# The Mediating Role of Intellectual Capital in the Influence of Organizational Culture, Risk Management, Financial Restructuring on the Business Performance of Construction Companies in Indonesia

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## Abstract

This study investigates the effects of organizational culture, financial restructuring, and risk management on corporate performance, with intellectual capital serving as a mediating variable, within Indonesian construction firms. A quantitative research design was adopted, and data were analyzed using SmartPLS 3. The study sample comprised 281 respondents selected through purposive sampling from eight established construction companies in Indonesia, each with a minimum of five years of operational experience. The sample size was determined using Slovin's formula.

The empirical results reveal that organizational culture ($X_1$) exerts a positive and statistically significant influence on intellectual capital (Z) ($p < 0.001$). Similarly, risk management ($X_2$) demonstrates a significant effect on intellectual capital ($p = 0.039$). In contrast, financial restructuring ($X_3$) does not exhibit a significant relationship with intellectual capital ($p = 0.228$). With respect to corporate performance (Y), organizational culture shows an insignificant direct effect ($p = 0.073$), whereas risk management has a significant positive impact ($p = 0.049$). Furthermore, financial restructuring does not significantly affect corporate performance through intellectual capital ($p = 0.230$). Intellectual capital, however, is found to have a strong and significant positive effect on corporate performance ($p < 0.001$).

This study contributes to the theoretical literature by incorporating intellectual capital into an integrated framework that explains how organizational culture and risk management influence corporate performance in the construction sector. The findings underscore the pivotal mediating role of intellectual capital in strengthening performance outcomes within construction firms.

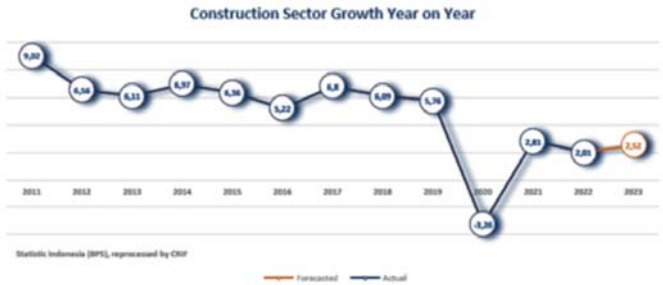
**Keyword:** Organizational Culture; Risk Management; Financial Restructuring; Intellectual Capital; Corporate Performance

## Introduction

The construction industry is a critical driver of economic growth worldwide, often contributing on the order of 10–15% of GDP in many regions. In emerging economies like Indonesia, construction is regarded as an "engine of growth" (Nursjanti, 2019). In fact, Indonesia's construction sector has grown faster than the overall economy (about 6.8% vs. 5.4% annual GDP growth), underscoring its large share in output and employment. High and sustained business performance in construction is therefore vital – not just financially, but also in terms of quality, safety and innovation. Firm performance in construction is multifaceted and dynamic; scholars note that relying on financial metrics alone is incomplete (Osman et al., 2023a). Effective performance measurement must also reflect operational efficiency, project outcomes and stakeholder value.

Organizational culture, risk management and financial restructuring are each seen as key antecedents to firm performance. A positive, performance-oriented culture – for example emphasizing teamwork, innovation or market-driven goals – helps align employees with firm objectives and can boost efficiency and quality in construction projects (Osman et al., 2023a). Indeed, studies find that construction companies with a strong "performance" culture tend to achieve better project outcomes (Putra et al., 2024). Likewise, robust risk management is essential in construction's uncertain environment. Projects that adopt systematic risk practices (identifying, assessing and mitigating delays, cost overruns, supply issues, etc.) tend to meet schedules, quality targets and budgets more reliably (Alshehhi et al., 2021). Scholars emphasize that understanding the link between risk management and project success is crucial for improving firm-level results (Hai, 2023). Financial restructuring – such as recapitalizing, reorganizing debts or cutting non-core costs – often becomes necessary when firms face distress. Research indicates that restructuring actions can have complex effects: they may reduce losses and restore viability, but also entail costs and tradeoffs in organizational efficiency (Aikpokhio et al., 2024). In short, culture, risk practices and financial structure all shape how well a construction firm performs in challenging markets

