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Building Risk-Aware Organizations: A Systematic Literature Review Of Organizational Culture, Governance Mechanisms, And Enterprise Risk Management Integration

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Abstract

This study examines the development of risk-aware organizations through a Systematic Literature Review (SLR) approach by analyzing the role of organizational culture, governance mechanisms, and Enterprise Risk Management (ERM) integration. A total of 50 peer-reviewed articles were reviewed based on the PRISMA guidelines to identify research trends related to risk culture, governance practices, ERM implementation, and organizational capabilities in managing uncertainty. The findings indicate that effective risk-aware organizations are built through the integration of strong risk culture, effective governance mechanisms, and strategic ERM implementation. Furthermore, digital transformation and adaptive capabilities enhance organizational ability to identify, evaluate, and respond to emerging risks. However, challenges remain regarding organizational readiness, technology integration, risk communication, and alignment between risk management practices and business strategies. This study contributes to

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the literature by providing a structured synthesis of previous research and highlighting the importance of integrated risk management capabilities in developing sustainable and adaptive risk-aware organizations.

Keywords: Risk-Aware Organization, Organizational Culture, Governance Mechanisms, Enterprise Risk Management, Risk Management Integration, Dynamic Capabilities Theory.

INTRODUCTION

Changes in the increasingly complex business environment have caused organizations to face various forms of uncertainty stemming from economic, technological, regulatory, social, and geopolitical factors. This condition makes organizations no longer only rely on operational and financial capabilities, but also require the capacity to understand, anticipate, and respond to risks systematically. In this context, the concept of risk-aware organization has developed as a strategic approach that places risk awareness as part of the decision-making process, organizational behavior, and achievement of long-term goals. Organizations that have high risk awareness are able to integrate a risk perspective into business activities so that risk is not only seen as a threat, but also as strategic information in creating organizational value (Fraser et al., 2022; Andersen et al., 2022; Fung et al., 2025).

The development of a risk-aware organization depends not only on the existence of a formal risk management system, but is also influenced by the organizational culture that shapes the way individuals understand and respond to risk. Risk culture is an important element because it determines how values, behaviors, communication, and responsibility for risk are implemented by all members of the organization. An organizational culture that supports risk awareness can strengthen the effectiveness of the implementation of Enterprise Risk Management (ERM) because it encourages the involvement of all levels of the organization in the process of identifying, evaluating, and controlling risks. Previous studies have shown that the success of ERM is strongly influenced by the organization's ability to build an internal environment that supports risk-aware behavior, rather than relying solely on formal procedures and regulations (Kuo et al., 2021; Huber et al., 2025; Barbosa et al., 2022).

In addition to organizational culture, governance mechanisms are fundamental factors in ensuring that risk management runs effectively and in line with the organization's strategic objectives. Governance structures such as the role of the board of directors, risk committees, internal audit functions, and external oversight systems play a role in creating accountability and

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transparency in risk-based decision-making. Strong governance mechanisms can improve an organization's ability to oversee risk exposure, set risk appetite, and ensure that ERM practices are consistently implemented. Previous research shows that the pressures of external oversight, corporate governance, and organizational control systems can be important drivers in increasing the adoption and effectiveness of ERM (Dong & Shen, 2026; Adam et al., 2023; Gavious et al., 2026).

In the development of modern organizations, Enterprise Risk Management (ERM) is no longer seen as a stand-alone control function, but has evolved into an integrated approach that supports organizational strategy and decision-making. ERM integration allows companies to connect the processes of risk identification, risk evaluation, mitigation, and monitoring with various key business activities. Through this approach, organizations can improve adaptability, strengthen operational resilience, and create more information-based decisions. Various studies show that the integration of ERM with organizational strategy, management control, and business processes is able to improve the effectiveness of risk management and strengthen the organization's ability to deal with changes in the external environment (Zhu et al., 2023; Wang & Yang, 2026; Dong et al., 2026).

The development of digital technology has also brought major changes to the way organizations build more responsive and data-driven risk management systems. The use of artificial intelligence, data analysis, digital technology, and risk information systems provides opportunities for organizations to improve their ability to detect risk patterns, make predictions, and accelerate decision-making processes. However, digital transformation in risk management also creates new challenges related to information security, algorithm transparency, and the need for governance mechanisms that are able to control technological risks. Therefore, organizations need to combine digital innovation with a strong risk and governance culture so that technology can support the development of a truly risk-aware organization (Akter, 2026; Lee, 2021; Peng & Jin, 2025).

The complexity of organizational risk today shows that risk is no longer limited to financial aspects, but has evolved into multidimensional risks that include environmental risks, climate change, cybersecurity, supply chain, and business sustainability. These conditions require organizations to have a risk management approach that is able to integrate various risk sources comprehensively. Organizations that have a strong risk culture, effective governance, and integrated ERM will have greater ability to build organizational resilience and maintain sustainability in the face of disruptions. Recent research shows that managing climate risk, digital

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risk, and supply chain risk requires cross-functional coordination and integration of risk systems in the overall organizational structure (Dal Maso et al., 2026; Sahoo et al., 2026; Guo et al., 2026).

Although research on Enterprise Risk Management has developed widely, previous studies have shown limitations in understanding the relationship between human factors (organizational culture), structural factors (governance mechanisms), and system factors (ERM integration) simultaneously in building risk-aware organizations. Some research still focuses on the effectiveness of ERM as a control mechanism, while aspects of organizational culture and governance are often studied separately. Therefore, this study conducted a Systematic Literature Review (SLR) to identify, classify, and analyze the development of the literature on how organizational culture, governance mechanisms, and ERM integration contribute to the formation of risk-aware organizations. This study is expected to make a theoretical contribution to the development of the concept of risk-aware organizations as well as provide practical implications for organizations in building a more integrated and sustainable risk management system (Mohamed et al., 2026; Ringgaard et al., 2026; Zhu & Shneor, 2026).

