

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, and Employee AI Literacy in Vietnam

Vo Minh Vinh¹, Hoang Hac Linh², Luu Kha Han³

¹Faculty of Management and Economics, Tomas Bata university, Czech Republic

²Vinschool Central Park, Ho Chi Minh, Vietnam

³British Vietnamese International School Ho Chi Minh City, Vietnam. Orcid ID: <https://orcid.org/0009-0007-4100-770X>

ABSTRACT: This study investigates the links among AI risk management capability, internal AI governance quality, and organizational performance in SMEs while also assessing the moderating role of employee AI literacy. Building on Dynamic Capabilities Theory and Sociotechnical Systems Theory, it frames organizational performance as the product of capabilities that allow SMEs to detect and reduce AI related risks, put in place effective governance arrangements, and match technological systems with human knowledge and responsibility. Employee AI literacy operates as a boundary condition that influences whether internal AI governance can convert into improved organizational outcomes. A quantitative cross sectional design gathered responses via a five point Likert scale questionnaire from 385 Vietnamese professionals familiar with AI adoption, organizational governance, risk management, information technology, data analytics, or AI supported business activities. IBM SPSS version 26 handled reliability assessment, exploratory factor analysis, and multiple linear regression, while Hayes' Process Macro Model 1 tested the moderating effect. The results reveal that AI risk management capability ($\beta = 0.565$) and internal AI governance quality ($\beta = 0.618$) both significantly enhance organizational performance in SMEs. Internal AI governance quality yields the larger direct effect, underscoring the value of clear accountability, transparent procedures, human oversight, and enforceable controls. Employee AI literacy further intensifies the positive association between internal AI governance quality and organizational performance through a significant interaction coefficient of 0.446. The findings show that formal governance structures by themselves cannot ensure performance gains. SMEs need to combine systematic AI risk management and substantive governance arrangements with employees' capacity to grasp AI principles, assess algorithmic outputs, acknowledge limitations, and handle ethical and compliance issues.

KEYWORDS: organizational performance in SMEs; AI risk management capability; internal AI governance quality; employee AI literacy; Vietnamese SMEs.

1. INTRODUCTION

Achieving financial stability, operational efficiency, innovation, and agility under severe resource constraints makes SME performance a vital area of study. Although artificial intelligence can boost predictive power, automation, and creativity, technology alone does not guarantee success without complementary managerial and human skills (Mikalef & Gupta, 2021). This challenge is acute for Vietnamese SMEs, whose digital progress is hindered by scarce resources, multitasking leaders, implementation hazards, and weak data practices (Walsh et al., 2023). Furthermore, piecemeal AI adoption often bypasses legal frameworks, implying that rapid rollout outstrips internal oversight (Schwaeke et al., 2025). Poor governance subsequently exposes enterprises to algorithmic bias, privacy leaks, compliance failures, and compromised trust (Mäntymäki et al., 2022). However, overly rigid controls can stifle experimentation if detached from daily operations. Employee AI literacy becomes essential so workers can interpret outputs, spot hazards, and use tools responsibly. Consequently, investigating how governance quality and risk management capabilities jointly shape SME outcomes is highly justified.

Although prior research shows that artificial intelligence capabilities boost enterprise performance by improving data handling, coordination, and creativity (Mikalef & Gupta, 2021), these studies mainly view technology as a resource while neglecting the oversight needed to ensure lasting gains. SME literature similarly notes disjointed adoption, limited assets, and ignored compliance needs, yet fails to test if risk controls and governance actually improve firm outcomes (Schwaeke et al., 2025). Frameworks for

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

organizational AI governance offer rules, procedures, accountability, and technical mechanisms to align algorithms with legal and strategic goals (Mäntymäki et al., 2022). Nevertheless, this line of inquiry remains largely conceptual, leaving governance impacts, risk processes, and practical effectiveness underexplored (Birkstedt et al., 2023). Additionally, while manager AI literacy builds strategic focus and execution skill, studies prioritize executives over frontline staff who implement oversight daily (Pinski et al., 2024). Empirical insights regarding Vietnamese SMEs are especially limited. This study fills these voids by evaluating how internal AI governance quality and risk capabilities affect SME performance, alongside the moderating role of employee AI literacy.

This study seeks to answer the following research questions:

- (1) To what extent does AI risk management capability influence organizational performance in SMEs?
- (2) How does internal AI governance quality affect organizational performance in SMEs?
- (3) How does employee AI literacy moderate the relationship between internal AI governance quality and organizational performance?

Accordingly, the first objective is to examine how effectively identifying, assessing, mitigating, and monitoring AI-related risks contributes to Organizational Performance. The second objective is to evaluate the effect of Internal AI Governance Quality, including accountability, transparency, ethical oversight, and decision-making structures, on SME performance. The third objective is to determine whether Employee AI Literacy strengthens the positive relationship between Internal AI Governance Quality and Organizational Performance. Academically, this research develops an integrated framework connecting organizational AI risk capability, internal governance mechanisms, and employee-level knowledge within the Vietnamese SME context. It extends AI governance literature by conceptualizing Employee AI Literacy as a boundary condition that may determine whether formal governance arrangements translate into improved organizational outcomes. Practically, the findings can guide SME managers in allocating resources among AI risk controls, governance systems, and employee development to achieve more responsible AI adoption and stronger performance.

2. LITERATURE REVIEW

2.1. Organizational performance

Organizational performance reflects how effectively a firm reaches financial and non-financial goals across earnings, expansion, client satisfaction, workforce well-being, and social or environmental contributions (Santos & Brito, 2012). This broad perspective matters theoretically because it shows if firm assets create value for diverse stakeholders instead of producing temporary profits. Because these dimensions vary independently, robust financial gains can occur alongside poor employee or social outcomes, meaning single financial metrics often hide critical operational realities (Santos & Brito, 2012). For smaller enterprises, strong performance underpins long-term survival, market edge, innovation, and resilience against external disruption. Artificial intelligence can boost these outcomes by sharpening decision quality, coordination, and creative capacity (Mikalef & Gupta, 2021). Yet technology alone cannot guarantee progress. SMEs frequently contend with tight budgets and scarce talent, while early digital shifts can temporarily depress performance until capabilities mature (Escobarragan & Becker, 2025). Moreover, AI adoption among smaller firms remains fragmented due to gaps in skills, infrastructure, and regulations (Schwaewe et al., 2025). Ultimately, achieving superior performance hinges less on acquiring AI and more on governing its application responsibly while mitigating associated risks.

