area identified in their research is external environmental risk management. The unpredictable nature of external factors such as political instability, economic fluctuations, and technological changes can severely impact organizational performance. They suggest that organisations develop adaptive strategies to monitor and respond to these external risks. This could involve regular environmental scanning, develop contingency plans, and build resilience through diversification and innovation. Finally, their study emphasizes the importance of compliance risk management. Compliance with regulations and industry standards is essential to avoid legal sanctions and reputational damage. As such, organisations need to enhance their compliance programs, ensure staff are regularly trained on regulatory requirements, and implement effective monitoring systems to address non-compliance issues. A strong compliance culture can not only prevent legal issues but also foster a transparent and ethical business environment, which is essential for the long-term success.

The importance of risk management in strategic decision making cannot be underestimated. Organizations that are able to implement risk management effectively have a significant competitive advantage, because they can be more proactive in responding to environmental changes and anticipating the impact of possible risks. Conversely, failure to manage risk can potentially cause financial loss, reputation, or even the survival of the organization itself. Applying risk management in strategic decision making is not a simple matter. This process involves careful steps from identifying potential risks, evaluating their impact on strategic objectives, to developing effective mitigation strategies. In addition, internal factors such as organizational culture and management commitment also play a crucial role in the successful implementation of risk management (Ansyari, 2024).

3. RESEARCH METHODOLOGY

The aim of this research is to analyse the literature published on the subject of strategic risk management in order to explore this research field's characteristics, to identify emerging trends in the literature and to determine possible links between themes, affiliations and sources in regards to strategic risk management.

- How did the literature on the subject of strategic risk management evolve throughout the years and where does it stand today?
- What are the current most relevant research themes regarding strategic risk management and how have they changed over time?
- Are there any links between these themes or between the different affiliations and sources that publish these papers?

Bibliometric analysis has gained immense popularity in business research in recent years, and its popularity can be attributed to the advancement, availability, and accessibility of bibliometric software such as Gephi, Leximancer, VOSviewer, Bibliometrix. Scientific databases such as Elsevier's Scopus and Clarivate's Web of Science, as well as the crossdisciplinary pollination of the bibliometric methodology from information science to business and economics have also made it

more compelling to researchers. More importantly, the popularity of bibliometric analysis in business research is not a fad but rather a reflection of its utility for handling large volumes of scientific data, and producing high impact research (Donthu et al., 2021). Bibliometric methodologies are also considered useful as supporting tools for decision-making in setting research priorities, tracking the evolution of science and technology, funding allocation, and rewarding scientific excellence, among others. Given their versatility, these methods have quickly spread beyond the information and library science domain from where they initiated. When executed properly, bibliometric methods offer an abundance of benefits to other disciplines and it cannot be expected to be contained (Mejia et al., 2021).

The following research was conducted using extracted data from the Web of Science database and the Biblioshiny tool for R in order to process and analyse the data (Aria & Cuccurullo, 2017; K-Synth, n.d.). The query used to extract the data on the topic of strategic risk management is the following:

("risk management" OR "risk control" OR "risk assessment" OR "risk analysis" OR "risk evaluation" OR "risk identification") AND ("strategic risk*" OR "strategic decision*" OR "strategic planning" OR "strategic goal*" OR "strategic activit*" OR "strategic objective*" OR "strategic initiative*" OR "strategic opportunit*" OR "strategic process*").

We tried including as many closely related terms and keywords to strategic risk management as possible. The initial search produced 1,431 results that ranged from the year 1984 to August 31, 2025, and included all languages and types of documents. In order for our research to be as relevant as possible, we filtered the results to only include articles and proceeding papers written in English. The result was 1,303 papers of which 1,003 were articles and 300 were proceeding papers.

The Biblioshiny app was used to further analyse the data and to generate several analyses such as the keyword co-occurrence network, the evolution of topics regarding strategic risk management, as well as collaboration networks between institutions and co-citation networks between different journals and publication outlets.

4. FINDINGS AND DISCUSSIONS

The annual number of papers and citations from 1984 until the end of August 2025 is presented in Figure 1. Overall, both metrics show a pronounced upward trajectory, especially in the most recent decade. From 1984 through the late 1990s, research output remained very low, with only minimal publication activity and negligible citation counts. Beginning in the early 2000s, the number of papers starts to rise gradually, accompanied by a steady but modest increase in citations. The first noticeable expansion occurs in 2010, where publication counts begin to fluctuate but follow a clear upward trend. Although individual years show minor increases and decreases, the overall pattern reflects substantial growth in productivity. Citations show an even stronger acceleration, rising consistently and outpacing the growth in publications. The second and most striking development happens from 2018 onward. With the exception of 2020, when the pandemic broke out, both publications and citations surge sharply, with citations in particular experiencing an exponential growth. By the end of August 2025, citations reach their highest level, and the number of papers also peaks, indicating heightened research interest and influence.

Figure 2 presents the distribution of published papers across a selection of journals, revealing notable disparities in publication frequency. Sustainability emerges as the most prominent source with a figure that considerably exceeds that of all other journals in the dataset. This dominance indicates a substantial research focus within sustainability-related themes. Risk Analysis and Applied Sciences-Basel follow, suggesting that these journals also serve as important platforms for disseminating related academic work, albeit to a lesser extent.