LITERATURE REVIEW

Dynamic Capabilities Theory

Dynamic capabilities theory explains that an organization's success in dealing with environmental changes is not only determined by the resources it has, but also the organization's ability to update, integrate, and develop internal capabilities on a sustainable basis. This theory emphasizes the organization's ability to detect change (sensing), make strategic decisions (seizing), and transform in order to be able to maintain excellence and face business uncertainty (Andersen et al., 2022; Wang & Yang, 2026; Sahoo et al., 2026).

In the context of risk management, dynamic capabilities theory explains that organizations need adaptive capabilities to build a risk management system that is responsive to change. This capability is reflected in the company's ability to utilize technology, integrate risk information, and adjust strategies based on external conditions. Research shows that digital transformation, innovation, and ERM integration can improve an organization's ability to deal with the complexity of modern risks (Guo et al., 2026; Peng & Jin, 2025; Akter, 2026).

Organizational Risk Culture

Organizational risk culture is a concept that describes the values, beliefs, behaviors, and decision-making patterns of organizational members in understanding and responding to risk. A

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strong risk culture encourages every individual in an organization to not only see risk as a responsibility of a specific function, but as part of daily business activities. Research shows that organizational culture is an important factor in the successful implementation of ERM because it builds an overall risk awareness (Fraser et al., 2022; Kuo et al., 2021; Huber et al., 2025).

An effective risk culture requires leadership support, internal communication, as well as the involvement of all levels of the organization in the risk management process. Organizations with a risk-aware culture tend to have better abilities in identifying potential disruptions and taking preventive actions. Previous studies have shown that ERM competencies, management control systems, and organizational learning contribute to building more risk-responsive organizational behaviors (Barbosa et al., 2022; Fung et al., 2025; Andersen et al., 2022).

Governance Mechanisms

Governance mechanisms are a set of structures, processes, and policies that organizations use to ensure effective oversight, accountability, and risk control. Governance mechanisms include the role of the board of directors, risk committees, internal audits, and external oversight systems that support risk-based decision-making. Research shows that strong governance can improve the effectiveness of ERM through increased organizational transparency, monitoring, and control (Adam et al., 2023; Dong & Shen, 2026; Gavious et al., 2026).

From a risk-aware organizational perspective, governance mechanisms serve as a link between organizational strategy and risk management practices. Good governance ensures that risks are considered in every strategic decision as well as supports the creation of an organizational environment that has risk responsibility. Previous studies have shown that investor supervisory pressures, regulations, and internal control mechanisms can encourage companies to improve the quality of ERM implementation (Dong & Shen, 2026; Huber et al., 2025; Fraser et al., 2022).

Enterprise Risk Management Integration

Enterprise Risk Management integration describes the process of incorporating risk management activities into an organization's strategy, operations, and decision-making processes. In contrast to traditional approaches that manage risk separately, integrated ERM allows organizations to understand the relationship between risks and determine a more comprehensive response. Research shows that ERM integration is able to improve the quality of decision-making and strengthen an organization's ability to deal with the uncertainties of the business environment (Zhu et al., 2023; Wang & Yang, 2026; Dong et al., 2026).

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Effective ERM implementation requires alignment between the risk system, strategic objectives, and operational activities of the organization. This integration allows companies to identify risks more broadly, improve coordination between functions, and create organizational value through proactive risk management. Various studies show that ERM connected to management control strategies and systems can strengthen organizational resilience and increase governance effectiveness (Huber et al., 2025; Fung et al., 2025; Yun, 2023).

Risk-Aware Organization

Risk-aware organization is an organizational concept that makes risk awareness part of the mindset, culture, and decision-making process. The organization not only tries to avoid risks, but is able to understand risks as strategic information in creating opportunities and improving sustainability. The formation of a risk-aware organization requires a combination of a risk culture, strong governance mechanisms, and the integration of ERM in all organizational activities (Fraser et al., 2022; Zhu et al., 2023; Ringgaard et al., 2026).

Building a risk-aware organization requires a holistic approach that combines human aspects, organizational structure, and technology. Risk culture shapes individual behavior, governance ensures effective oversight, while ERM provides a systematic framework for managing risk. Recent research shows that organizations that successfully integrate these three aspects have higher adaptability to environmental changes, operational disruptions, and external pressures (Mohamed et al., 2026; Sahoo et al., 2026; Wang & Yang, 2026).

METHOD

This study uses the Systematic Literature Review (SLR) method by following the guidelines of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The SLR method was chosen because it is able to provide a structured approach in identifying, evaluating, and synthesizing previous research developments related to the formation of risk-aware organizations. Through this approach, the research seeks to understand how organizational culture, governance mechanisms, and Enterprise Risk Management (ERM) integration play a role in improving an organization's ability to deal with the uncertainty of the business environment (Fraser et al., 2022; Andersen et al., 2022; Huber et al., 2025).

The literature in this study was obtained through several reputable international academic databases, namely Scopus, Web of Science (WoS), ScienceDirect, and Emerald Insight. The literature search strategy was carried out using a combination of keywords relevant to the focus