2.2. Critical Analysis of Theoretical Frameworks

2.2.1. Dynamic Capabilities Theory

Dynamic Capabilities Theory was initially developed by Teece et al. (1997) and subsequently refined by Teece (2018). This theory explains how enterprises achieve sustainable performance by identifying environmental changes, seizing emerging opportunities, and restructuring organizational resources and operational processes. Unlike ordinary capabilities that merely support current operations, dynamic capabilities enable an organization to transform its resource base to adapt to shifts in technology, regulations, and competitive conditions. This distinction is particularly significant for small and medium-sized enterprises (SMEs) in Vietnam, as artificial intelligence (AI) presents both opportunities, such as enhanced efficiency and fostered innovation, and challenges, including algorithmic bias, personal data leakage risks, security threats, legal uncertainty, and accountability issues. Consequently, organizational performance hinges on the ability of SMEs to continuously identify these developments and appropriately adjust their AI-related resources. AI risk management capability is considered a form of dynamic capability, as it allows enterprises to identify potential technical, ethical, operational, and legal risks through monitoring and assessment activities. This capability also facilitates the seizing of opportunities by assisting managers in selecting appropriate responses, allocating resources, and deciding whether a specific AI application should be deployed, modified, restricted, or discontinued. Restructuring occurs when a firm

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

adjusts data processing workflows, decision-making authority, control mechanisms, employee responsibilities, and technical safeguards to address identified risks. These activities help minimize disruption and preserve the expected value of AI investments. Accordingly, a robust internal AI governance mechanism supports dynamic capabilities by establishing decision-making authority, accountability structures, monitoring processes, ethical principles, and organizational standards to guide AI throughout its operational lifecycle. Effective governance aligns AI investments with organizational goals and legal obligations while ensuring that models, data, and human decisions remain subject to appropriate oversight (Mäntymäki et al., 2022). Consequently, governance enhances operational efficiency by preventing inappropriate AI use, facilitating consistent decision-making, maintaining stakeholder trust, and improving the strategic allocation of finite resources. This argument aligns with evidence showing that an organization's AI capabilities drive innovation and operational efficiency when firms combine technological assets with human expertise, coordination capabilities, and organizational resources (Mikalef & Gupta, 2021). It also reflects the view that AI management requires continuous adaptation, as characteristics such as self-learning capabilities, opacity, and variable outputs distinguish AI from traditional information technologies (Berente et al., 2021). Furthermore, employee AI literacy serves as a vital human resource, facilitating the implementation of these agile processes. Employees knowledgeable about AI functions, limitations, risks, and responsible usage are better equipped to identify problematic outputs, interpret governance requirements, report incidents, and accurately apply organizational controls. Consequently, AI literacy transforms formal governance mechanisms into practical operational capabilities, moving beyond mere tokenistic policies. Research indicates that AI literacy strengthens an organization's strategic direction and implementation capabilities by enhancing its ability to recognize and extract value from AI (Pinski et al., 2024). In the proposed model, Dynamic Capabilities Theory explains how AI risk management capabilities and internal AI governance quality can improve organizational performance, and how employee AI literacy enhances the operational effectiveness of governance. The combination of these capabilities enables Vietnamese SMEs to transform governance from a purely compliance-oriented function into an adaptive mechanism that supports operational performance, innovation, resilience, and sustainable value creation. The central assumption of dynamic capabilities theory is that firms achieve superior performance by continuously sensing environmental changes, seizing emerging opportunities, and reconfiguring resources and processes accordingly. Thus, AI risk management and internal AI governance enhance organizational performance when they enable SMEs to recognize AI-related risks, implement appropriate responses, and adapt organizational controls. Employee AI literacy strengthens these processes by translating governance principles into informed, responsible, and adaptive workplace practices.

2.2.2. Socio Technical Systems

Socio Technical Systems Theory, rooted in the work of Trist & Bamforth (1951), posits that organizational performance depends on the simultaneous optimization of two subsystems including the social system and the technical system. The technical subsystem encompasses technology, data, algorithms, tasks, workflows, and control mechanisms, whereas the social subsystem comprises employees, knowledge, roles, authority, communication, values, and organizational relationships. Performance improves when these components are designed to complement one another, rather than pursuing technical efficiency in isolation from human and organizational requirements. This theoretical logic is highly applicable to AI governance, as AI systems do not generate organizational value when operating merely as standalone technical tools. Their impact arises from the interplay among algorithms, employees, managers, organizational policies, data processing workflows, and stakeholder expectations. Consequently, AI governance can be understood as an organizational mechanism that aligns technical systems with social responsibilities. Effective internal AI governance ensures technical alignment by establishing requirements for data quality, model testing, security, monitoring, documentation, and auditability. Simultaneously, it fosters social alignment by clearly defining decision-making authority, human oversight, ethical standards, accountability, communication protocols, and problem-resolution processes (including escalation mechanisms). Mäntymäki et al. (2022) define organizational AI governance as an integrated system comprising rules, practices, processes, and technical tools designed to ensure that AI usage aligns with the organization's strategy, values, ethical principles, and legal requirements. From a sociotechnical perspective, high-quality governance enhances organizational performance by ensuring that technical capabilities remain compatible with employee roles and organizational objectives. Furthermore, AI risk management capabilities reinforce this alignment by identifying potential failure points stemming from both technical and social factors. Technical risks may arise from inaccurate data, biased models, security vulnerabilities, model performance degradation, or unreliable outputs. Social risks may stem from over-reliance, unclear accountability, inappropriate interpretation, limited oversight, or employee misuse of AI. Consequently, effective risk management requires a combination of technical assessment, managerial judgment, employee engagement, and organizational learning. Berente et al. (2021) emphasize that AI management must address issues related to system autonomy, learning capabilities, and a lack of transparency (or "black-box" nature); these factors necessitate new forms of human control and organizational coordination mechanisms. Therefore,

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

employee AI literacy plays a pivotal role, as employees serve as the bridge between formal governance structures and the practical, day-to-day application of AI. AI-literate employees are capable of questioning outputs, recognizing uncertainty, understanding appropriate levels of confidence, safeguarding sensitive data, and adhering to reporting protocols. They can also communicate effectively with technical experts and management, facilitating the smooth flow of governance-related information across organizational departments. Studies adopting a sociotechnical perspective indicate that effective collaboration between employees and AI relies on employee skills, knowledge sharing, trust, and role clarity, which are the factors that collectively drive business performance (Chowdhury et al., 2022). Similarly, organizational readiness for AI requires alignment across strategy, resources, knowledge, culture, and data capabilities, rather than focusing solely on technology (Jöhnk et al., 2021). Consequently, employee AI literacy acts as a moderator in the relationship between the quality of internal AI governance and organizational performance. High levels of literacy enable employees to grasp and implement governance requirements, detect anomalies, and utilize AI responsibly. When governance quality and employee literacy go hand in hand, small and medium-sized enterprises (SMEs) in Vietnam can achieve superior decision-making quality, operational reliability, stakeholder trust, and high organizational performance through the seamless integration of people and technology. The central assumption of sociotechnical systems theory is that organizational performance improves when technical and social subsystems are jointly optimized and mutually aligned. Accordingly, internal AI governance and AI risk management generate stronger performance outcomes when their technical controls are supported by clear human responsibilities, appropriate employee capabilities, and effective coordination. Employee AI literacy therefore strengthens this alignment by enabling employees to interpret, apply, and monitor governance requirements effectively and responsibly.

2.3. The Impact of AI risk management capability

AI risk management capability denotes an organization's ability to identify, assess, prioritize, mitigate, monitor and communicate technical, ethical, legal security and operational risks across the AI lifecycle. This extends past formal policies alone since true capability demands coordinated knowledge, routines, human oversight, technological controls and organizational learning that enable repeated adaptive risk responses. Responsible AI governance research frames risk management as structural procedural and relational practices that convert responsible AI principles into concrete organizational action (Papagiannidis et al., 2025). AI governance frameworks likewise stress that risks of bias, opacity, privacy, discrimination and unintended harm require attention throughout development, deployment and use rather than solely prior to launch (Batoool et al., 2025). Drawing on Dynamic Capabilities Theory, the capability equips SMEs to sense emerging vulnerabilities, seize suitable mitigations, and reconfigure data practices, workflows, responsibilities and controls as AI evolves. Its value rests in safeguarding decision quality, regulatory compliance, operational continuity, stakeholder trust and returns on AI investment while helping resource limited SMEs allocate scarce funds and talent toward applications whose benefits outweigh risks, thereby rendering risk management a value creating rather than purely defensive function.