**Figure 1| Construction sector growth in Indonesia (2011-2023)**




*Source: (https://www.id.crifasia.com).*

Central to these processes is intellectual capital – the firm's bundle of knowledge-based resources (human expertise, organizational processes and external relationships) (Li et al., 2019). Under the Resource-Based View and Knowledge-Based View, intellectual capital is a strategic, intangible asset that underpins competitive advantage (Saleh et al., 2024). Firms rich in intellectual capital tend to be more innovative and adaptable: they leverage employee skills, efficient processes and stakeholder networks to create value (Li et al., 2019). In construction, for example, higher intellectual capital can improve knowledge sharing and innovation in project management, leading to better performance outcomes. In this way, intellectual capital potentially mediates the effects of organizational culture, risk management and restructuring on business results..

**Table 1| Research Gap Mapping**

| Aspect | Finding from previous studies | Research Gap | Position of the Current Study | Theoretical Implication |
|---|---|---|---|---|
| **Organizational Culture and Firm Performance** | Organizational culture has been shown to influence performance, innovation, and HR behavior (Rani & Indrayanti, 2020; Nurmiati et al., 2022; Osman et al., 2023). | Prior studies have rarely examined the effect of organizational culture in the national private construction sector, particularly in relation to strengthening risk and financial management. | This study positions organizational culture as a key exogenous variable that affects performance through intellectual capital. | Reinforces the Resource-Based View (RBV) that organizational culture is a strategic internal resource capable of enhancing knowledge capabilities and performance. |

| Aspect | Finding from previous studies | Research Gap | Position of the Current Study | Theoretical Implication |
|---|---|---|---|---|
| **Risk Management and Performance** | Effective risk management can control costs and improve project performance (Alshehhi et al., 2021; Purwanti & Heriana, 2024). | Limited studies explore how risk management practices contribute to forming intellectual capital, ultimately improving construction firm performance. | This research examines the role of risk management as a strategic variable that strengthens intellectual capital and firm performance. | Extends the Knowledge-Based View (KBV) by asserting that risk experience and documentation are part of the accumulation of organizational structural capital. |
| **Financial Restructuring and Performance** | Financial restructuring improves liquidity and profitability (Mavlutova et al., 2021; Fang, 2024; Bhagas & Naim, 2024). | Very few empirical studies in national private construction firms link financial restructuring with knowledge management and organizational culture. | This study tests the effect of financial restructuring on performance with intellectual capital as a mediating variable. | Expands strategic financial management theory by adding the dimension of intangible knowledge assets as a bridge between financial decisions and performance outcomes. |
| **Intellectual Capital and Performance** | Intellectual capital influences innovation and competitiveness (Inkinen, 2018; Wijayani et al., 2019; Duodu & Rowlinson, 2021). | Most studies position intellectual capital as an independent or moderating variable, not as a mediator. | This study places intellectual capital as the primary mediating (intervening) variable between culture, risk, and restructuring toward performance. | Expands KBV and RBV by explaining how intellectual capital acts as a conversion mechanism that transforms intangible resources into superior performance. |
| **Integration of Strategic Variables (Culture, Risk, Restructuring, IC, Performance)** | Prior studies are partial—testing only two or three variables separately (Hashim et al., 2022; Purwanti & Heriana, 2024). | No integrative model combines organizational culture, risk management, and financial restructuring simultaneously with intellectual capital as a mediator. | This research develops a comprehensive conceptual model integrating the three exogenous variables with intellectual capital as the linking mechanism toward performance. | Offers a new conceptual framework explaining multidimensional relationships among strategic managerial variables in the construction sector. |
| **Industry Context and Empirical Scope** | Many studies were conducted abroad or in non-construction sectors (Xu et al., 2019; Kanchana & Mohan, 2017). | Limited research in Indonesia's construction sector, despite its large GDP contribution and high exposure to risks. | This research focuses on national construction companies in Indonesia amid fluctuating conditions and financial pressure. | Enhances local empirical literature and expands the validity of RBV–KBV theories within developing-country and high-risk industry contexts. |
| **Theoretical and Practical Approaches** | Earlier studies tend to be correlational and do not explain organizational learning and knowledge mechanisms. | Lack of knowledge-integration-based theoretical approaches that connect culture, risk, and financial decision-making. | This study integrates RBV and KBV as the conceptual foundation for explaining how intangible assets (knowledge, culture, systems) generate competitive advantage. | Produces a new theoretical contribution in the form of an RBV–KBV hybrid model, positioning intellectual capital as a strategic bridge between management practices and the performance of construction firms. |