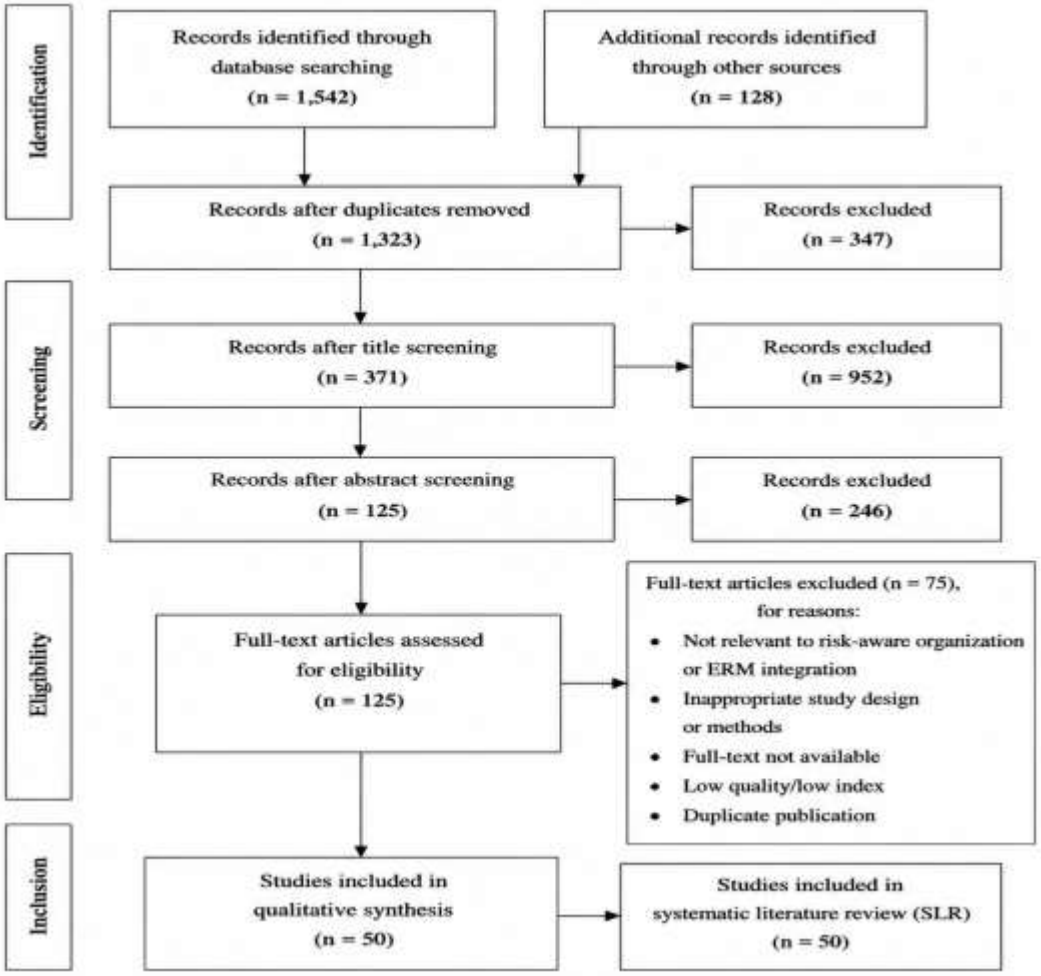
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of the study, such as "enterprise risk management", "risk-aware organization", "risk culture", "organizational culture", "corporate governance", "governance mechanism", "risk management integration", and "organizational resilience". Based on the initial identification process, 1,542 scientific articles were obtained that were related to the themes of organizational risk management, risk governance, and ERM implementation. All of these articles were then processed through a selection stage based on research inclusion and exclusion criteria.

The next stage is the screening process of articles that have been obtained from various databases. Of the total 1,542 initial articles, 347 articles were deleted because they were found to be duplicate articles between databases. After the duplication elimination process was carried out, the remaining 1,195 articles were then evaluated based on titles (title screening) and abstracts (abstract screening). At this stage, a total of 824 articles were eliminated because they were not directly related to the formation of risk-aware organizations, did not discuss ERM conceptually or empirically, and focused more on specific risks such as market risk, credit risk, or operational risk without connecting them to aspects of organizational culture and governance. The results of the screening resulted in 371 articles that entered the eligibility assessment stage.

At the feasibility evaluation stage, 371 full-text articles were reviewed based on research objectives, methodological clarity, theoretical contribution, and relevance to organizational culture, governance, and ERM integration. A total of 246 articles were excluded due to limited relevance, unavailable full text, overly specific focus, and lack of contribution to the risk-aware organization concept. From the remaining 125 articles, a quality assessment was conducted, resulting in the exclusion of 75 articles due to methodological limitations and insufficient relevance. Finally, 50 international journal articles were selected and analyzed using thematic synthesis to identify research patterns, variable relationships, and research gaps related to the development of risk-aware organizations (Adam et al., 2023; Dong & Shen, 2026; Wang & Yang, 2026).

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Source : Data processed, 2026

Figure 1. PRISMA Flow Diagram

Figure 1 shows the stages of literature selection using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. The selection process is carried out through several stages, namely identification of articles from various databases, removal of duplicate articles, filtering by title and abstract, and feasibility evaluation through full-text review. Based on all the selection stages, 50 international journal articles that meet the inclusion criteria were obtained and used as the basis for the analysis of the Systematic Literature Review (SLR) on risk-aware organization development through the study of organizational culture, governance mechanisms, and Enterprise Risk Management (ERM) integration.

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RESEARCH RESULTS

Based on the results of the literature selection, this study analyzed the characteristics of 50 international journal articles that became the basis for the Systematic Literature Review (SLR) study. The analysis was conducted to understand the pattern of research development based on journal quality, theoretical approaches, geographical distribution of research, and methods used in studying the development of risk-aware organizations. This study focuses on the development of research on risk culture, governance mechanisms, and integration of Enterprise Risk Management (ERM) as important elements in building organizational capabilities in dealing with uncertainty and changes in the business environment. The results of the analysis of the characteristics of the literature are presented through the following main classifications.

Table 1. Journal Index Distribution

Journal Index	Number of Articles	Percentage
Scopus Q1	23	46,00%
Scopus Q2	15	30,00%
Scopus Q3	9	18,00%
Scopus Q4	3	6,00%
Total	**50**	**100%**

Source : Data processed, 2026

Based on Table 1, most of the articles used in this study came from 23 articles (46.00%) from Scopus Q1 category journals, followed by 15 articles (30.00%) from Scopus Q2 journals. Overall, articles from highly reputable journals (Q1 and Q2) reached 38 articles or 76.00% of the total literature. The composition shows that studies on risk-aware organizations, organizational culture, risk governance, and ERM integration have become a growing research topic in high-quality international journals. The dominance of publications in reputable journals shows that the issue of organizational risk management is increasingly seen as a strategic aspect in improving organizational sustainability and resilience.