Stronger capability is expected to enhance organizational performance because systematic risk identification and mitigation can curb costly errors, service failures, data misuse, regulatory exposure, and reputational harm. Continuous model monitoring can detect performance deterioration or biased outputs, while clear escalation procedures enable corrective action before wider financial losses or stakeholder damage occur. AI governance research further indicates that governing data, models, and integrated systems enables firms to control AI-related costs and risks while preserving strategic value (Schneider et al., 2023). Similarly, broader evidence concerning AI capability reveals a robust, positive relationship with organizational creativity and firm performance when technological resources are effectively combined with human expertise and organizational coordination (Mikalef & Gupta, 2021). Enterprise risk management studies provide comparable support. Yang et al. (2018) found that formal risk management practices improved SME performance both directly and indirectly through competitive advantage, while Florio and Leoni (2017) associated more advanced risk management systems with stronger financial and market outcomes. Collectively, these findings imply that cultivating AI risk management capability can strengthen operational efficiency, organizational resilience, decision reliability, and competitive positioning.

Nevertheless, a more neutral perspective suggests that risk management does not automatically improve performance. Syrová and Špička (2023) found that enterprise risk management affected SME financial outcomes through organizational culture and strategic risk management performance rather than through a direct, independent pathway. Likewise, Callahan and Soileau (2017) identified only limited effects across several measures of operating performance. This debate indicates that formal controls may consume scarce organizational resources or remain largely symbolic unless they are meaningfully embedded in routines, strategic processes, and managerial decisions. From a postpositivist perspective, AI risk management capability and organizational performance can be treated as measurable constructs whose relationship may be tested statistically. A critical realist view, however,

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

regards this capability as a latent organizational attribute that generates performance outcomes through underlying mechanisms, such as learning, oversight, and corrective action, under specific organizational conditions. A pragmatic stance evaluates the capability according to whether it delivers tangible risk reduction and observable performance improvements. Together, these complementary philosophical perspectives support empirical examination of the proposed relationship rather than the assumption that formal risk policies alone necessarily create organizational value. Therefore:

H1: AI risk management capability has a positive impact on organizational performance in SMEs.

2.4. The Impact of Internal AI Governance Quality

Internal AI governance quality denotes the extent to which an organization establishes coherent, transparent, enforceable, and regularly reviewed structures, responsibilities, processes, and technological controls to guide AI development and use (Mäntymäki et al., 2022; Papagiannidis et al., 2025). It captures the operational substance and effectiveness of governance practices, rather than merely the existence of formal policies or ethical statements (Birkstedt et al., 2023; Papagiannidis et al., 2025). Strong governance defines decision-making authority, assigns accountability, preserves human oversight, manages data and model life cycles, monitors compliance, documents decisions, and aligns AI applications with organizational strategies, stakeholder expectations, ethical standards, and legal requirements. Mäntymäki et al. (2022) conceptualize organizational AI governance as an integrated system of rules, practices, processes, and tools that maintains these alignments. Similarly, Papagiannidis et al. (2025) demonstrate that responsible AI governance combines structural elements, such as committees and clearly defined roles, with procedural elements, including audits and impact assessments, and relational elements, such as communication and stakeholder involvement.

This construct is therefore important because it transforms abstract principles of fairness, transparency, accountability, privacy, and reliability into consistent organizational routines. For resource-limited SMEs that lack extensive specialist knowledge, effective governance can define boundaries for acceptable AI applications, prevent overlapping controls, promote consistent decisions, and direct investment toward high-value uses. It can also provide institutional assurance that AI-supported outcomes remain explainable, contestable, and subject to human responsibility, rather than being accepted merely because they were produced by advanced technology.

Higher internal AI governance quality is expected to improve organizational performance in SMEs through several pathways. Clear decision rights and accountability reduce uncertainty regarding who authorizes AI tools, responds to failures, and assumes responsibility for organizational consequences. Data standards, validation procedures, continuous monitoring, and audit trails can improve information quality and limit biased, inaccurate, or legally problematic outputs. These mechanisms can consequently strengthen decision reliability, operational efficiency, regulatory compliance, stakeholder trust, and the sustainable realization of AI-generated benefits. From a dynamic capabilities perspective, governance also helps SMEs coordinate technological and human resources, recognize environmental changes, and adapt their AI practices as business conditions or regulatory requirements evolve. Evidence obtained from 342 securities firms indicates that responsible AI governance generated measurable improvements in corporate performance, with certification, transparency, and AI innovation activities serving as important drivers (Xia et al., 2026). Related research on organizational attention to responsible AI shows that sustained managerial attention can increase both the quantity and influence of firm innovation by strengthening human capital and reducing innovation-related risks (Xiong et al., 2026). Evidence from information technology governance similarly demonstrates that governance mechanisms promote dynamic capabilities, process agility, and innovative capacity, which subsequently enhance firm performance (Ilmudeen, 2024). Collectively, these findings support the strong-impact perspective because governance functions as a strategic capability for value creation, rather than solely as a compliance mechanism.

Nevertheless, a more measured perspective suggests that formal governance may not improve performance when it becomes ceremonial, fragmented, excessively rigid, or disconnected from daily organizational practices. AI governance research emphasizes that its outcomes depend on how employees undertake oversight, auditing, and impact assessment, rather than on the mere existence of formal structures (Birkstedt et al., 2023). Organizational control research further indicates that formalization enhances performance only when it is accompanied by flexibility and aligned with environmental turbulence (Yang et al., 2022). Heavy procedural requirements may increase administrative costs, slow experimentation, and restrict managerial discretion, thereby offsetting potential benefits within resource-constrained SMEs. Effective governance quality, therefore, depends on integration, adaptability, and genuine implementation, rather than on the sheer number of policies adopted.

A postpositivist perspective treats internal AI governance quality as a measurable construct whose relationship with organizational performance can be empirically examined. A critical realist perspective regards governance quality as a latent organizational structure that influences performance through underlying mechanisms, including accountability, learning, trust, and risk reduction,

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

whose effectiveness varies according to context. A pragmatic perspective evaluates governance according to whether it produces workable controls and observable organizational value. Together, these philosophical perspectives support empirical testing of the proposed positive relationship, while emphasizing that substantive, rather than symbolic, governance provides its causal foundation. Accordingly:

H2: Internal AI governance quality has a positive impact on organizational performance in SMEs.