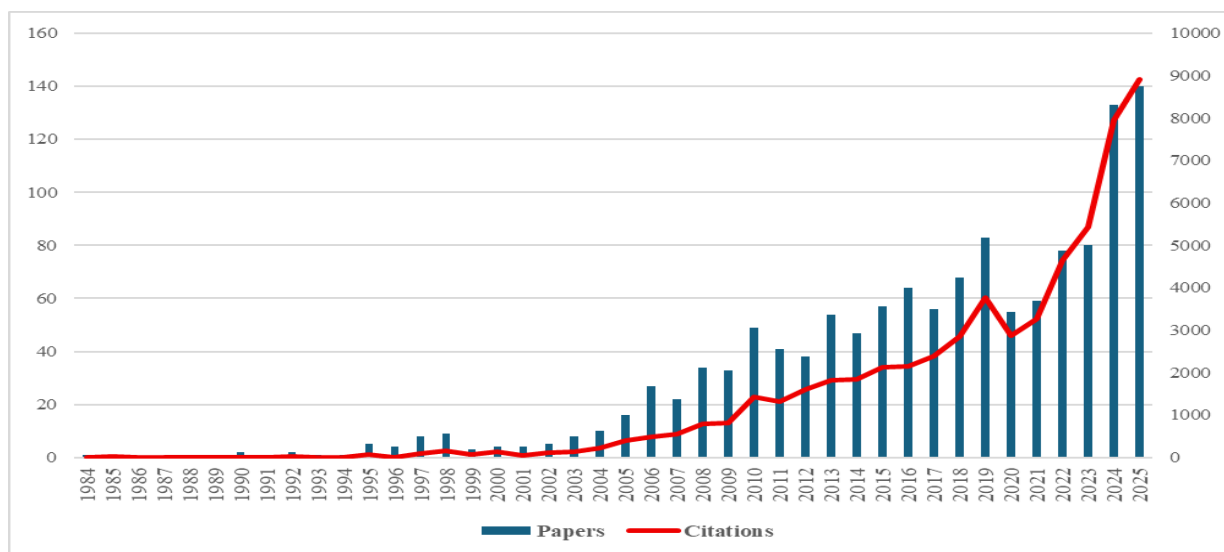


Figure 1. The evolution of papers and citations on the topic of strategic risk management
 Source: Authors, based on WoS data

Mid-range publication levels are observed in the Journal of Risk Research, and both the Proceedings of the International Conference on Business Excellence and Risks, indicating moderate but consistent engagement. The remaining journals, while lower in the rankings, nonetheless reflect a diversified dissemination of research across multiple disciplinary outlets. Overall, the publication pattern suggests a strong concentration of research activities within sustainability and risk-oriented journals, accompanied by a broader but comparatively modest distribution across operational research, disaster risk, and production research venues. This distribution underscores both the centrality of sustainability-focused research and the interdisciplinary nature of risk management.

In Figure 3 is presented the distribution of published papers attributed to various institutions, highlighting comparatively less variation in research output than the previously analysed sources. The Ministry of Education and Science of Ukraine leads with most publications. This likely happened because the Ministry of Education and Science of Ukraine serves as an umbrella affiliation for a large number of researchers and institutions. Bibliometric algorithms further exacerbate this issue by failing to separate affiliations correctly, often collapsing many distinct institutional affiliations into one entity. The Ministry is followed closely by the Bucharest University of Economic Studies and the University of London, both of which demonstrate substantial contributions to the research landscape. A second tier of institutions, the United States Department of Agriculture (USDA) and the University of California System, suggesting consistent and meaningful involvement in related academic activities. The University of Virginia follows closely, reflecting a moderate but significant research presence. The last four institutions, namely Cranfield University, Delft University of Technology, Griffith University and the University System of Georgia, while slightly lower in output, have contributions that collectively illustrate a broad international engagement and diversified participation across universities and governmental bodies. This distribution underscores a lower but still significant concentration of research productivity within a select group of leading institutions while also demonstrating the involvement of a wide range of organizations across different countries. This pattern reflects both the global relevance of the research topic and the diversity of institutional actors contributing to its advancement.



Figure 2. Top 10 most relevant sources on the topic of strategic risk management
 Source: Authors, based on WoS data

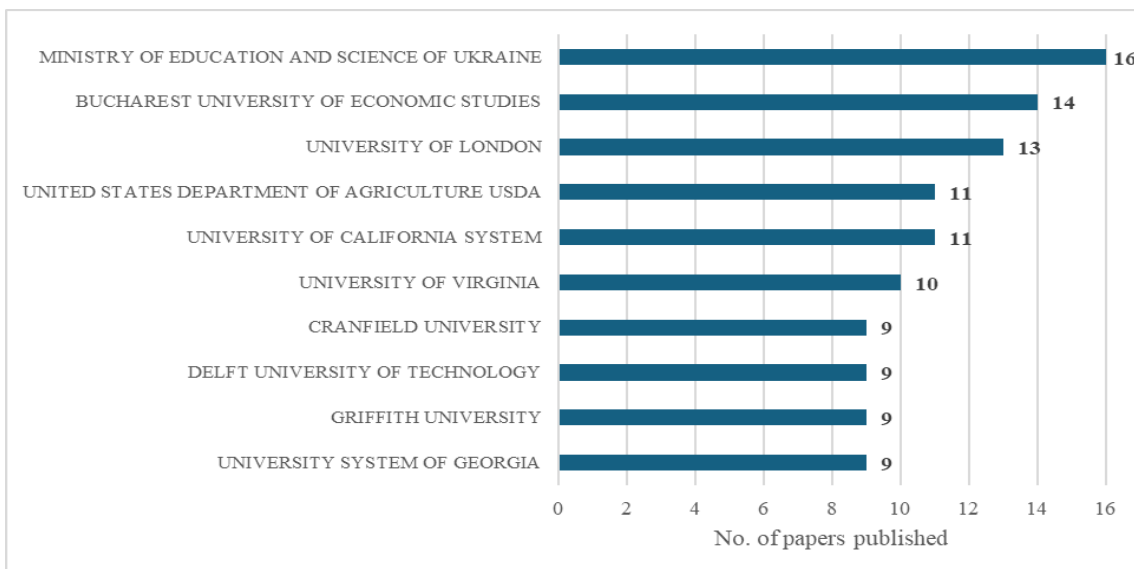


Figure 3. Top 10 most relevant affiliations in the field of strategic risk management
 Source: Authors, based on WoS data