Table 2. Distribution of Research Theories

Theory/Concept	Number of Articles	Percentage
Dynamic Capabilities Theory	11	22,00%
Enterprise Risk Management Framework	9	18,00%

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Resource-Based View (RBV)	8	16,00%
Agency Theory	6	12,00%
Institutional Theory	5	10,00%
Stakeholder Theory	4	8,00%
Technology-Organization-Environment (TOE) Framework	4	8,00%
Other theories	3	6,00%
Total	**50**	**100%**

Source : Data processed, 2026

Based on Table 2, the most widely used theory in research on risk-aware organizational development is Dynamic Capabilities Theory with a total of 11 articles (22.00%). The dominance of this theory shows that the organization's ability to recognize changes, adapt, and develop internal capabilities is an important factor in dealing with increasingly complex risk dynamics. In addition, the Enterprise Risk Management Framework was used in 9 articles (18.00%) which showed that research on risk-aware organizations emphasizes the importance of integrating risk identification, evaluation, mitigation, and monitoring processes in organizational strategies.

Overall, the use of various theoretical perspectives shows that research on risk-aware organizations develops through a multidimensional approach. The Resource-Based View perspective explains that internal resources such as competence, knowledge, and technology are the foundation in building risk management capabilities. Meanwhile, the Agency Theory and Institutional Theory approaches provide an understanding of the importance of supervisory mechanisms, compliance, and external pressure in strengthening organizational risk governance.

Table 3. Distribution of Research Countries

Country	Number of Articles	Percentage
China	8	16,00%
United States	7	14,00%
English	6	12,00%
Australia	5	10,00%
Germany	4	8,00%
India	4	8,00%
Canada	3	6,00%

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Country	Number of Articles	Percentage
Italy	3	6,00%
Indonesia	2	4,00%
The Netherlands	2	4,00%
Japan	1	2,00%
South Korea	1	2,00%
Other countries	4	8,00%
Total	50	100%

Source : Data processed, 2026

Based on Table 3, the most research on risk-aware organizations was conducted in China with 8 articles (16.00%), followed by the United States with 7 articles (14.00%), and the United Kingdom with 6 articles (12.00%). The high contribution of research from these countries shows that issues regarding ERM, corporate governance, risk culture, and the organization's ability to deal with uncertainty are important concerns in the modern business environment.

In general, the geographical distribution of the study shows that the study of the development of risk-aware organizations has a wide international scope. Differences in economic characteristics, regulations, organizational culture, and the level of technological development cause the implementation of ERM and governance mechanisms to vary between countries. The diversity of research contexts provides an understanding that organizations need to adapt risk management strategies to their respective environmental conditions in order to be able to build an effective and sustainable risk system.

Table 4. Distribution of Research Methods

Research Methods	Number of Articles	Percentage
Quantitative	20	40,00%
Literature Review	12	24,00%
Qualitative	11	22,00%
Mixed Method	7	14,00%
Total	**50**	**100%**

Source : Data processed, 2026

Based on Table 4, the quantitative method is the most widely used approach with a total of 20 articles (40.00%). The dominance of these methods shows that research on risk-aware organizations, risk culture, governance mechanisms, and ERM integration uses a lot of empirical

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approaches to analyze the relationship between organizational variables. The quantitative approach allows researchers to measure the influence of internal organizational factors, governance effectiveness, and the application of ERM on the organization's ability to systematically manage risk.

In addition to quantitative methods, the Systematic Literature Review and bibliometric approaches were used in 12 articles (24.00%) to map the development of research concepts, theories, and trends regarding organizational risk management. The qualitative method of 11 articles (22.00%) was used to understand the process of forming a risk culture, governance practices, and organizational experience in implementing ERM. Meanwhile, a mixed method method of 7 articles (14.00%) was used to combine empirical analysis with an in-depth understanding of organizational phenomena. The variety of methods shows that the development of risk-aware organizations is a multidimensional study that requires various research approaches.

Table 5. Distribution of Research Sectors

Research Sector	Number of Articles	Percentage
Finance and Banking	8	16,00%
Manufacturing	7	14,00%
Digital Technology and Information Systems	7	14,00%
Supply Chain and Logistics	6	12,00%
Energy and Environment	5	10,00%
Insurance and Financial Services	5	10,00%
Infrastructure and Construction	4	8,00%
Health and Pharmacy	3	6,00%
Government and the Public Sector	3	6,00%
Other Sectors	2	4,00%
Total	**50**	**100%**

Source : Data processed, 2026

Based on Table 5, the financial and banking sectors are the sectors with the largest research contribution of 8 articles (16.00%). The dominance of these sectors shows that the implementation of Enterprise Risk Management (ERM), governance mechanisms, and risk culture are the main concerns in industries that have a high level of risk exposure. Furthermore, the manufacturing sector as many as 7 articles (14.00%) and digital technology as many as 7 articles

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(14.00%) show the importance of organizational ability to manage operational changes and technological risks.

The distribution of research sectors shows that the study of risk-aware organizations has developed in various industry fields. The supply chain, energy, insurance, construction, healthcare, and government sectors are also of concern because they face complex and interrelated risks. This shows that the development of risk-aware organizations is not only a need for a specific sector, but is a relevant strategic approach for different types of organizations in dealing with the uncertainty of the business environment.