2.5 The Moderating Role of Employee AI Literacy

Employee AI literacy denotes employees' multifaceted ability to understand AI principles, operate AI tools, formulate appropriate instructions, critically evaluate outputs, recognize limitations, and address ethical and compliance issues in workplace settings (Liu et al., 2025; Steinhäuser & Heid, 2026). This conceptualization extends beyond purely technical proficiency because productive workplace applications also require evaluative judgement, communication skills, and awareness of privacy, bias, transparency, and accountability. Liu et al. (2025) identify technical competence, prompt refinement, content evaluation, creative application, and ethical awareness as interconnected dimensions of AI literacy. From a human capital perspective, these capabilities enhance employees' ability to transform AI resources into useful knowledge and improved work outcomes. AI literacy also functions as an individual microfoundation of organizational absorptive capacity because knowledgeable employees can acquire, interpret, and apply AI-generated information more effectively (Steinhäuser & Heid, 2026).

Within SMEs that lack extensive specialist personnel, AI literacy assumes particular importance because employees frequently undertake operational, managerial, and compliance responsibilities simultaneously. Research indicates that managerial AI literacy strengthens corporate AI orientation and implementation capacity (Pinski et al., 2024), while productive collaboration between employees and AI promotes knowledge exchange, decision quality, innovation, and business performance (Chowdhury et al., 2022). Liu et al. (2025) similarly report a clear, positive association between generative AI literacy and employee job performance. Employee AI literacy, therefore, constitutes a strategic human resource that enables employees to use AI effectively while maintaining essential human judgement and oversight.

The moderating influence of employee AI literacy arises because internal AI governance quality cannot improve organizational performance through formal rules alone. Effective AI governance depends on organizational members consistently implementing assigned responsibilities, oversight procedures, ethical standards, and accountability mechanisms in their everyday AI-related activities (Mäntymäki et al., 2022). Governance may establish requirements concerning approved tools, data protection, output verification, human responsibility, and risk escalation. However, employees must possess sufficient AI knowledge to understand and implement these requirements effectively. Employees with higher AI literacy are better equipped to scrutinize AI-generated results, identify technical limitations, manage ethical and compliance concerns, and appropriately integrate AI into organizational workflows (Liu et al., 2025; Pinski et al., 2024).

These capabilities also improve human-AI collaboration by facilitating knowledge exchange, role clarity, informed judgement, and responsible technology adoption, thereby contributing to stronger business performance (Chowdhury et al., 2022). Consequently, employees with greater AI literacy can translate governance principles into consistent compliance, reliable decisions, responsible experimentation, and continuous organizational learning. Conversely, when employee AI literacy is limited, governance policies may be misunderstood, implemented mechanically, or disregarded. Such weaknesses can create a gap between formally established governance arrangements and actual workplace practices, reducing the ability of internal AI governance quality to generate performance benefits.

Nevertheless, empirical evidence suggests that AI literacy may not strengthen every organizational condition equally. Its influence depends on how employees interpret and apply organizational AI arrangements within particular work settings (Steinhäuser & Heid, 2026). Excessively complex or restrictive governance may constrain employees even when they possess strong AI literacy, whereas insufficient governance may leave knowledgeable employees without clear boundaries or accountability. From a contingency perspective, the greatest performance gains should therefore arise when employee capabilities are appropriately aligned with transparent, enabling, and practically applicable governance structures.

A postpositivist perspective treats employee AI literacy as a measurable individual capability whose moderating effect can be tested statistically. A critical realist perspective regards AI literacy as an underlying human mechanism through which formal governance structures are interpreted and converted into observable organizational outcomes. A pragmatic perspective evaluates literacy according to whether it helps employees implement governance requirements, reduce AI-related risks, and generate tangible organizational value. Together, these perspectives support the expectation that employee AI literacy strengthens the performance effects of substantive internal AI governance. Accordingly, this study proposes H3:

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

H3: Employee AI literacy positively moderates the relationship between internal AI governance quality and organizational performance in SMEs.

Building on established theoretical foundations, this study develops the conceptual framework illustrated in Figure 1 to extend and enhance the current body of knowledge:

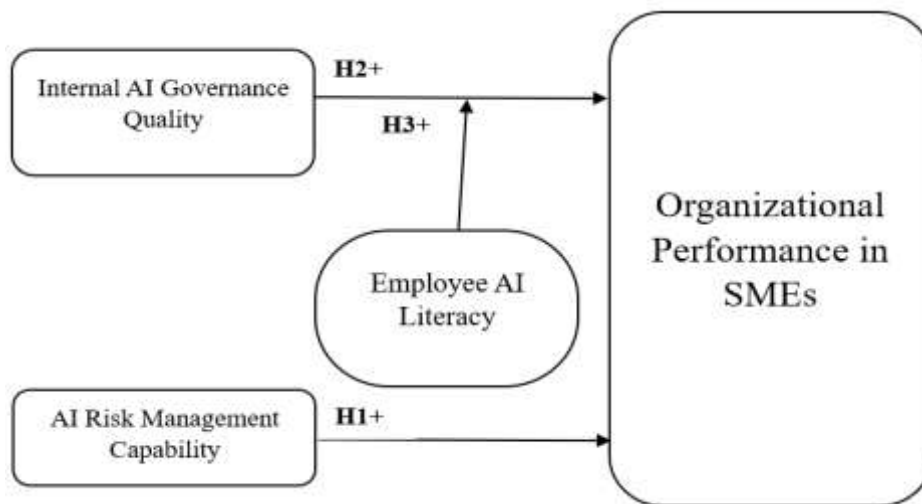


Figure 1: The Paper Conceptual Framework

3. METHODS

3.1. Sampling Strategy

This study employed a quantitative, cross-sectional design to investigate the effects of AI risk management capability and internal AI governance quality on organizational performance among Vietnamese SMEs, while also assessing the moderating influence of employee AI literacy. A quantitative strategy was appropriate for the research objectives because it enabled rigorous hypothesis testing and statistical estimation of the proposed direct and interaction effects using standardized survey data. The cross-sectional approach provided an efficient means of collecting respondents' evaluations of AI-related risk management, governance practices, employee competence, and organizational outcomes at a specific point in time (Bryman, 2016).

Purposive sampling guided the selection of individuals who possessed sufficient organizational knowledge and direct experience with AI-enabled applications. The unit of analysis was the individual organizational member, although the organizational constructs were assessed through each respondent's informed perceptions of their SME. Eligible participants included SME owners, senior and middle managers, information technology specialists, data analysts, risk and compliance personnel, and employees involved in AI-supported operational or managerial activities. Participants were required to work for an SME operating in Vietnam and to possess knowledge of how their organization adopted, governed, monitored, or applied AI. Recruitment covered different industries, enterprise sizes, organizational roles, and levels of AI experience to enhance sample diversity and reduce dependence on any single professional category.

Data were collected through a structured, self-administered questionnaire developed from validated academic instruments. AI risk management capability assessed the firm's capacity to identify, evaluate, prioritize, mitigate, monitor, and communicate technical, ethical, legal, security, and operational risks throughout the AI life cycle (Berente et al., 2021; Schneider et al., 2023). Internal AI governance quality measured the coherence, transparency, enforceability, and periodic review of governance structures, accountability systems, human oversight, data controls, model monitoring, and compliance procedures (Mäntymäki et al., 2022; Birkstedt et al., 2023). Employee AI literacy evaluated employees' understanding of AI principles, ability to operate AI tools, capacity to assess outputs and recognize limitations, and competence in addressing ethical and compliance issues (Liu et al., 2025; Pinski et al., 2024). Organizational performance encompassed financial and nonfinancial outcomes, including efficiency, innovation, growth, customer satisfaction, adaptability, and stakeholder value (Santos & Brito, 2012; Mikalef & Gupta, 2021).