*Source: data processed by researchers (2025)*

Despite these insights, empirical studies have largely examined these drivers in isolation. There is a notable gap in the literature on how culture, risk and financial strategies jointly influence performance through knowledge assets – especially in construction firms in emerging economies. For instance, few studies have tested whether intellectual capital serves as the critical link between internal capabilities and performance in construction (Duodu &

Rowlinson, 2021). As construction drives economic and social development, filling this gap is important. The present study therefore investigates how organizational culture, risk management and financial restructuring together affect Indonesian construction firms' performance, and whether intellectual capital mediates these effects. By combining global theory and evidence with the Indonesian industry context, this work aims to advance understanding of performance drivers in construction.

## Literature Review and Hypotheses Development

### Literature review

#### *Organizational Culture*

In the construction sector, organizational culture represents the shared values, beliefs, and behavioral norms among project participants—such as contractors, clients, and site workers—that influence how projects are executed. Research shows that specific cultural dimensions, like goal alignment, cooperative orientation, contractor commitment, worker orientation, and empowerment, strongly affect project performance outcomes, including productivity, knowledge sharing, and participant satisfaction (Nguyen & Watanabe, 2017).

A recent study by Osman, Liu, and Wang (2023) found that clan, adhocracy, and market cultures positively influence construction firm performance through innovation and marketing capabilities (Osman et al., 2023). Meanwhile, empirical research from 451 construction professionals demonstrated that clan culture has especially strong positive effects on project performance, partly mediated by organizational citizenship behavior (Nguyen & Watanabe, 2018).

In the Indonesian context, organizational culture in large construction firms has also been mapped using the Competing Values Framework (CVF) and OCAI (Organizational Culture Assessment Instrument) (Putra et al., 2024). This cultural insight suggests that companies increasingly view culture not just as a "soft" value but as a vital management lever to drive productivity, innovation, and stakeholder relationships. Ultimately, a well-developed organizational culture in construction can both mitigate risk and enhance performance by fostering commitment, shared purpose, and continuous learning.

*Risk Management*

Research on risk management in the construction sector has evolved significantly over time. Kafidipe et al. (2021) proposed a knowledge-based risk management methodology that integrates practical experience, formal modeling, and knowledge-capture techniques to improve project risk handling. Szymański (2017) provided a broad analysis of construction project risks, stressing the ubiquitous nature of risk and the imperative for structured risk management. Shatnawi et al. (2020) traced global risk management research, identifying emerging themes and research gaps.

Foundational work by Akintoye and MacLeod (1997) remains influential: they conducted risk analysis around cost, time, and quality, highlighting the importance of experience-based judgment in construction risk assessment. More recent advances involve intelligent risk management (Aikpokhio et al., 2024) and decision-support systems in construction risk. Similarly, Abdullah et al. (2020) analyzed the role of machine learning, natural language processing, and knowledge-based reasoning in predictive risk modeling, while also noting challenges like data quality and explainability.

From a methodological standpoint, Hai (2023) offered a taxonomy of risk-management techniques for construction projects, helping practitioners choose appropriate tools based on risk type. In a practical application, Kumar & Subramanian (2021) demonstrated a case-based reasoning (CBR) tool in large-scale construction projects to manage recurring risks by leveraging past project cases. Meanwhile, Osei-Kyei and Chan (2022) performed a scientometric analysis of over 1,600 publications on construction risk management, mapping key research trends, analytic techniques, and emergent themes

#### *Financial Restructuring*

In recent research, Wibowo et al. (2024) analyze financial risk, debt, and efficiency in Indonesia's construction industry, comparing SOEs and private firms. Their study shows that many state-owned construction companies face

critical liquidity, high leverage, and poor profitability, and recommends debt restructuring, capital infusions, and divestments as recovery measures.

Another practical insight comes from PwC (2024), reporting that Indonesian SOEs such as Waskita Karya and WIKA have undertaken massive debt restructuring deals with banks and bondholders to stabilize their cash flows and sustain operations.