The five most frequently cited publications within the dataset (Table 1) related to strategic risk management highlight a diverse range of thematic emphases, further reflecting the multidisciplinary nature of the topic. The most cited paper, authored by Wagner and Bode (2008), has accumulated a substantial number of citations, positioning it as a seminal contribution. Its focus on supply chain performance and risk dimensions underscores the importance of supply chain resilience as a central concern in strategic risk management research. This work's substantial citation count suggests its enduring relevance in both academic and applied risk management contexts.

The second-ranked paper by Graedel et al. (2012), introduces a methodological framework for metal criticality determination. It mainly focuses on the supply risks of metals, from a scarcity perspective, a geological, technological and economic perspective (the abundance of metal), social and regulatory perspective (the effects of mining the resources), geopolitical perspective (governmental policies, actions and stability that affect the ability to obtain mineral resources) and environmental implications (the toxicity of the metals and its impacts on the ecosystem). Although

situated within the broader domain of environmental science, its methodological rigor and emphasis on resource-related risk accentuates the field’s interdisciplinary reach, particularly in relation to sustainability and material security.

In third place, the publication by Adams and Frost (2008) contributes to the understanding of sustainability reporting within management practices. This reflects the expanding integration of sustainability considerations into strategic decision-making and risk assessment frameworks, while also aiming to develop KPIs for measuring sustainability performance and explain the way these KPIs could be used in decision-making, planning and performance management.

Table 1. The most cited papers from the database on the topic of strategic risk management

Rank	Authors, Paper, Source	DOI	Total citations
1	Wagner, S.M., Bode, C. (2008). An Empirical Examination of Supply Chain Performance along Several Dimensions of Risk. <i>Journal of Business Logistics</i>	10.1002/j.2158-1592.2008.tb00081.x	568
2	Graedel, T. E., Barr, R., Chandler, C. et al. (2012). Methodology of Metal Criticality Determination. <i>Environmental Science & Technology</i>	10.1021/es203534z	431
3	Adams, C. A., Frost, G. R. (2008). Integrating sustainability reporting into management practices. <i>Accounting Forum</i>	10.1016/j.accfor.2008.05.002	311
4	Arjaliès, D.L., Mundy, J. (2013). The use of management control systems to manage CSR strategy: A levers of control perspective. <i>Management Accounting Research</i>	10.1016/j.mar.2013.06.003	265
5	Yang, R.J., Zou, P.X.W. (2014). Stakeholder-associated risks and their interactions in complex green building projects: A social network model. <i>Building and Environment</i>	10.1016/j.buildenv.2013.12.014	244

Source: Authors, based on WoS data

The fourth paper, authored by Arjaliès and Mundy (2013), examines management control systems within the context of corporate social responsibility. The study highlights the interplay between organizational governance mechanisms and risk-related strategic objectives, reinforcing the importance of internal controls in mitigating and managing emerging risks. Finally, Yang and Zou (2014) occupy the fifth position, offering insights into stakeholder-associated risks in green building projects through a social network modelling approach. This contribution emphasizes the complexity and interconnectedness of stakeholder influences, aligning with broader trends toward systemic and network-based perspectives in risk analysis. Collectively, the table illustrates that the most influential works in strategic risk management span a wide array of subject areas, including supply chains, environmental sustainability, corporate governance, and construction management, further demonstrating the breadth and interdisciplinary nature of research in this field. The prominence of these studies indicates their foundational role in guiding subsequent research and informing practical approaches to strategic risk management.

Figure 4 presents the top ten research areas contributing to the research on strategic risk management, revealing a clear hierarchy of disciplinary engagement. Business and Economics is

the dominant field, underscoring the centrality of risk-related issues within managerial decision-making, financial analysis, and organizational strategy. This prominence reflects the foundational role of risk management within business-oriented research, where strategic uncertainty and performance outcomes are core concerns. The second most represented area is Engineering, indicating the strong relevance of risk assessment in technical systems, infrastructure planning, and industrial operations, while the significant contribution of Computer Science further highlights the increasing importance of digitalization, cybersecurity, and computational modelling in contemporary risk management research.