All measurement items employed a five-point Likert scale ranging from 1, representing strongly disagree, to 5, representing strongly agree. Academic experts and practitioners specializing in AI, SME management, risk management, and organizational governance reviewed the questionnaire to assess its clarity and content validity. A pilot survey was subsequently conducted with eligible respondents, allowing minor revisions to ambiguous or unclear wording before the main data collection stage.

The finalized questionnaire was distributed electronically through professional networks, SME associations, organizational contacts, and relevant online channels. Participation was voluntary and anonymous. Each respondent received information concerning the academic purpose of the research and the measures adopted to protect confidentiality. Following the removal of

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

incomplete, duplicate, patterned, and insufficiently engaged responses, 385 valid questionnaires were retained for statistical analysis.

3.2. Data analysis

Data analysis proceeded in successive stages through IBM SPSS version 26 together with Hayes' Process macro. Descriptive statistics first outlined respondents' demographic and professional profiles. Cronbach's alpha evaluated internal consistency whereby coefficients of at least 0.70 and corrected item total correlations exceeding 0.30 signaled satisfactory reliability (Tavakol & Dennick, 2011). Exploratory factor analysis followed employing principal component extraction and Varimax rotation. Items remained when factor loadings surpassed 0.50 and displayed no notable cross loadings (Hair et al., 2009). Multiple linear regression assessed the direct influences of AI risk management capability and internal AI governance quality on organizational performance with statistical significance set at p below 0.05. Ultimately, Hayes' Process Model 1 tested whether employee AI literacy moderated the association between internal AI governance quality and organizational performance (Hayes, 2022).

4. RESULTS

4.1. Descriptive Statistical Analysis

The sample encompassed SMEs spanning varied sectors in Vietnam, with 23.9% of respondents engaged in manufacturing and production, 22.9% in trade, retail, and e-commerce, and 20.5% in professional and business services. Information technology and digital services comprised 17.4%, while logistics, transportation, and remaining industries made up 15.3%. Concerning organizational roles, owners, directors, or senior managers formed the largest share at 25.7%, followed by middle or functional managers at 22.9%, IT or data analytics specialists at 19.2%, risk, compliance, or governance professionals at 17.1%, and employees engaged in AI-supported activities at 15.1%. With respect to firm size, organizations employing 10 to 49 people represented 36.9%, and those with 50 to 199 employees accounted for 33.5%. In addition, 40.8% of participants indicated high familiarity with their firms' AI practices, 24.2% reported very high familiarity, and 26.2% noted moderate familiarity, whereas only 8.8% held limited familiarity. In short, the sample reflected diverse SME settings, and most respondents demonstrated adequate knowledge to assess AI risk management capability, internal AI governance quality, employee AI literacy, and organizational performance.

4.2. Reliability analysis

Table 1 summarizes the measurement items employed to assess the study constructs. Each construct was operationalized through four items adapted from established scholarly sources to maintain theoretical consistency and capture its essential dimensions comprehensively. Respondents evaluated all items using a five-point Likert scale, ranging from 1, strongly disagree, to 5, strongly agree.

Table 1: Measurement Items

Code	Survey item	Theoretical source
Organizational Performance in SMEs		
OP1	Our organization operates efficiently in its use of resources and business processes.	Santos & Brito (2012); Mikalef & Gupta (2021)
OP2	Our organization successfully develops improved products, services, or working practices.	Santos & Brito (2012); Mikalef & Gupta (2021)
OP3	Our organization responds effectively to changes in its business environment.	Santos & Brito (2012); Mikalef & Gupta (2021)
OP4	Our organization achieves satisfactory overall financial and nonfinancial results.	Santos & Brito (2012); Mikalef & Gupta (2021)
AI Risk Management Capability		
AIRMC1	Our organization systematically identifies risks associated with AI applications.	Berente et al. (2021); Papagiannidis et al. (2025)
AIRMC2	Our organization assesses the technical, ethical, legal, security, and operational risks of	Batool et al. (2025); Papagiannidis et al. (2025)

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

	AI applications.	
AIRMC3	Our organization implements appropriate measures to mitigate identified AI-related risks.	Papagiannidis et al. (2025); Schneider et al. (2023)
AIRMC4	Our organization continuously monitors AI applications and communicates emerging risks to responsible personnel.	Berente et al. (2021); Schneider et al. (2023)
Internal AI Governance Quality		
IAGQ1	Our organization clearly defines roles and responsibilities for the development and use of AI.	Mäntymäki et al. (2022); Papagiannidis et al. (2025)
IAGQ2	Our organization maintains transparent and enforceable procedures for governing AI applications.	Birkstedt et al. (2023); Mäntymäki et al. (2022)
IAGQ3	Our organization maintains appropriate human oversight of AI-supported activities and decisions.	Birkstedt et al. (2023); Mäntymäki et al. (2022)
IAGQ4	Our organization regularly reviews its AI governance practices, controls, and compliance requirements.	Mäntymäki et al. (2022); Papagiannidis et al. (2025)
Employee AI Literacy		
EAIL1	Employees in our organization understand the basic principles underlying AI applications used in their work.	Liu et al. (2025); Steinhäuser & Heid (2026)
EAIL2	Employees in our organization can use workplace AI tools appropriately.	Liu et al. (2025); Pinski et al. (2024)
EAIL3	Employees in our organization can critically evaluate the accuracy and limitations of AI-generated outputs.	Liu et al. (2025); Steinhäuser & Heid (2026)
EAIL4	Employees in our organization understand the ethical, privacy, and accountability issues associated with AI use.	Liu et al. (2025); Pinski et al. (2024)

Table 2: Reliability analysis of “Organizational Performance in SMEs”.

Reliability Statistics				
Cronbach's Alpha	N	of		
.833	4	Items		
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
OP1	10.742	4.816	0.675	0.808
OP2	10.615	4.693	0.661	0.811
OP3	10.836	4.927	0.612	0.825
OP4	10.693	4.574	0.701	0.800

Source: (The authors, 2026)

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

Table 2 indicates that the four items produced corrected item-total correlations from 0.612 to 0.701, well above the accepted cutoff of 0.30. The complete scale attained a Cronbach's alpha of 0.833, which surpassed the conventional 0.70 standard and thereby confirmed robust internal consistency. Alpha values calculated after successive removal of each item ranged from 0.800 to 0.825 and stayed lower than the overall coefficient in every instance. These findings show that eliminating any item would diminish the scale's reliability. As a result, OP1 through OP4 made meaningful contributions to the assessment of organizational performance in SMEs and were retained for later analyses. Parallel reliability results also emerged for the remaining measurement scales used in the study (Hair et al., 2009; Tavakol & Dennick, 2011).

4.3. Exploratory factor analysis (EFA)

Table 3: Factor Loading Matrix.

Rotated Component Matrix ^a							
Component with loading factors							
1		2		3		4	
OP1	0.785	AIRMC1	0.812	IAGQ1	0.826	EAIL1	0.804
OP2	0.769	AIRMC2	0.784	IAGQ2	0.793	EAIL2	0.778
OP3	0.721	AIRMC3	0.756	IAGQ3	0.758	EAIL3	0.749
OP4	0.831	AIRMC4	0.728	IAGQ4	0.737	EAIL4	0.719
Extraction Method: Principal Component Analysis.							
Rotation Method: Varimax with Kaiser Normalization.							
a. Rotation converged in 7 iterations.							