Despite the importance of restructuring in construction, academic literature is surprisingly sparse. For example, the determinants of capital structure for Indonesian companies undergoing debt restructuring have been studied (Tjahjono et al., 2023), but not specifically in construction firms.

There is also work on broader corporate restructuring that could offer theoretical insights: Xue & Chang (2024) examine debt restructuring's impact on financial performance and risk control, though not limited to construction.

***Intellectual Capital***

In the construction industry, intellectual capital (IC) — composed of human capital (skills, expertise), structural capital (processes, systems), and relational capital (networks, partnerships) — is increasingly recognized as a critical strategic asset. Li et al. (2019) show that in Chinese construction firms, IC has a direct positive impact on innovation performance, and this effect is partly mediated through knowledge sharing. A case study by Sucena et al. (2022) on Portuguese construction companies found that managing IC contributes significantly to firm performance: by investing in employee competencies (human), codifying that into structural capital, and leveraging relationships, firms can sustain competitive advantage without losing accumulated knowledge.

Strategic partnerships also play an important role, Sucena et al. (2022) demonstrates that IC together with strategic alliances strengthens innovation, operational efficiency, and competitiveness in construction companies. In the empirical side in Indonesia, Rosa et al. (2022) report that IC positively affects financial performance (ROA, ROE) in property, real estate, and construction firms listed on the Jakarta Stock Exchange, although the effect on market value is less consistent. Another study by Walidain & Ardian (2024) analyzed IC using the VAIC (Value Added Intellectual Coefficient) method in building-construction companies and found that components of IC (especially structural and employed capital) significantly influence financial distress levels.

Furthermore, a study Ali et al. (2021)found a strong empirical link between IC and organizational performance, supporting the idea that SMEs in construction can leverage intangible resources to overcome limitations in scale and capital investment. The literature suggests that intellectual capital in construction not only fuels innovation, but also serves as a resilience mechanism: firms that successfully accumulate and manage IC can better adapt to market competition, improve efficiency, and maintain long-term performance. This aligns with the knowledge-based view (KBV) of the firm, where knowledge assets are seen as scarce, valuable, and difficult to replicate, making them a key source of sustainable competitive advantage.

***Corporate Performance***

Corporate performance in the construction industry is often measured through financial indicators such as profitability, return on assets (ROA), liquidity, and solvency. In Indonesia, for example, a case study of 32 publicly-listed construction and real estate firms found that higher business risk (measured by operating leverage) positively impacts ROA, whereas reliance on debt (capital structure) negatively affects performance (Sutrisno & Yulia, 2022). Meanwhile, studies have linked increased technology investment and trade credit with improved performance in Indonesian construction companies—highlighting that financial flexibility and innovation can help firms navigate intense competition (Wildan et al., 2025). In South Africa, contractor firms with strong financial foundations (e.g., high turnover, liquidity, capital) show significantly better financial health, suggesting scale and financial management matter greatly in construction performance (Omopariola et al., 2021).

More advanced multi-criteria evaluation methods—such as an integrated entropy–fuzzy VIKOR model—have been employed in Malaysia to assess construction firm performance, providing a structured way to compare firms

on complex financial ratios under uncertainty (Lam et al., 2021). At the same time, in the Indonesian market, construction SOEs (state-owned enterprises) report mixed results: while some firms like Adhi Karya logged solid revenue growth and improved profitability in recent periods, others (e.g., Waskita Karya and Wijaya Karya) continued to struggle with heavy losses due to high debt and cost pressures. (www.PwC.com) These studies collectively suggest that corporate performance in construction is driven by a mix of financial structure, innovation capacity, and risk management, and that performance varies widely across firms depending on size, governance, and market positioning.

***Hypothesis development***

Implication of Organizational Culture, Risk Management, and Financial Restructuring on Intellectual Capital

The influence of organizational culture on intellectual capital (IC) has been well-documented. (Amalia & Holgado, 2006), for example, argue that cultural capital should be considered an integral dimension of IC itself: in their "Intellectus" model, a firm's culture interacts with human, structural, and relational capital, embedding knowledge deeply in organizational practices. Similarly, Rumanti et al. (2019) found that innovation and risk-taking, results orientation, and team orientation (as elements of organizational culture) positively influence all dimensions of IC — human capital, structural capital, and relational capital. These findings imply that cultivating a supportive, innovation-oriented culture can build the firm's knowledge base and resilience.