Table 6. Main Research Results

Main Research Results	Number of Articles	Percentage
ERM integration improves an organization's ability to manage strategic risks	11	22,00%
Risk culture strengthens organizational risk management awareness and behavior	9	18,00%
Governance mechanisms improve oversight and risk management effectiveness	8	16,00%
The use of digital technology supports risk identification and monitoring	7	14,00%
Risk-based decision-making improves organizational adaptation	6	12,00%
Integration of sustainability, ESG, and external risks strengthens organizational resilience	5	10,00%
Cross-functional collaboration and coordination support ERM implementation	4	8,00%
Total	50	100%

Source : Data processed, 2026

Based on Table 6, the main research results show that the most dominant theme is the integration of ERM in improving the organization's ability to manage strategic risks with a total of 11 articles (22.00%). The findings show that ERM has evolved from a risk control approach to a strategic mechanism that supports organizational decision-making. In addition, as many as 9 articles (18.00%) emphasized the importance of risk culture in building awareness and behavior of organizational members towards risk management.

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Overall, the results of the study show that the development of risk-aware organizations is influenced by a combination of organizational culture, governance mechanisms, technology, and ERM integration. Research on governance mechanisms as many as 8 articles (16.00%) shows that supervision and accountability structures have an important role in ensuring the effectiveness of risk management. Meanwhile, the use of digital technology as many as 7 articles (14.00%) shows a shift towards a more adaptive, predictive, and information-based risk management system.

In addition, research on risk-based decision-making as many as 6 articles (12.00%) shows that modern organizations need the ability to connect risk information with business strategies. External factors such as ESG, sustainability, and environmental change are also starting to become a concern with a total of 5 articles (10.00%) because they can affect an organization's ability to maintain long-term resilience. The findings show that risk-aware organizations require an integrated approach between people, systems, and governance.

DISCUSSION

1. The Role of Organizational Risk Culture in Building a Risk-Aware Organization

Changing increasingly complex business environments have led organizations to require a risk management approach that relies not only on formal systems, but also on the individual's ability to understand and respond to risks. In this context, organizational risk culture is an important element because it shapes values, behaviors, and decision-making patterns related to risk. A strong risk culture allows each member of the organization to understand that risk management is a shared responsibility, not just a specific unit's task. Previous research has shown that organizational culture has an important role to play in supporting the successful implementation of ERM and building a more risk-aware organization (Fraser et al., 2022; Kuo et al., 2021; Huber et al., 2025).

The results of the literature review show that risk culture is closely related to the effectiveness of risk management systems because it affects how organizations identify, communicate, and respond to potential threats. Organizations with a good risk culture tend to have higher information openness, inter-departmental coordination, and adaptability when facing environmental changes. In addition, risk culture also supports the implementation of ERM because it encourages the involvement of all members of the organization in the risk management process. Previous studies have explained that ERM competencies and a supportive organizational environment can increase a company's readiness to face business uncertainty (Barbosa et al., 2022; Fung et al., 2025; Andersen et al., 2022).

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The formation of a risk culture in an organization is not only influenced by the existence of policies and procedures, but also by leadership, internal communication, and organizational learning mechanisms. Leaders have a strategic role in creating an environment that encourages risk awareness through setting an example, strengthening organizational values, and increasing individual responsibility for risk. The results show that organizations that have management support for risk practices tend to be better able to integrate risk perspectives in operational and strategic activities. This condition shows that risk culture is a connecting factor between formal risk management systems and organizational behavior (Fraser et al., 2022; Huber et al., 2025; Barbosa et al., 2022).

Overall, the results of the SLR show that organizational risk culture is the main foundation in building a risk-aware organization. Risk culture not only serves as an organization's internal value, but also as a mechanism that shapes how companies deal with uncertainty and make strategic decisions. Organizations that successfully develop a risk-aware culture will have better ability to anticipate change, reduce potential failures, and increase the effectiveness of ERM implementation. Thus, the construction of a risk-aware organization requires an approach that incorporates formal systems, individual behaviors, and organizational values in a sustainable manner (Kuo et al., 2021; Fraser et al., 2022; Fung et al., 2025).

2. The Role of Governance Mechanisms in Strengthening the Effectiveness of Organizational Risk Management

In the development of risk-aware organizations, governance mechanisms play an important role in ensuring that the risk management process runs in a systematic, transparent, and aligned manner with the organization's strategic objectives. Risk governance is not only related to the supervisory structure, but also includes the division of responsibilities, accountability systems, and decision-making mechanisms that consider various potential risks. Organizations with strong governance systems are able to ensure that risk is part of the strategic process, not just a concern at the operational level. Previous research has shown that the quality of governance contributes to increasing the effectiveness of ERM implementation and strengthening the organization's ability to deal with uncertainty (Adam et al., 2023; Dong & Shen, 2026; Gavious et al., 2026).

The results of the literature review show that governance mechanisms function as a link between risk management and organizational strategies through continuous supervision, evaluation, and control. The role of the board of directors, risk committee, and internal audit

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functions are important factors in ensuring that risks are identified and managed according to the organization's tolerance level. In addition, external oversight mechanisms such as regulation, investor pressure, and information transparency can also encourage companies to improve the quality of risk management practices. Previous studies have shown that increased external monitoring is able to strengthen the adoption of ERM as organizations are encouraged to have a more mature risk management system in place (Dong & Shen, 2026; Adam et al., 2023; Huber et al., 2025).

The implementation of effective governance also plays a role in creating coordination between organizational units so that risk management does not run separately. A good governance structure allows risk information to flow more effectively from the operational level to the strategic level. This condition helps management in understanding the relationship between types of risks and making more appropriate decisions based on available information. Previous research shows that the integration of management control systems, governance practices, and ERM can improve an organization's ability to anticipate environmental changes and maintain consistency in risk management (Huber et al., 2025; Fraser et al., 2022; Dong et al., 2026).

Overall, the SLR results show that governance mechanisms are a key component in building a risk-aware organization because they provide a supervisory and accountability structure that supports the effectiveness of ERM. Strong governance allows organizations to develop more disciplined decision-making processes, increase transparency, and ensure that risks are considered in every strategic activity. Thus, the development of a risk-aware organization requires a balance between a strong risk culture and governance mechanisms that are able to guide and control organizational behavior in a sustainable manner (Gavious et al., 2026; Dong & Shen, 2026; Adam et al., 2023).