Source: (The authors, 2026)

The exploratory factor analysis summarized in Table 3 revealed four clear factors that correspond to organizational performance in SMEs, AI risk management capability, internal AI governance quality, and employee AI literacy. Every one of the 16 measurement items displayed strong loadings on the factors they were designed to measure, with values between 0.719 and 0.831 that surpassed the 0.50 guideline proposed by Hair et al. (2009). Convergence of the Varimax rotation occurred within six iterations and thereby confirmed the stability of the solution. As a result, none of the items required deletion and the full set of 16 indicators proceeded to further statistical work. Then, these outcomes furnish adequate support for the hypothesized four-factor arrangement and for the construct validity of the measurement model.

4.4. Multiple linear regression model

Table 4: Coefficients^a.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	0.319	0.121		2.636	0.009
AIRMC	0.487	0.028	0.565	17.393	0.000
IAGQ	0.536	0.027	0.618	19.852	0.000
a. Dependent Variable: OP					

Source: (The authors, 2026)

Where AIRMC represents the mean of AIRMC1 to AIRMC4, IAGQ represents the mean of IAGQ1 to IAGQ4, and OP represents the mean of OP1 to OP4.

Table 4 indicates that the significance levels associated with the links from AI risk management capability to organizational performance in SMEs and from internal AI governance quality to organizational performance in SMEs both equaled 0.000 and therefore fell far beneath the 0.05 criterion. AI risk management capability produced a clear positive influence on organizational performance as reflected by $\beta = 0.565$, $t = 17.393$, and $p < 0.001$. In parallel, internal AI governance quality generated a similarly strong positive influence with $\beta = 0.618$, $t = 19.852$, and $p < 0.001$. Collectively the results supply robust empirical grounds for accepting H1 and H2.

4.5. Moderator analysis

Table 5: Results analysis of “Employee AI Literacy”.

Model: 1		Y: OP		X: IAGQ W: EAIL		Sample Size: 385	

OUTCOME VARIABLE: OP		Model Summary					
R	R-sq	MSE	F	dl1	dl2	p	
.695	.483	0.216	118.650	3.000	381.000	.000	
Model							
	Coeff.	SE	t	p	LLCI	ULCI	
Constant	0.312	0.105	2.971	0.003	0.106	0.518	
IAGQ	0.673	0.041	16.415	0.000	0.592	0.754	
EAIL	0.695	0.044	15.795	0.000	0.609	0.781	
Int_1	0.446	0.036	12.389	0.000	0.375	0.517	

Source: (The authors, 2026)

Where EAIL was calculated as the mean score of items EAIL1 to EAIL4.

A positive interaction coefficient of $B = 0.446$ indicates that elevated employee AI literacy intensifies the advantageous impact of internal AI governance quality upon organizational performance in SMEs. While internal AI governance quality sets out defined responsibilities, human oversight, transparent procedures, and compliance mechanisms, its influence on organizational performance grows more pronounced among employees who hold higher levels of AI literacy. Staff equipped with adequate understanding of AI principles are able to apply workplace AI tools correctly, assess AI generated results with a critical eye, identify technological constraints, and handle related ethical, privacy, and accountability issues. In this way, AI literate employees convert formal governance standards into responsible conduct, sound decisions, and efficient organizational routines with greater success. In addition, the confidence interval surrounding the interaction term stretches from LLCI = 0.375 to ULCI = 0.517 and does not contain zero, which verifies both the significance and the dependability of the positive moderating role. In sum, the results position employee AI literacy as a key boundary condition that amplifies the positive role of internal AI governance quality for organizational performance in SMEs and thereby offer empirical backing for Hypothesis H3.

5. DISCUSSION

5.1. Result Summary

Both AI risk management capability and internal AI governance quality have significant, positive effects on organizational performance in SMEs, as demonstrated by their respective standardized coefficients of 0.565 and 0.618. These findings indicate that structured processes for risk identification, assessment, mitigation, and monitoring, combined with clearly defined governance responsibilities, transparent procedures, human oversight, and compliance mechanisms, enable SMEs to deploy AI more reliably and productively. Internal AI governance quality exerts a moderately stronger influence, highlighting the particular importance of coherent governance systems in translating AI adoption into improved organizational outcomes. Employee AI literacy also functions as a significant, positive moderator that strengthens the relationship between internal AI governance quality and organizational performance. This moderating effect is supported by an interaction coefficient of 0.446 and a confidence interval ranging from 0.375 to 0.517. The results indicate that governance quality generates greater performance improvements when employees understand AI principles, operate AI tools appropriately, critically evaluate AI-generated outputs, recognize technological limitations, and address ethical and compliance concerns effectively. Overall, the empirical evidence supports all three hypotheses and provides validation for the proposed theoretical model linking AI risk management capability, internal AI governance quality, employee AI literacy, and organizational performance among Vietnamese SMEs.

Regarding the research questions, the findings answer the first question by confirming that AI risk management capability significantly enhances organizational performance. They address the second question by demonstrating that internal AI governance quality also has a significant, positive effect, with a standardized coefficient slightly higher than that of AI risk management capability. Finally, they answer the third question by showing that greater employee AI literacy substantially

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

strengthens the beneficial effect of internal AI governance quality on organizational performance. Collectively, these findings demonstrate that SMEs obtain the greatest benefits when they combine systematic AI risk management with robust governance arrangements and an AI-literate workforce. Improving organizational performance, therefore, requires SMEs to define AI-related responsibilities clearly, monitor technological risks continuously, maintain meaningful human oversight, establish transparent governance procedures, and strengthen employees' ability to evaluate and use AI responsibly.

5.2. Theoretical Implications

The empirical results lend firm support to H1 since AI risk management capability markedly enhances organizational performance with $\beta = 0.565$. This outcome aligns closely with Schneider et al. (2023), who contend that managing AI risks lets organizations preserve strategic value while limiting potential costs, and with Mikalef & Gupta (2021), who connect coordinated AI capabilities to improved firm performance. It further backs Yang et al. (2018), whose work ties formal risk management practices to SME performance and competitive advantage. Yet the finding stands in contrast to the more restrained view of Callahan & Soileau (2017), who observe only limited effects of risk management on various operational outcomes. It agrees only in part with Syrová & Špička (2023), who hold that risk management affects SME financial results chiefly through organizational culture and strategic risk management performance. The coefficient obtained here suggests that risk management generates direct value when it functions as an operational capability rather than a mere symbolic set of policies. Theoretically, the study advances Dynamic Capabilities Theory by framing AI risk management as a specialized sensing, seizing, and reconfiguring capability that enables resource constrained SMEs to identify technological vulnerabilities, apply corrective actions, and safeguard performance during AI adoption.