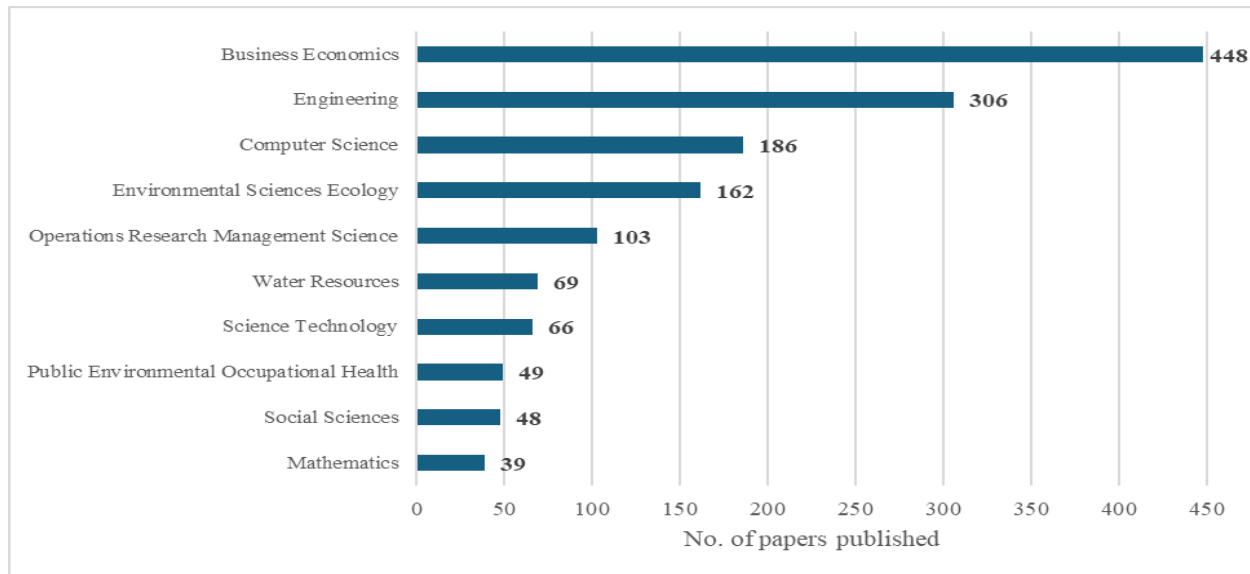


Figure 4. Top 10 most relevant research areas on the topic of strategic risk management

Source: Authors, based on WoS data

Environmental Sciences and Ecology, demonstrate the growing recognition of ecological and sustainability-related risks, including climate-induced uncertainties and resource vulnerabilities. Meanwhile, Operations Research and Management Science reflects a methodological focus on optimization, decision modelling, and quantitative approaches to managing complex risk environments. Research areas with moderate publication levels – such as Water Resources and Science and Technology– indicate that risk considerations are increasingly embedded within sector-specific and innovation-driven disciplines. Fields such as Public Environmental and Occupational Health, Social Sciences, and Mathematics contribute smaller but meaningful bodies of work, emphasizing the societal, behavioural, and theoretical dimensions of strategic risk.

Overall, the distribution presented in Figure 4 demonstrates that strategic risk management is inherently interdisciplinary, spanning technical, economic, environmental, and social domains. The concentration of research within Business Economics and Engineering, which make up more than 50% of the total number of papers published on strategic risk management, suggests that both organizational decision-making and technical risk modelling constitute the core drivers of academic inquiry, while the diversity across other fields reflects the complex and multifaceted nature of strategic risk phenomena.

The tree map in Figure 5 provides a quantitative overview of the most frequently occurring keywords in the strategic risk management literature. As expected, „risk management” remains the dominant term, with 515 occurrences, confirming its position as the overarching thematic anchor of the field. A substantial number of publications also employ the term „strategic risk” (161), proving the correctness of the query used to extract the data, as well as the specific importance of risk from a strategic perspective rather than a merely operational or technical one. The presence of

„management” (144) and „performance” (132) as high-frequency terms reflects the focus of the literature on managerial practices and organizational outcomes. These concepts demonstrate that risk-related decision making is closely tied to performance evaluation, strategic alignment, and managerial capability.



Figure 5. The most frequent keywords in research on the topic of strategic risk management

Source: Authors, based on WoS data

Additionally, keywords such as „model” (96), „risk” (88), „uncertainty” (65), „framework” (61), and „impact” (71) indicate that methodological and analytical approaches play a central role in the research domain. Their significant frequency underscores the field’s reliance on conceptual models, uncertainty assessment, and structured frameworks for evaluating strategic risk phenomena. The visibility of „small and medium enterprises” (52) signals the importance of SMEs as a recurrent empirical context. This confirms that strategic risk management is not only studied in large corporate environments but also within smaller, resource-constrained firms where risk exposure is often higher and managerial capabilities differ substantially.

Closely related to the last one is Figure 6, which illustrates the relational structure among the keywords, providing insight into how research themes cluster and interact. As in the word-cloud, „risk management” appears as the central and most influential node, forming the core of the conceptual network. A prominent cluster (red) surrounding „strategic risk,” „management,” „uncertainty,” „framework,” „sustainability” and „supply chain” reflects the managerial and organizational focus of the literature. These connections show that strategic risk is frequently conceptualized through organizational frameworks, sustainability considerations, and supply chain vulnerabilities. The network also highlights a substantial performance-oriented cluster, with keywords such as „performance,” „impact,” „innovation,” „strategy” and „implementation.” This pattern indicates that performance outcomes and strategic capabilities are key dimensions of contemporary risk management research. Distinct from these managerial and performance-related nodes, a separate environmental-climate cluster (green) emerges, represented by terms such as „climate change,” „resilience,” „flood risk,” „impacts” and „adaptation.” Although less central, this cluster shows that environmental risk and climate-induced uncertainty are increasingly integrated into strategic risk discourses. Finally, a governance-related cluster – including „corporate governance,” „firm,” „determinants” and „enterprise risk management” – suggests the importance of institutional structures and managerial systems in shaping risk responses.