From a risk management perspective, intellectual capital also plays a mediating or buffering role. Research into financial distress and IC demonstrates that firms with higher IC are less susceptible to financial distress. Setowening & Djuminah (2024) show that greater human capital efficiency (HCE) and capital-employed efficiency (CEE) reduces the risk of distress. This suggests that strong IC systems can absorb shocks, helping firms stabilize in times of crisis. In practice, this means that risk management practices (e.g., documenting lessons learned, sharing risk-related knowledge) contribute to building structural capital, thereby reinforcing the firm's capacity to deal with future volatility.

Financial restructuring, such as changes in capital structure or recapitalizations, also has important implications for IC. While fewer studies examine this directly, related research in financial sectors shows how IC interacts with capital structure to affect firm value. For example, a study found that intellectual capital positively influences firm value even when controlling for free cash flow and capital structure, implying that firms undergoing restructuring can preserve or even grow their IC to maintain competitive advantage (Surya, 2023). Meanwhile, research on IC's role in financial distress across developed and developing countries (Pradana & Chalid, 2023) underscores the value of CEE and HCE in protecting value during restructuring or financial hardship.

Moreover, aligning these ideas with the Knowledge-Based View (KBV) of the firm helps explain why IC is so critical: under KBV, knowledge-based resources (like IC) are strategically valuable, rare, and hard to imitate, and they provide firms with sustainable advantage. Managers who focus on building a strong culture, integrating risk knowledge, and protecting IC during restructuring are essentially safeguarding their firm's most enduring assets. By doing so, they elevate IC from merely a passive intangible to a proactive driver of long-term resilience and innovation.

**H1:** Organizational Culture significanltly impact on Intellectual Capital

**H2:** Risk Management significantly impact on Intellectual Capital

**H3:** Financial Restructure significantly impact on Intellectual Capital

***Implication of Organizational Culture, Risk Management, and Financial Restructuring on Corporate Performance***

Risk management culture has increasingly become a central focus in managerial research due to its critical role in strengthening organizational performance. Bockius & Gatzert (2024) hrough a structured literature review of 83 academic articles, found that risk culture is essential for

supporting the enterprise risk management framework because it aligns employee behavior with the organization's risk tolerance. Furthermore, Anton et al. (2025) demonstrated that the integration of risk management with sustainable business practices is positively correlated with long-term financial performance, indicating that a mature risk management culture enhances financial flexibility and overall firm value.

In the context of financial restructuring, Vo & Huynh (2023) examined corporate restructuring in Vietnam and found that financial restructuring initiatives—such as debt refinancing—improve liquidity and reduce financial distress, thereby contributing to better corporate performance. This study highlights that restructuring is not merely a reactive recovery measure but can also serve as a proactive strategy to enhance competitiveness. Audi et al. (2022) emphasized that financial restructuring is often chosen by underperforming firms as a strategic response, and that ownership structure, corporate governance, and creditor involvement play decisive roles in determining the type of restructuring undertaken.

Within the domain of corporate governance and risk management, Kafidipe et al. (2021) examined listed banks and found that corporate governance is positively associated with risk management practices and financial performance, suggesting that risk management and governance structures must be well-aligned to achieve optimal outcomes. Additionally, risk governance infrastructure—such as oversight mechanisms—occupies a crucial position. Fauziah et al. (2025) reported that although risk management practices are positively related to performance, formal risk governance mechanisms (e.g., risk committees) do not consistently exert a direct impact on financial performance, indicating that risk management alone is insufficient without supporting structural systems.

Sindakis et al. (2024) argued that organizational culture and leadership significantly influence firm performance because strong cultures support the adoption of strategic initiatives and innovations that enhance operational efficiency and corporate value. However, several studies also highlight the complexities and potential trade-offs involved. For instance, Afrizal et al. (2025) found that a larger risk management committee can improve firm performance, yet this relationship is weakened by political connections, illustrating how external contextual factors shape the effectiveness of risk management within corporate restructuring processes.