The findings offer strong endorsement for H2 in that internal AI governance quality produces a significant positive influence on organizational performance with $\beta = 0.618$, a value larger than that of AI risk management capability. This result corresponds closely with Xia et al. (2026), who document measurable performance gains from responsible AI governance, and with Ilmudeen (2024), who shows that governance mechanisms foster agility and innovative capacity. It likewise sustains Xiong et al. (2026), whose evidence implies that ongoing attention to responsible AI bolsters innovation by lowering risk and developing human capital. At the same time, the study rejects any treatment of governance as purely ceremonial compliance. Birkstedt et al. (2023) caution that governance structures yield limited value when oversight, auditing, and impact assessment remain detached from everyday practices. The outcome agrees only partially with Yang et al. (2022), who maintain that formalization raises performance solely when matched by flexibility and suitable environmental conditions. The sizable coefficient implies that substantive, adaptable, and enforceable governance can generate organizational value in a direct manner. Theoretically, the research extends Dynamic Capabilities Theory by casting internal AI governance quality as an orchestration capability that coordinates data, algorithms, human accountability, and strategic aims inside resource constrained SMEs.

The empirical results provide robust support for H3 because employee AI literacy positively moderates the association between internal AI governance quality and organizational performance with $B = 0.446$ and a confidence interval spanning 0.375 to 0.517. This finding matches closely with Liu et al. (2025), who link AI literacy to employees' technical, evaluative, and ethical competence, and with Pinski et al. (2024), who illustrate that managerial AI literacy enhances organizational AI orientation and implementation. It also affirms Chowdhury et al. (2022), who argue that effective human AI collaboration rests on knowledge sharing, role clarity, and employee expertise. Nevertheless, the result questions governance views that tacitly presume formal structures function apart from employee capability. Mäntymäki et al. (2022) stress organizational rules, responsibilities, and oversight, yet the present evidence reveals that these arrangements deliver greater performance benefits when employees are able to interpret and put them into practice. The study concurs only partly with Steinhauser & Heid (2026), whose examination suggests that literacy does not reinforce every organizational condition to the same degree. Theoretically, this research positions employee AI literacy as a sociotechnical microfoundation and boundary condition that transforms formal AI governance into responsible routines, informed human oversight, and improved SME performance.

5.3. Practical Implications

Support for H1 indicates that Vietnamese SMEs ought to regard AI risk management capability as a managerial competence that creates value instead of a restricted compliance task. Managers need to set up an AI risk register that addresses model bias, inaccurate outputs, privacy breaches, security vulnerabilities, legal exposure, and operational dependence. Every risk must receive an assigned owner, severity rating, mitigation plan, and escalation threshold. Given the limited financial and technical resources of SMEs, controls ought to match the risk level and strategic weight of each AI application. High impact applications demand pre deployment testing, periodic validation, incident reporting, and human review, while low risk tools can undergo lighter monitoring. Firms should further blend technical expertise with business knowledge since effective AI capability relies on coordinating

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

technological, human, and organizational resources (Mikalef & Gupta, 2021). Periodic readiness assessments can assist managers in spotting shortfalls in data, skills, strategy, infrastructure, and governance prior to scaling AI investment (Jöhnk et al., 2021). Such steps can lessen expensive failures while retaining the efficiency, innovation, and adaptability gains shown in the significant ai risk management capability coefficient of $\beta = 0.565$.

Support for H2, marked by the largest direct coefficient of $\beta = 0.618$, shows that SMEs should embed internal AI governance without building an overly bureaucratic apparatus. Owners and senior managers must clarify who approves AI applications, validates outputs, authorizes data access, investigates incidents, and stays accountable for AI supported decisions. A cross functional governance group that includes management, IT, operations, risk, and relevant users can examine high impact applications and settle tensions between innovation and control. Governance documents should cover approved use policies, data requirements, model records, decision logs, monitoring schedules, and procedures for questioning automated recommendations. These steps align with the organizational AI governance framework of rules, practices, processes, and capabilities advanced by Mäntymäki et al. (2022). Still, SMEs need to adjust these arrangements according to organizational size and application risk, as inflexible controls might slow experimentation and drain scarce resources. Quarterly governance reviews should therefore check whether controls stay useful, proportionate, and consistent with evolving business goals. This method turns governance from symbolic policy into an adaptive operating system that raises accountability, decision reliability, stakeholder trust, and organizational performance.

The significant moderation outcome for H3, with $B = 0.446$ and a confidence interval from 0.375 to 0.517, suggests that governance investments will yield greater returns when paired with employee AI literacy development. SMEs should begin by assessing employees' capacity to grasp AI principles, apply approved tools, judge output accuracy, identify limitations, and manage privacy, bias, and accountability issues. Training ought then to vary by role. General users require guidance on responsible tool use and output verification, whereas managers need skills in risk based approval, human oversight, and accountability. IT and analytics staff need more advanced preparation in validation, monitoring, security, and documentation. Scenario based exercises that feature inaccurate recommendations, sensitive data, biased outputs, and escalation choices can convert policies into workplace conduct. Firms should also create communities of practice and reporting channels so employees can exchange lessons and challenge AI outputs without fear. Such measures match evidence that AI employee collaboration hinges on skills, knowledge sharing, trust, and role clarity (Chowdhury et al., 2022). Managers should therefore appraise governance maturity and employee literacy together rather than assuming that formal rules implement themselves.

5.4. Limitations

This research contains several limitations. First, its cross sectional design records perceptions at a single moment and thus cannot confirm definite causal or longitudinal links among AI risk management, governance quality, employee literacy, and SME performance. Second, purposive sampling and the sole concentration on Vietnamese SMEs limit the generalizability of the results to other institutional and economic settings. Third, data came from individual respondents via self reported measures, which introduces possible common method bias, social desirability bias, and inaccuracies in organization level evaluations. Fourth, the analysis regarded SMEs as a largely uniform group despite potential differences by industry, size, AI applications, and digital maturity levels. Finally, the study tested employee AI literacy solely as a moderator of the governance performance relationship and did not examine alternative pathways such as mediation, nonlinear effects, or interactions with AI risk management capability.

5.5. Future Research Directions

Future research ought to adopt longitudinal or panel designs to track how AI governance and risk management capabilities develop and whether their performance impacts endure over time. Experimental and mixed method studies could further uncover the processes by which employees convert governance requirements into operational actions. Comparative work across emerging and developed economies would show whether regulatory quality, national culture, digital infrastructure, and competitive intensity modify the proposed relationships. Scholars should examine manufacturing, services, technology, and logistics SMEs independently and perform multigroup comparisons across micro, small, and medium enterprises. Future models might investigate trust in AI, human oversight quality, organizational learning, data governance maturity, and AI adoption intensity as mediators or boundary conditions. Objective performance measures, multiple respondents per organization, and matched managerial and employee data should also be employed to lessen common method bias and reinforce causal as well as organizational level inference.

5.6. Conclusion

This study shows that AI risk management capability and internal AI governance quality significantly raise organizational performance among Vietnamese SMEs, with standardized coefficients of 0.565 and 0.618 respectively. Internal AI governance

AI Governance and SME Performance: The Roles of Governance Quality, Risk Management, And Employee AI Literacy in Vietnam

quality supplies the larger direct contribution, underscoring the value of substantive accountability, oversight, and control arrangements. Employee AI literacy additionally intensifies the governance performance relationship, as indicated by the positive interaction coefficient of 0.446 and its confidence interval from 0.375 to 0.517. Consequently, all three hypotheses receive support. The findings demonstrate that technological adoption by itself is inadequate for extracting organizational value from AI. SMEs obtain stronger results when they manage AI risks systematically, integrate governance responsibilities into daily operations, and prepare employees to assess and apply AI responsibly. The study thus provides an integrated capability based and sociotechnical account of how governance, risk management, and human competence together advance SME performance.