In Figure 7 we can observe the progression of the most significant topics regarding strategic risk management in the past two decades. The prominence of real estate and ethics in 2010 underscores the field’s initial anchoring in industry-specific risk exposure and normative concerns. Research at this stage focused on practical vulnerabilities within key sectors and the moral dimensions of decision-making, reflecting a relatively localized and conceptual phase of development. By 2016, the dominant terms – strategic management, strategy and strategic planning – signal a decisive transition. Risk is no longer treated as an isolated problem but becomes embedded in the broader logic of organizational strategy. This period marks the conceptual consolidation of risk as a fundamental managerial function that shapes long-term competitive positioning.



Figure 6. Keyword co-occurrence network regarding strategic risk management

Source: Authors with Biblioshiny, based on WoS data

In 2018, the emphasis on risk assessment, management, and risk management demonstrates the field's growing methodological rigor and practical alignment. The literature moves toward systematizing the processes through which risk is identified, evaluated, and integrated into organizational routines. This reflects an increasing professionalization and formalization of risk practices. The shift in 2020 toward quality, decision-making and sustainability highlights a research agenda shaped by heightened global uncertainty. The focus on quality indicates concerns for reliability under stress, while decision-making reflects the demand for adaptive choices in crisis conditions. Meanwhile, sustainability introduces a broader temporal and ecological horizon, expanding risk considerations beyond immediate operational impacts. By 2022, the prominence of technology, resilience and impact signifies the convergence of digital transformations with systemic risk perspectives. Technology becomes a central enabler of risk analysis and mitigation, resilience captures organizational and infrastructural adaptability, and impact reflects the heightened importance of tracing risk consequences across interconnected systems.

In the current year, the dominant themes, namely volatility, machine learning and digital transformation, reflect the culmination of earlier trends. Research increasingly incorporates advanced computational models to interpret and respond to highly volatile environments. Digital transformation becomes foundational rather than auxiliary, and machine learning represents the methodological frontier for predictive and adaptive risk management.

The collaboration network map (Figure 8) illustrates the structural relationships among research institutions contributing to the field. Node size reflects each affiliation's publication volume or influence, while spatial clustering and link density illustrate the intensity of collaborative ties. The resulting configuration reveals several distinct clusters and highlights the central actors driving inter-institutional cooperation. The most prominent and densely connected cluster centres on the United States Department of Agriculture (USDA) and the University of California System, both represented by large nodes. Their spatial proximity and strong connections indicate a highly collaborative research ecosystem. The presence of Imperial College London and the University of London within or adjacent to this cluster suggests a well-developed transatlantic collaboration network. These UK institutions act as bridging nodes, linking European research structures with major U.S. research hubs. This cluster reflects a core network characterized by high productivity, international reach, and methodological influence.

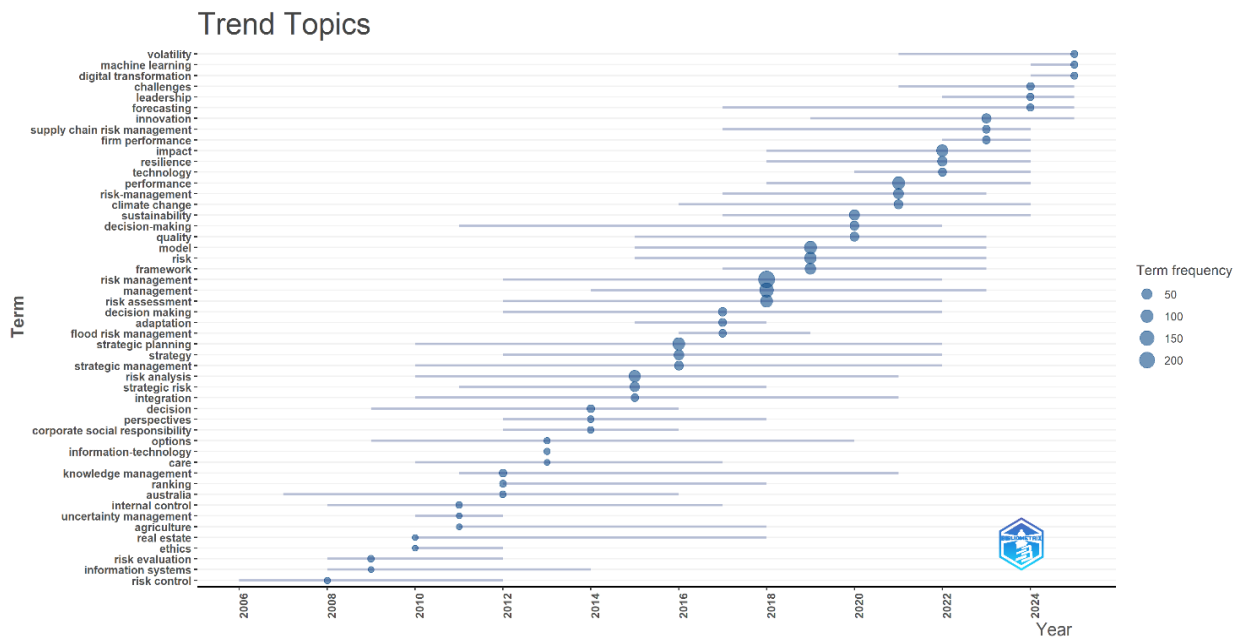


Figure 7. The evolution of topics regarding research on strategic risk management
 Source: Authors with Biblioshiny, based on WoS data

A second grouping is found around the University of London, featuring nodes such as Cranfield University, University of Nottingham, and University of North Carolina. This cluster is more academically oriented, with strong internal coherence. It appears less connected to the USDA – California hub than to each other, suggesting a degree of thematic specialization within European-centric collaborations. A distinct and somewhat isolated cluster includes Griffith University, the University of Melbourne, and related institutions, including defence-linked bodies such as the United States Department of Defense, in this context likely co-publishing on strategic and cyber risk topics. The cluster’s relative separation indicates strong intra-regional ties but fewer direct collaborations with North American or European hubs.