**H4:** Organizational Culture significantly impacts on Corporate Performance

**H5:** Risk Management Significantly impacts on Corporate Performance

**H6:** Financial Restructuring significantly impacts on Corporate Performance

### *Implication of Intellectual Capital on Company Performance*

Intellectual capital, which includes employees' knowledge, skills, and expertise, as well as intangible assets like patents, trademarks, and brand reputation, can significantly impact company performance (Anyika, 2020). It is increasingly recognized as a key driver of competitive advantage and value creation in today's knowledge-based economy (Khan, 2018). A skilled, knowledgeable, and motivated workforce can drive innovation and help a company develop new products, services, and processes that meet customer needs and stand out from competitors (Shao, 2023). This can boost market share, revenue growth, and profitability. Intellectual capital also plays an important role in improving operational efficiency and effectiveness (Halid et al., 2018).

Intellectual capital (IC) — encompassing human capital, structural capital, relational capital, and other intangible assets — exerts a significant influence on firm performance by enhancing innovation, efficiency, and value creation. Priyanto et al. (2024) investigated consumer-goods companies listed on the Indonesia Stock Exchange using the VAIC (Value-Added Intellectual Coefficient) model and found that IC positively and significantly improves both profitability and firm value. Similarly, a study in the property and real estate sector demonstrated that intellectual capital has a direct, positive effect on firm value, suggesting that effective management of knowledge-based resources can enhance market valuation (Ali et al., 2021).

Research in the ASEAN region further illustrates IC's strategic importance. In a panel of non-financial firms from ASEAN countries, Pratama et al. (2019) show that IC positively impacts financial performance, and that R&D intensity strengthens this effect — implying that investment in knowledge generation and human expertise amplifies IC's contribution to performance. Another complex-systems study by Gao et al. (2024) finds that intellectual capital components, when combined with high board diversity, lead to improved financial performance — especially human capital efficiency — indicating that good corporate governance enhances IC's value-creating role.

Meta-analytical evidence also supports IC's performance implications. A systematic "state of the art" review by Jikhan et al. (2023) synthesizes numerous empirical studies and concludes that human, structural, and relational capital consistently drive firm performance, often through mediating mechanisms such as knowledge integration or innovation. Moreover, empirical findings from Surya (2023) suggest that IC improves firm value indirectly via its impact on financial performance. This cascade effect underscores how IC enhances performance not only through direct value creation but also by bolstering financial metrics that investors care about.

**H7:** Intellectual Capital Significantly impact on Company Performance

***Intellectual Capital Mediates Organizational Culture, Risk Management, and Financial Restructuring on Corporate Performance***

Intellectual capital functions as a mediator between organizational culture and company performance. Research indicates that enhancing intellectual capital can strengthen the positive impact of organizational culture on performance (Reza & Silalahi, 2021). In the context of sustainability-focused companies, as shown in studies on green organizational culture, green intellectual capital can boost innovation and operational efficiency, thereby contributing to overall company performance (Sustrastanti & Rachmawati, 2023).

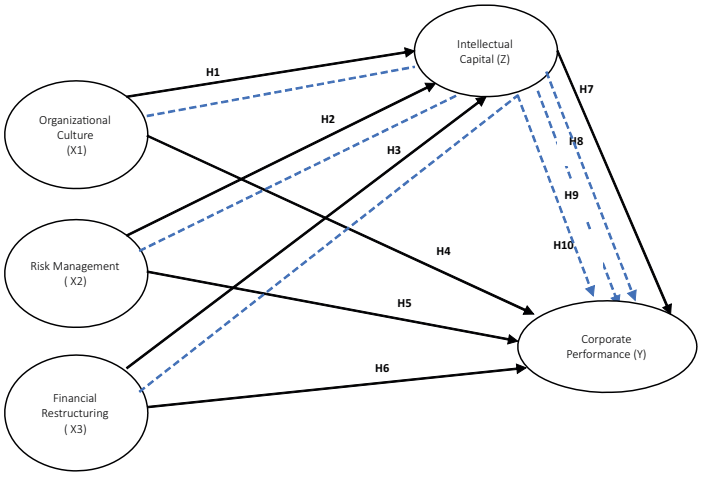
Research by Ardina & Novita (2023) shows that the disclosure of risk management and intellectual capital has a significant positive effect on company performance, measured by Return on Equity (ROE). This indicates that companies that actively manage risks and leverage their intellectual assets can achieve better financial performance. A study by Indawati et al. (2024) found that risk management directly affects sustainability performance, although intellectual capital is not always significant in all models.