REFERENCES

- 1) Batool, A., Zowghi, D., & Bano, M. (2025). AI governance: A systematic literature review. *AI and Ethics*, 5(3), 3265–3279. <https://doi.org/10.1007/s43681-024-00653-w>
- 2) Berente, N., Gu, B., Recker, J., & Santhanam, R. (2021). Managing artificial intelligence. *MIS Quarterly*, 45(3), 1433–1450. <https://doi.org/10.25300/MISQ/2021/16274>
- 3) Birkstedt, T., Minkinen, M., Tandon, A., & Mäntymäki, M. (2023). AI governance: Themes, knowledge gaps and future agendas. *Internet Research*, 33(7), 133–167. <https://doi.org/10.1108/INTR-01-2022-0042>
- 4) Bryman, A. (2016). *Social research methods*. Oxford University Press.
- 5) Callahan, C., & Soileau, J. (2017). Does enterprise risk management enhance operating performance? *Advances in Accounting*, 37, 122–139. <https://doi.org/10.1016/j.adiac.2017.01.001>
- 6) Chowdhury, S., Budhwar, P., Dey, P. K., Joel-Edgar, S., & Abadie, A. (2022). AI-employee collaboration and business performance: Integrating knowledge-based view, socio-technical systems and organisational socialisation framework. *Journal of Business Research*, 144, 31–49. <https://doi.org/10.1016/j.jbusres.2022.01.069>
- 7) Escob Barragan, K., & Becker, F. S. R. (2025). Keeping pace with the digital transformation—exploring the digital orientation of SMEs: K. Escob Barragan and FSR Becker. *Small Business Economics*, 64(3), 1361–1385. <https://doi.org/10.1007/s11187-024-00947-7>
- 8) Florio, C., & Leoni, G. (2017). Enterprise risk management and firm performance: The Italian case. *The British Accounting Review*, 49(1), 56–74. <https://doi.org/10.1016/j.bar.2016.08.003>
- 9) Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.
- 10) Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). Guilford Press.
- 11) Ilmudeen, A. (2024). IT governance mechanism and IT-enabled dynamic capabilities drives firm performance: An empirical study in Sri Lanka. *Information Development*, 40(1), 3–19. <https://doi.org/10.1177/02666669221074259>
- 12) Jöhnk, J., Weißert, M., & Wyrski, K. (2021). Ready or not, AI comes—An interview study of organizational AI readiness factors: J. Jöhnk et al.: Ready or not, AI comes: An interview study of organizational AI readiness factors. *Business & Information Systems Engineering*, 63(1), 5–20. <https://doi.org/10.1007/s12599-020-00676-7>
- 13) Liu, X., Zhang, L., & Wei, X. (2025). Generative artificial intelligence literacy: Scale development and its effect on job performance. *Behavioral Sciences*, 15(6), 811. <https://doi.org/10.3390/bs15060811>
- 14) Mäntymäki, M., Minkinen, M., Birkstedt, T., & Viljanen, M. (2022). Defining organizational AI governance. *AI and Ethics*, 2(4), 603–609. <https://doi.org/10.1007/s43681-022-00143-x>
- 15) Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management*, 58(3), 103434. <https://doi.org/10.1016/j.im.2021.103434>
- 16) Papagiannidis, E., Mikalef, P., & Conboy, K. (2025). Responsible artificial intelligence governance: A review and research framework. *The Journal of Strategic Information Systems*, 34(2), 101885. <https://doi.org/10.1016/j.jsis.2024.101885>
- 17) Pinski, M., Hofmann, T., & Benlian, A. (2024). AI literacy for the top management: An upper echelons perspective on corporate AI orientation and implementation ability. *Electronic Markets*, 34(1), 24. <https://doi.org/10.1007/s12525-024-00707-1>
- 18) Santos, J. B., & Brito, L. A. L. (2012). Toward a subjective measurement model for firm performance. *BAR-Brazilian Administration Review*, 9(spe), 95–117. <https://doi.org/10.1590/S1807-76922012000500007>
- 19) Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (7th ed.). Pearson Education.
- 20) Schneider, J., Abraham, R., Meske, C., & Vom Brocke, J. (2023). Artificial intelligence governance for businesses. *Information Systems Management*, 40(3), 229–249. <https://doi.org/10.1080/10580530.2022.2085825>

- 21) Schwaewe, J., Peters, A., Kanbach, D. K., Kraus, S., & Jones, P. (2025). The new normal: The status quo of AI adoption in SMEs. *Journal of Small Business Management*, 63(3), 1297–1331. <https://doi.org/10.1080/00472778.2024.2379999>
- 22) Shrestha, N. (2020). Detecting multicollinearity in regression analysis. *American Journal of Applied Mathematics and Statistics*, 8(2), 39–42. <https://doi.org/10.12691/ajams-8-2-1>
- 23) Steinhäuser, S., & Heid, P. (2026). Organizational readiness, AI literacy, and the new frontier of R&D: How generative AI shapes innovation capacity. *R&D Management*. <https://doi.org/10.1111/radm.70038>
- 24) Syrová, L., & Špička, J. (2023). Exploring the indirect links between enterprise risk management and the financial performance of SMEs: L. Syrová, J. Špička. *Risk Management*, 25(1), 1. <https://doi.org/10.1057/s41283-022-00107-9>
- 25) Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- 26) Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40–49. <https://doi.org/10.1016/j.lrp.2017.06.007>
- 27) Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z)
- 28) Trist, E. L., & Bamforth, K. W. (1951). Some social and psychological consequences of the longwall method of coal-getting: An examination of the psychological situation and defences of a work group in relation to the social structure and technological content of the work system. *Human Relations*, 4(1), 3–38. <https://doi.org/10.1177/001872675100400101>
- 29) Walsh, J., Nguyen, T. Q., & Hoang, T. (2023). Digital transformation in Vietnamese SMEs: Managerial implications. *Journal of Internet and Digital Economics*, 3(1–2), 18–32. <https://doi.org/10.1108/JIDE-09-2022-0018>
- 30) Xia, H., Chen, H., Zhang, J. Z., & Kamal, M. M. (2026). Exploring the impact of responsible AI governance on corporate performance: A quasi-natural experiment. *Technological Forecasting and Social Change*, 223, 124425. <https://doi.org/10.1016/j.techfore.2025.124425>
- 31) Xiong, M., Xu, H., Ji, J., Zuo, R., Wang, Y., & Olya, H. (2026). Responsible artificial intelligence attention and firm innovation: An attention-based view. *Journal of Product Innovation Management*, 43(1), 186–214. <https://doi.org/10.1111/jpim.70015>
- 32) Yang, F., Shinkle, G. A., & Goudsmit, M. (2022). The complementarity of control formalization and control flexibility: The contingent effects of competitive turbulence. *Australian Journal of Management*, 47(4), 773–792. <https://doi.org/10.1177/03128962211067648>
- 33) Yang, S., Ishtiaq, M., & Anwar, M. (2018). Enterprise risk management practices and firm performance, the mediating role of competitive advantage and the moderating role of financial literacy. *Journal of Risk and Financial Management*, 11(3), 35. <https://doi.org/10.3390/jrfm11030035>



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.