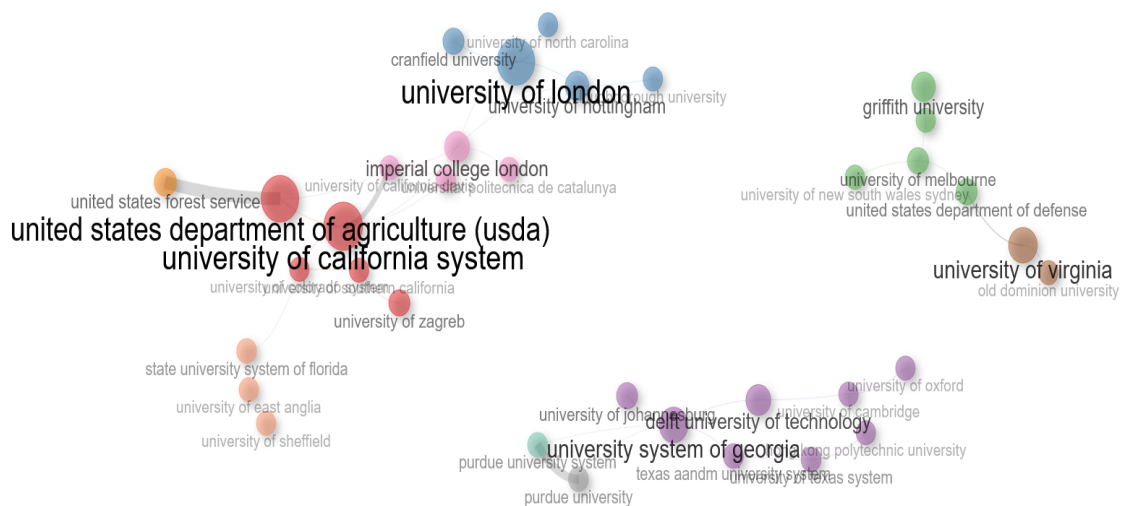


Figure 8. Collaboration networks between affiliations
 Source: Authors with Biblioshiny, based on WoS data

The University of Virginia stands as a visible node with moderate connections, linking primarily to other U.S. institutions, including Old Dominion University. The University System of Georgia

forms another identifiable cluster, connected to institutions such as the University of Johannesburg, the University of Technology, Texas A&M University System and Purdue University. Several peripheral institutions – such as the University of Zagreb, University of Sheffield, and State University System of Florida – appear as smaller nodes with weaker connections. These actors contribute to the field but maintain limited collaborative reach, suggesting more localized research agendas or independent publication patterns.

Figure 9 illustrates the co-citation structure of sources referenced within the strategic risk management literature. Each node represents a source (journal or publication outlet), and the size of the node reflects its relative prominence in the co-citation network. The network displays three clearly distinguishable clusters, each with its own centrally positioned, highly cited journals. These clusters suggest distinct but interconnected areas of academic influence. The first cluster (red) is centered around Sustainability-Basel, which is shown as one of the largest and most influential nodes in the entire network. Other sizeable nodes within this cluster include Risk Analysis, Safety Science and other journals related to environmental systems, disaster risk, and hazard studies. The nodes in this cluster are tightly interconnected, with dense edges indicating frequent co-citation among journals focused on risk analysis, environmental risk, safety, and sustainability-related issues. The large node size of Sustainability-Basel suggests it plays a major anchoring role within this domain.

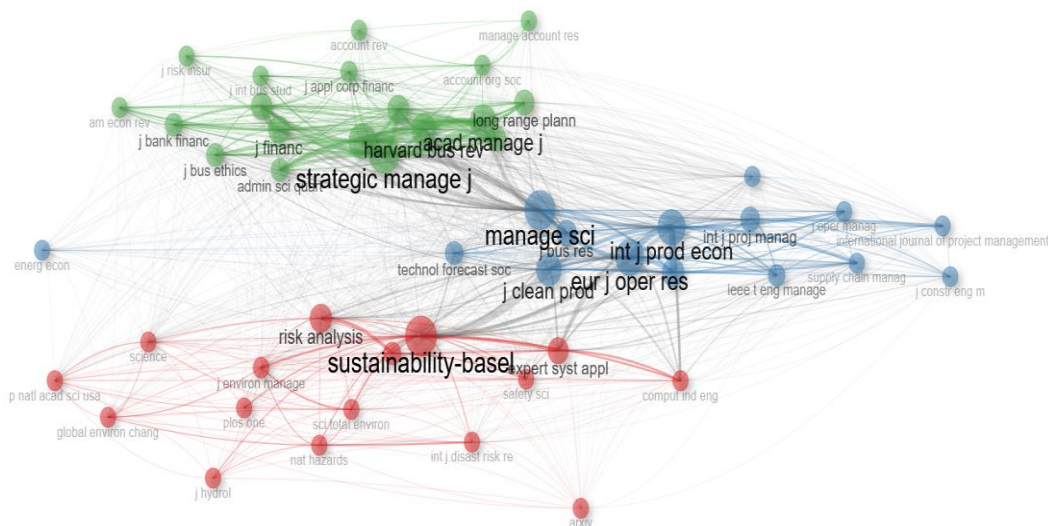


Figure 9. Co-citation networks between sources
Source: Authors with Biblioshiny, based on WoS data