3. Integration of Enterprise Risk Management (ERM) as a Strategic Approach in Building a Risk-Aware Organization

The development of the concept of Enterprise Risk Management (ERM) shows a paradigm shift in organizational risk management. ERM is no longer understood as just a control mechanism to reduce the likelihood of loss, but has evolved into a strategic approach that integrates risk with the process of planning, decision-making, and achieving organizational goals. Through the integration of ERM, organizations are able to understand the interconnectedness between types of risk, determine mitigation priorities, and build more effective responses to the uncertainties of the business environment. Previous research has

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shown that the implementation of integrated ERM can improve an organization's ability to manage risks end-to-end and strengthen organizational resilience (Yun, 2023; Zhu et al., 2023; Wang & Yang, 2026).

The results of the literature review show that the effectiveness of ERM is greatly influenced by the extent to which the risk management system is connected to the organization's operational strategies and activities. Organizations that only implement ERM as an administrative procedure tend to have limited benefits compared to organizations that make risk part of the strategic decision-making process. ERM integration allows companies to connect risk information with business planning, resource allocation, and organizational performance evaluation. Previous studies have shown that the integration of risk with corporate strategies can improve adaptability and help organizations cope with increasingly complex environmental changes (Yun, 2023; Dong et al., 2026; Fung et al., 2025).

In addition to playing a role in risk control, ERM is also a means of coordination between organizational functions in understanding and responding to various sources of uncertainty. An effective ERM system allows various work units to share risk information, conduct joint evaluations, and develop more comprehensive mitigation strategies. This approach supports the creation of an organizational mindset that sees risk as part of the value creation process, not just as a threat. Previous research has shown that companies with higher levels of ERM maturity have better ability to maintain performance and deal with external pressures (Fung et al., 2025; Wang & Yang, 2026; Yun, 2023).

Overall, the SLR results show that ERM integration is a core element in building a risk-aware organization because it is able to connect aspects of risk culture, governance, and business processes in one integrated management framework. Integrated ERM allows organizations not only to respond to risks after they occur, but also to proactively identify and prevent. Thus, successful development of risk-aware organizations requires the implementation of ERM that does not stand alone, but rather becomes part of the organization's strategy, decision-making system, and long-term value creation process (Zhu et al., 2023; Wang & Yang, 2026; Dong et al., 2026).

4. Digital Transformation and Adaptive Capabilities in the Development of Risk-Aware Organizations

The development of digital technology has changed the way organizations understand, identify, and manage risks. The use of technologies such as artificial intelligence, data analysis, information systems, and various digital platforms provides opportunities for organizations to

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improve their ability to monitor and predict risks more quickly. In the context of risk-aware organizations, digital transformation not only functions as an operational support tool, but also becomes part of an organization's strategy in building adaptive capabilities to environmental changes. Previous research has shown that technological developments can increase the effectiveness of risk management through improving information quality and data-driven decision-making (Lee, 2021; Akter, 2026; Peng & Jin, 2025).

The results of the literature review show that the integration of digital technology in risk management systems is able to strengthen an organization's ability to detect potential disruptions before they have a greater impact. Data-driven technology allows companies to analyze risk patterns, improve prediction accuracy, and accelerate the process of responding to changes in the business environment. However, the application of technology also presents new challenges such as cybersecurity risks, reliance on digital systems, and the need for adequate technology governance. Therefore, organizations need to ensure that digital innovation runs in harmony with the governance mechanisms and risk culture that has been built (Akter, 2026; Lee, 2021; Guo et al., 2026).

In addition to the technological aspect, an organization's adaptive capabilities are an important factor in ensuring the successful transformation towards a risk-aware organization. Adaptive capabilities allow companies to adjust strategies, update risk management systems, and respond to external changes more effectively. Organizations that have the ability to learn and adapt tend to be better able to integrate new technologies with business processes and risk management systems. Previous research shows that digital transformation, organizational innovation, and the development of internal capabilities play a role in increasing the effectiveness of ERM and strengthening organizational resilience in the face of uncertainty (Wang & Yang, 2026; Peng & Jin, 2025; Sahoo et al., 2026).

Overall, the results of the SLR show that digital transformation and adaptive capabilities are important dimensions in the development of risk-aware organizations in the modern era. Technology provides the ability for organizations to obtain risk information more quickly and accurately, while adaptive capabilities ensure that organizations are able to use this information in strategic decision-making. Thus, risk-aware organizations are not only built through control systems and governance structures, but also through the ability to innovate, learn, and adapt to increasingly dynamic business environments (Akter, 2026; Sahoo et al., 2026; Wang & Yang, 2026).

Conclusion

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Based on the results of a Systematic Literature Review (SLR) of 50 international journal articles on the development of risk-aware organizations, this study shows that risk-aware organizations are formed through the integration of organizational culture, governance mechanisms, and Enterprise Risk Management (ERM). Modern risk management no longer only functions as a threat control mechanism, but develops into an organization's strategic ability to understand change, manage uncertainty, and create business sustainability.

The results of the study show that organizational risk culture is a fundamental factor in building risk awareness at all levels of the organization. A strong risk culture is able to improve communication, coordination, and individual involvement in the risk management process. In addition, effective governance mechanisms play a role in strengthening supervision, accountability, and ensuring that risk is part of the organization's strategic decision-making process.

This research also shows that the integration of Enterprise Risk Management (ERM) is an important approach in connecting risk culture, governance, and organizational strategy. ERM allows companies to identify, evaluate, mitigate, and monitor risks in a more structured manner. Based on the perspective of Dynamic Capabilities Theory, the organization's ability to adapt, transform, and develop internal capabilities is the main factor in building an organization that is able to deal with environmental changes in a sustainable manner.