**H8:** Intellectual Capital significantly mediates Organizational Culture on Corporate Performance

**H9:** Intellectual Capital significantly mediates Risk Management on Corporate Performance

**H10:** Intellectual Capital significantly mediates Financial Restructure on Corporate Performance

**Figure 2| Conceptual Framework**




## Research Method

### Research Design

The study employs a quantitative design, with the unit of analysis being individual permanent employees — comprising supervisors and managers — from eight construction companies in Indonesia. Data were collected using a cross-sectional approach via questionnaire, and hypotheses were tested using PLS-SEM. Sampling occurred between June and August 2025. This research provides a "snapshot" of the current state, characteristics, or prevalence of the phenomenon within the population at a particular point in time, without longitudinal observation or tracking of variable changes over time.

**Population and Sampling**

The population in this study comprises 950 individuals from 8 (eight) construction companies in Indonesia, including permanent employees, staff, and managers. All participants have at least two years of work experience in their respective fields.

In this study, the sampling technique employed by the researcher is non-probability sampling, in which not all members of the population have an equal chance of being selected. Specifically, the study uses purposive sampling, based on the researcher's particular objectives and considerations. The sample size was determined using Slovin's formula, resulting in 281 respondents drawn from eight reputable construction companies (both private and state-owned).

**Data Collection**

The data collection process in this study incorporated both primary and secondary sources to ensure a comprehensive and multi-faceted understanding of the phenomena under investigation. For primary data, a structured questionnaire was distributed to participants in eight reputable construction companies in Indonesia. These questionnaires targeted permanent staff, supervisors, and managers, enabling the collection of perceptual and attitudinal data directly from key organizational actors. Utilizing a questionnaire allows the researcher to systematically measure variables such as organizational culture, risk-management practices, restructuring experiences, and intellectual capital, while enabling statistical testing of hypotheses via PLS-SEM.

In addition to survey data, the study incorporates secondary data by gathering corporate records, company reports, and internal documents. These sources provide objective, historical, and contextual information on financial performance, restructuring transactions, and organizational structure. By combining primary perceptions with secondary archival data, the research design leverages methodological triangulation, thereby enhancing the validity and reliability of the findings. This dual-data strategy allows for robust testing of how intangible constructs (like intellectual capital) mediate the relationship between culture, risk practices, and restructuring within firms.

**Data Analysis**

This study applied a rigorous PLS-SEM (Partial Least Squares–Structural Equation Modeling) approach. First, validity testing was conducted: convergent validity was evaluated using outer loadings (standardized loading factors), where ideal values are $\geqslant 0.70$, though loadings between 0.50–0.70 may be acceptable in exploratory research (Russo & Stol, 2022). Indicators with loadings below 0.50 should be considered for removal to preserve model quality (Rasoolimanesh & Ali, 2018). Average Variance Extracted (AVE) was also used, with a threshold of $\geqslant 0.50$ indicating adequate convergent validity. For discriminant validity, both the Fornell–Larcker criterion (i.e., the square root of each construct's AVE must exceed its correlations with other constructs) and the HTMT (Heterotrait-Monotrait) ratio (target $\leqslant 0.90$) were applied (J. Hair & Alamer, 2022; Henseler et al., 2015).

Next, reliability was assessed. Internal consistency reliability relied on Cronbach's alpha, where values $\geqslant 0.60$ were deemed acceptable, and on Composite Reliability (CR), which should ideally be $\geqslant 0.70$ (Hair et al. (2021). In PLS-SEM, construct reliability is supported when CR falls within the 0.70–0.95 range. Model fit was also evaluated using the Standardized Root Mean Square Residual (SRMR), with acceptable values considered below 0.10 (or more conservatively $< 0.08$) (Henseler et al., 2015; SmartPLS documentation). Normed Fit Index (NFI) and bootstrap-based criteria (d_ULS, d_G) were also used to assess overall model fit. Finally, for hypothesis testing, the structural model was analyzed via PLS-SEM in SmartPLS software. Decision rules for hypothesis acceptance were set as follows: if p-value $\leqslant 0.10$, the null hypothesis ($H_0$) is rejected (i.e., alternative hypothesis supported); if p-value $> 0.10$, the null hypothesis is not rejected.