A second major group (green) appears in the upper-left region, with several notable journals forming the core: Strategic Management Journal, Harvard Business Review, Journal of Finance and several journals in management, accounting, and corporate governance. This cluster is visually characterized by medium to large node sizes for established management journals, strong internal connections and a spread-out structure compared to the compact red cluster. The density of edges suggests that these journals are frequently co-cited in work involving strategic management, corporate governance, business strategy, and organizational performance.

The third major cluster (blue) appears on the right side of the graph, dominated by Management Science, International Journal of Production Economics, European Journal of Operational Research and International Journal of Production Research. This cluster is slightly more elongated, with numerous connections linking journals in operations management, production systems, industrial engineering, and decision sciences. The shared co-citation patterns indicate the influence of quantitative methods, optimization, and operational decision-making in strategic risk management research.

5. CONCLUSIONS

This paper aimed to highlight the growing importance of strategic risks and strategic risk management for both organisations, by explaining what strategic risks are, how they differ from traditional risks and how they can be managed, and researchers, through the bibliometric analysis conducted. Strategic risks are becoming increasingly important because organisations now operate in environments defined by rapid change, interdependence, and heightened uncertainty. Companies face a range of constraints that make long-term success more difficult to secure. Global markets are volatile, with geopolitical tensions, supply chain disruptions, and shifting regulatory frameworks creating unpredictable external pressures. Technological innovation accelerates continuously, forcing firms to adapt their business models while facing risks related to digitalisation, cybersecurity, and automation. At the same time, competitive dynamics evolve quickly as new entrants, platform-based ecosystems, and disruptive technologies challenge established market positions. Environmental and social expectations have also intensified, requiring firms to address sustainability, climate-related risks, and stakeholder scrutiny. These conditions reduce the reliability of experience as a guide for future decisions and increase the likelihood that strategic choices may lead to unintended or harmful consequences. Strategic risk management helps organisations navigate these constraints by promoting a forward-looking and systematic approach to identifying, assessing, and responding to high-impact uncertainties. It encourages leaders to scan the external environment more rigorously, evaluate alternative strategic scenarios, and integrate risk considerations directly into strategic planning. By recognising vulnerabilities early, companies can build greater resilience, allocate resources more effectively, and adapt more quickly to emerging challenges. Importantly, strategic risk management also highlights potential opportunities embedded in uncertainty—such as new markets or technological advantages—supporting more agile and informed decision-making. As a result, strategic risks have become central to organisational survival and competitiveness in today's complex and dynamic operating environments.

The bibliometric analysis highlighted several important aspects of the research on strategic risk management. The temporal analyses of publication frequency indicate a steady and sustained growth of research activity over time. Although fluctuations appear across individual years, the general trend demonstrates an expanding academic interest in the topic, supported by the steadily growing number of papers published and exponentially increasing number of citations, as well as a progressively widening research base. This expansion is mirrored in the trend topics figure, which show how the conceptual vocabulary of the field evolves by decade and by specific peak years. Early periods are dominated by terms associated with foundational managerial concerns, such as real estate, ethics, strategic management, and strategic planning. Over time, the thematic focus shifts toward increasingly complex and contemporary areas, including risk assessment, risk management, decision-making, quality, sustainability, technology, resilience, impact, volatility, machine learning, and digital transformation. This progression highlights the field's dynamic adaptation to global uncertainty, technological change, and organizational transformation.

The research also illustrated the distribution of publications across sources which reveals a field grounded in a diverse set of academic outlets, with a limited number of journals contributing disproportionately to overall output. This concentration suggests that while strategic risk management is dispersed across multiple disciplines, a core set of publication venues acts as an anchor for academic dissemination.

The collaboration network between affiliations reveals a research landscape characterized by multiple clusters of institutional cooperation, though the degree of interconnection varies considerably among nodes. Some institutions form dense collaborative subgroups, while others appear more isolated, indicating uneven levels of coordination and integration within the academic

community. Nonetheless, the presence of several multi-institutional links points to an underlying, albeit asymmetrical, collaborative structure.

The co-citation network of sources offers insight into the intellectual foundations of the field. The presence of identifiable clusters underscores the existence of shared reference points that anchor academic discourse. Sources such as Sustainability-Basel, Strategic Management Journal and Management Science represent bodies of literature that exert greater influence, serving as conceptual benchmarks for researchers and helping to define the boundaries and theoretical orientation of strategic risk management.

There is also a strong need for further research in the field. As emerging phenomena such as AI adoption, climate transitions, cyber-physical systems, and global supply-chain reconfiguration reshape strategic landscapes, further research in the field is necessary. More empirical evidence on how organisations actually manage (or fail to manage) strategic risks is also necessary because it offers insights into best practices and common pitfalls. By generating robust knowledge, identifying emerging trends, and informing managerial education, research in this field supports more resilient and adaptive organisations. In a world where strategic missteps can have far-reaching consequences, advancing the study of strategic risk management is both scientifically relevant and practically indispensable. In order for future bibliometric analyses to be more thorough, more papers need to be included by accessing other databases, such as Elsevier's Scopus. A more extensive dataset would offer additional aspects to be studied, optimizing the research. For future research, a systematic analysis of the literature should be considered, with a particular focus on the key success factors in implementing an integrated risk management system as part of the enterprise risk management approach.