Research Limitations

This study has several limitations that need to be considered in understanding the results of the study. The SLR approach used is highly dependent on the quality, availability, and characteristics of previous literature so that the results of the study reflect more of the synthesis of research developments than direct empirical testing. In addition, variations in industry sectors, research countries, analysis methods, and theoretical approaches used in the article studied can affect the level of generalization of research results. The possibility of publication bias is also a limitation because research with certain theoretical contributions and results tends to be more widely published.

Suggestions

Further research is recommended to conduct empirical studies that examine the relationship between organizational culture, governance mechanisms, ERM integration, and the effectiveness of risk-aware organizational development. Future research can also develop

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integrative models by considering internal organizational factors such as leadership, risk competence, digital capabilities, and organizational innovation. In addition, technological developments such as artificial intelligence, machine learning, and big data analytics can be the focus of further research to understand how these technologies support the process of risk identification, decision-making, and improving organizational adaptability.

Practical & Theoretical Implications

In practical terms, this research implies that organizations need to strengthen risk management systems as part of their long-term business strategy. Companies need to build a strong risk culture, increase the effectiveness of governance mechanisms, and integrate ERM in organizational decision-making processes. The use of digital technology and improving the quality of risk information are also important factors in helping organizations identify, evaluate, and respond to changes in the business environment.

Theoretically, this study contributes to the development of Dynamic Capabilities Theory in explaining how organizations build adaptive capabilities through the integration of risk culture, governance mechanisms, and ERM. The results of the study show that risk-aware organizations are not only influenced by the existence of formal systems, but also by the organization's ability to develop internal resources, build organizational learning, and transform the changing environment. These findings broaden the understanding of the relationship between organizational capabilities and modern risk management practices and open up opportunities for further research on the development of a more comprehensive risk-aware organization model.

REFERENCES

Adam, M., Soliman, A. M., & Mahtab, N. (2023). Measuring enterprise risk management implementation: A multifaceted approach for the banking sector. *The Quarterly Review of Economics and Finance, 87*, 244–256. https://doi.org/10.1016/j.qref.2021.01.002

Aigner, P. (2025). Identifying scenarios for the own risk and Solvency assessment of insurance companies. Insurance: Mathematics and Economics, 122, 30–43. https://doi.org/10.1016/j.insmatheco.2025.01.009

Akter, R. (2026). Evolution and emerging frontiers of explainable artificial intelligence (XAI) in financial risk management: A bibliometric analysis. Strategic Business Research, 2, 100118. https://doi.org/10.1016/j.sbr.2026.10 0118

Alfeus, M., Mwampashi, M. M., Nikitopoulos, C. S., & Overbeck, L. (2026). Stochastic modelling

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

and forecasting of wind capacity utilization with applications to risk management: The Australian case. Pacific-Basin Finance Journal. https://doi.org/10.1016/j.pac fin.2026.103310

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(2), 102164. https://doi.org/10.1016/j.lrp.2021.102164

Azeez, F. A., Akhtar, A., & Shah, M. M. (2026). A hybrid FAHP-TOPSIS approach for prioritizing supply chain risk management factors and ranking industry alternatives. Strategic Business Research. https://doi.org/10.1016/j.sbr.2026. 100155

Barbosa, M. W., Martinez Carrasco, S. I., & Rodriguez Abarca, P. C. (2022). The effect of enterprise risk management competencies on students' perceptions of their work readiness. The International Journal of Management Education, 20, 100638. https://doi.org/10.1016/j.ijme.2022.100638

Charles, A., & Darné, O. (2026). Forecasting volatility and risk management in natural gas markets. International Economics, 187, 100714. https://doi.org/ 10.1016/j.inteco. 2026.100714

Cole, C. R., & Eastman, E. M. (2026). Risk management and corporate lifecycles: Evidence from reinsurance purchases. Journal of Corporate Finance, 98, 102961. https://doi.org/10.10 16/j.jcorpfin.2026.102961

Cornwell, N., Bilson, C., Gepp, A., Stern, S., & Vanstone, B. J. (2023). Modernizing operational risk management in financial institutions via data-driven causal factors analysis: A pre-registered report. Pacific-Basin Finance Journal, 77, 101906. https://doi.org/10.10 16/j.pacfin.2022.101906

Cornwell, N., Bilson, C., Gepp, A., Stern, S., & Vanstone, B. J. (2023). Modernizing operational risk management in financial institutions via data-driven causal factors analysis: A pre-registered study. Pacific-Basin Finance Journal, 79, 102011. https://doi.org/10.1016 /j.pacfin.2023.102011

Dal Maso, L., Jia, X., & Kanagaretnam, K. (2026). Climate beliefs, attitudes, and bank risk management. Journal of Banking & Finance, 185, 107652. https://doi.org/10.1016 /j.jbankfin.2026.107652

Díaz-Aldret, A., & Becerril, H. (2026). More-than-human governance: Beyond top-down and bottom-up logics in disaster risk management. Cities, 178, 107313. https://doi.org/10.1016/j.cities.2026.107313

Dionne, G., El Hraiki, R., & Mnasri, M. (2023). Determinants and real effects of joint hedging: An empirical analysis of US oil and gas producers. Energy Economics, 124, 106801. https://doi.org/10.1016/j.eneco.2023.106801

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Dong, H., Zhong, X., & Zou, S. (2026). Ex-ante defense: Enterprise risk management and supply chain integration. Finance Research Letters, 101, 109963. https://doi.org/10.1016/j.frl.2026.109963

Erkan-Barlow, A., & Nguyen, T. (2024). Cybersecurity and executive compensation: Can inside debt-induced risk aversion improve cyber risk management effectiveness? International Review of Financial Analysis, 93, 103173. https://doi.org/10.1016/j.irfa.2024.103173

Fung, D. W. H., Lee, W. Y., & Yang, C. C. (2025). Surviving the storm: Evaluating the role of enterprise risk management in property and liability insurers' performance during the COVID-19 pandemic. Journal of Corporate Finance, 91, 102751. https://doi.org/10.1016/j.jcorpfin.2025.102751

Fraser, J. R. S., Quail, R., & Simkins, B. J. (2022). Questions asked about enterprise risk management by risk practitioners. Business Horizons, 65, 251–260. https://doi.org/10.1016/j.bushor.2021.02.046

Gao, C., & Zhang, S. (2025). ESG performance and corporate financialization: A dual perspective of risk management and value creation. Finance Research Letters, 71, 106442. https://doi.org/10.1016/j.frl.2024.106442

Gavious, I., Milo, O., & Fenigstein, T. (2026). Chronicles of risk management practices in EU banks: A cross-country analysis. Finance Research Letters, 91, 109426. https://doi.org/10.1016/j.frl.2025.109426

Giannozzi, A., & Kirilova, A. (2026). When corporate risk management amplifies risks: Evidence from Europe's energy crisis in 2022. Journal of Banking & Finance, 188, 107700. https://doi.org/10.1016/j.jbankfin.2026.107700

Guo, J., He, J., Ren, Y., & Zhang, Y. (2026). Digital transformation and climate transition risk management: Evidence from Chinese listed firms. China Economic Review, 99, 102732. https://doi.org/10.1016/j.chieco.2026.102732

Guo, X., Guo, K., & Wang, S. (2026). The Crypto Risk Composite Index (CCRI)-advancing risk management in the digital asset space. International Review of Financial Analysis, 113, 105136. https://doi.org/10.1016/j.irfa.2026.105136

Guo, Y., Ge, H., Liao, Z., Hu, Y., & Huang, B. (2024). The influence of financial innovation on enterprise risk management. Finance Research Letters, 62, 105098. https://doi.org/10.1016/j.frl.2024.105098

Han, X., & Laing, E. (2025). Enterprise risk management and foreign currency derivatives usage. International Review of Economics and Finance, 103, 104518. https://doi.org/10.1016/j.iref.2025.104518

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

He, Y., & Lin, C. (2025). Dynamic impact of media coverage on corporate risk management: Moderating effect of environmental policies and heterogeneity analysis. International Review of Economics and Finance, 100, 104109. https://doi.org/10. 1016/j.iref.2025.104109

Huber, C., Kraus, K., & Meidell, A. (2025). Integrating the balanced scorecard and enterprise risk management: Exploring the dynamics between management control anchor practices and subsidiary practices. Management Accounting Research, 66, 100924. https://doi.org/10. 1016/j.mar.2024.100924

Kugele, A. S. H., & Sarkar, B. (2026). Advanced risk management for a business-to-business and business-to-consumer service supply chain under information asymmetry with Stackelberg game. Journal of Industrial Information Integration. https://doi.org/10.1016/j.jii.2026.101168

Kuo, Y. F., Lin, Y. M., & Chien, H. F. (2021). Corporate social responsibility, enterprise risk management, and real earnings management: Evidence from managerial confidence. Finance Research Letters, 41, 101805. https://doi.org/10.1016/j.frl.2020.101805

Lee, I. (2021). Cybersecurity: Risk management framework and investment cost analysis. Business Horizons, 64, 659–671. https://doi.org/10.1016/j.bushor. 2021.02.022

Li, X., & Shiu, Y. M. (2026). Effect of risk management through reinsurance in estimating the target capital structure. International Review of Economics and Finance, 109, 105400. https://doi.org/10.1016/j.iref.2026.105400

Mohamed, M. A. H., Al-Mhdawi, M. K. S., Ojiako, U., Qazi, A., Mahammedi, C., & Dacre, N. (2026). A GenAI-driven risk management framework for sustainable development projects. Project Leadership and Society, 7, 100217. https://doi.org/10.10 16/j.plas.2026.100217

Peng, Y., & Jin, H. (2025). Effects of information and technology application in audits and digital economy on enterprise risk management level. Finance Research Letters, 73, 106593. https://doi.org/10.1016/j.frl.2024.106593

Reilley, J. T., & Klein, V. H. Jr. (2026). Pathways to accounting mediation: A case study on the role of checklists in risk management. Management Accounting Research, 68, 100964. https://doi.org/10.1016/j.mar.2026.100964

Ringgaard, A., Bukh, P. N., & Sandalgaard, N. (2026). Accounting for the future: A case study of how Probability of Default mediates between calculative practices in risk management. Management Accounting Research, 69, 100965. https://doi.org/10.10 16/j.mar.2026.100965

Sahoo, S., Kumar, A., Mangla, S. K., & Emrouznejad, A. (2026). Enhancing supply chain resilience through digital twin-enabled risk management: The role of logistic service coordination and distribution network efficiency. International Journal of Production Economics, 297, 110016. https://doi.org/ 10.1016/j.ijpe.2026.110016

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Sufi, F., & Islam, S. (2026). From risk to resilience: Empirical validation of a multidimensional entrepreneurial risk management model in developing markets. Strategic Business Research, 2, 100206. https://doi.org/10.1016/ J.SBR.2026.100206

Wang, L., & Yang, Y. (2026). Digital intelligence transformation, financial innovation, and the effectiveness of enterprise risk management. International Review of Financial Analysis, 110, 104865. https://doi.org/10 .1016/j.irfa.2025.104865

Xuan, Y., You, L., & Song, K. (2026). Financial amplification, leased capital, and risk management. Journal of Corporate Finance, 100, 103029. https://doi.org/10.10 16/j.jcorpfin.2026.103029

Zhu, D., Li, Z., & Mishra, A. R. (2023). Evaluation of the critical success factors of dynamic enterprise risk management in manufacturing SMEs using an integrated fuzzy decision-making model. Technological Forecasting and Social Change, 186, 122137. https://doi.org/10.1016/j.techfore.2022.122137

Zhu, F., & Shneor, R. (2026). Credit risk management in peer-to-peer lending platforms: A systematic literature review. Technological Forecasting and Social Change, 232, 124831. https://doi.org/10.1016/j.techfore.2026.124831

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