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REFERENCES

- Adams, C., A. & Frost, G., R. (2008). Integrating sustainability reporting into management practices. *Accounting Forum*, 32(4), 288-302. <https://doi.org/10.1016/j.accfor.2008.05.002>.
- Andersen, T., J., Sax, J. & Giannozzi, A. (2022). Conjoint effects of interacting strategy-making processes and lines of defense practices in strategic Risk Management: An empirical study. *Long Range Planning*, 55(6). <https://doi.org/10.1016/j.lrp.2021.102164>.
- Ansyari, S. (2024). Implementation of Risk Management in Strategic Decision Making. *Journal of Scientific Interdisciplinary*, 1(1), 35-44. <https://doi.org/10.62504/t7c2r379>.
- Aria, M. & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959-975. <https://doi.org/10.1016/j.joi.2017.08.007>.
- Arjaliès, D., L. & Mundy, J. (2013). The use of management control systems to manage CSR strategy: A levers of control perspective. *Management Accounting Research*, 24(4), 284-300. <https://doi.org/10.1016/j.mar.2013.06.003>.
- Baloyi, T. & Ozumba, A. (2020). Strategic Risk Management among Small Enterprises in the Construction Industry. *MATEC Web of Conferences*, 312. <https://doi.org/10.1051/mateconf/202031202013>.
- Bromiley, P., Rau, D. & McShane, M., K. (2016). Can strategic risk management contribute to enterprise risk management? A strategic management perspective. *The Routledge Companion to Strategic Risk Management*, 140-156. <https://doi.org/10.2139/ssrn.2512477>.
- Dhlamini, J. (2022). Strategic risk management: A systematic review from 2001 to 2020. *Journal of Contemporary Management*, 19(2), 212-237. <https://doi.org/10.35683/jcm22008.165>.

- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N. & Lim, W., M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285-296. <https://doi.org/10.1016/j.jbusres.2021.04.070>.
- Fuzi, S., F., S., M., Hassan, M., S., Jaffar, R. & Abdullah, M., H., S., B. (2022). Examining Enterprise Risk Management Research using Bibliometric Analysis. *International Journal of Academic Research in Business and Social Sciences*, 12(12), 592-604. <https://doi.org/10.6007/IJARBS/v12-i12/15565>.
- Graedel, T., E., Barr, R., Chandler, C., Chase, T., Choi, J., Christoffersen, L., Friedlander, E., Henly, C., Jun, C., Nassar, T., N., Schechner, D., Warren, S., Yang, M. & Zhu, C. (2012). Methodology of Metal Criticality Determination. *Environmental Science & Technology*, 46(2), 1063-1070. <https://doi.org/10.1021/es203534z>.
- K-Synth. (n.d.). *Bibliometrix*. Retrieved from <https://www.bibliometrix.org/home/index.php/layout/biblioshiny>.
- Krewski, D., Saunders-Hastings, P., Larkin, P., Westphal, M., Tyshenko, M., G., Leiss, W., Dusseault, M., Jerrett, M. & Coyle, D. (2022). Principles of risk decision-making. *Journal of Toxicology and Environmental Health, Part B*, 25(5), 250-278. <https://doi.org/10.1080/10937404.2022.2107591>.
- McConnell, P., J. (2015). Strategic Risk Management - A Trail of Two Strategies. *Macquarie University Faculty of Business & Economics*, (38). <https://doi.org/10.2139/ssrn.3327988>.
- Mejia, C., Wu, M., Zhang, Y. & Kajikawa, Y. (2021). Exploring Topics in Bibliometric Research Through Citation Networks and Semantic Analysis. *Frontiers in Research Metrics and Analytics*, 24. <https://doi.org/10.3389/frma.2021.742311>.
- Mizrak, F. (2023). Integrating cybersecurity risk management into strategic management: a comprehensive literature review. *Research Journal of Business and Management*, 10(3), 98-108. <https://doi.org/10.17261/pressacademia.2023.1807>.
- Munyao, D., K., Deya, J. & Odollo, L. (2025). Strategic Risk Management and Performance of Commercial State Corporations in Kenya. *International Journal of Social Science and Humanities Research*, 3(1), 97-111. <https://doi.org/10.61108/ijsshr.v3i1.157>.
- Sax, J. & Andersen, T., J. (2019). Making Risk Management Strategic: Integrating Enterprise Risk Management with Strategic Planning. *European Management Review*, 16(3), 719-740. <https://doi.org/10.1111/emre.12185>.
- Slagmulder, R. & Devoldere, B. (2018). Transforming under deep uncertainty: A strategic perspective on risk management. *Business Horizons*, 61(5), 733-743. <https://doi.org/10.1016/j.bushor.2018.05.001>.
- Wagner, S., M. & Bode, C. (2008). An Empirical Examination of Supply Chain Performance along Several Dimensions of Risk. *Journal of Business Logistics*, 29(1), 307-325. <https://doi.org/10.1002/j.2158-1592.2008.tb00081.x>.
- Yang, R., J. & Zou, P., X., W. (2013). Stakeholder-Associated Risks and their Interactions in Complex Green Building Projects: A Social Network Model. *Building and Environment*, 73, 208-222. <https://doi.org/10.1016/j.buildenv.2013.12.014>.