## Results And Discussion

**Table 2| Respondent Demographic**

| Factor | Category | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | Male | 231 | 82.2 |
| | Female | 50 | 17.8 |
| | Total | 281 | 100.0 |
| Age | 20–30 years | 12 | 4.2 |
| | >30–40 years | 166 | 59.0 |
| | >40–50 years | 92 | 32.7 |
| | >50 years | 11 | 4.1 |
| | Total | 281 | 100.0 |
| Education | Bachelor's Degree (S1) | 219 | 78.0 |
| | Master's Degree (S2) | 62 | 22.0 |
| | Doctorate/PhD (S3) | 0 | 0.0 |
| | Total | 281 | 100.0 |
| Years of Work Experience | 3 years | 20 | 7.1 |
| | 4 years | 43 | 15.3 |
| | 5 years | 32 | 11.4 |
| | >5 years | 186 | 66.2 |
| | Total | 281 | 100.0 |
| Position | Staff | 106 | 37.8 |
| | Leader/Supervisor | 127 | 45.2 |
| | Manager | 48 | 17.0 |
| | Total | 281 | 100.0 |

*Source: Researchers (2025)*

Table 2 shows that the respondent profile is predominantly male (82.2%), consistent with the gender composition commonly observed in Indonesia's construction industry. The majority fall within the 31–40 age range (59.0%), indicating a concentration of mid-career professionals in their peak productive years. Regarding educational attainment, 78.0% hold a Bachelor's degree and 22.0% a Master's degree, reflecting a generally well-qualified workforce. Moreover, 66.2% report more than five years of professional experience, suggesting substantial familiarity with industry practices. In terms of organizational roles, leaders or supervisors constitute the largest group (45.2%), followed by staff members (37.8%) and managers (17.0%), indicating a reasonably balanced representation across hierarchical positions.

**Table 3| Reflective measurement model**

| Construct | Indicator | Outer Loading | Cronbach's α | Composite Reliability (CR) | AVE |
|---|---|---|---|---|---|
| **Organizational Culture** | OC1 | 0.812 | 0.966 | 0.962 | 0.707 |
| | OC2 | 0.902 | | | |
| | OC3 | 0.933 | | | |
| | OC4 | 0.724 | | | |
| | OC5 | 0.806 | | | |
| | OC6 | 0.722 | | | |
| | OC7 | 0.906 | | | |
| | OC8 | 0.915 | | | |
| | OC9 | 0.855 | | | |
| | OC10 | 0.823 | | | |
| | OC11 | 0.822 | | | |
| | OC12 | 0.841 | | | |

| Construct | Indicator | Outer Loading | Cronbach's α | Composite Reliability (CR) | AVE |
|---|---|---|---|---|---|
| **Risk Management** | RM1 | 0.910 | 0.981 | 0.983 | 0.853 |
| | RM2 | 0.936 | | | |
| | RM3 | 0.800 | | | |
| | RM4 | 0.901 | | | |
| | RM5 | 0.907 | | | |
| | RM6 | 0.930 | | | |
| | RM7 | 0.895 | | | |
| | RM8 | 0.926 | | | |
| | RM9 | 0.928 | | | |
| | RM10 | 0.883 | | | |
| | RM11 | 0.872 | | | |
| | RM12 | 0.854 | | | |
| | RM13 | 0.887 | | | |
| | RM14 | 0.896 | | | |
| **Financial Restructuring** | FR1 | 0.946 | 0.988 | 0.986 | 0.853 |
| | FR2 | 0.925 | | | |
| | FR3 | 0.909 | | | |
| | FR4 | 0.943 | | | |
| | FR5 | 0.928 | | | |
| | FR6 | 0.958 | | | |
| | FR7 | 0.919 | | | |
| | FR8 | 0.931 | | | |
| | FR9 | 0.732 | | | |
| | FR10 | 0.940 | | | |
| | FR11 | 0.952 | | | |
| | FR12 | 0.920 | | | |
| | FR13 | 0.956 | | | |
| | FR14 | 0.952 | | | |
| **Intellectual Capital** | IC1 | 0.907 | 0.975 | 0.978 | 0.834 |
| | IC2 | 0.916 | | | |
| | IC3 | 0.912 | | | |
| | IC4 | 0.902 | | | |
| | IC5 | 0.917 | | | |
| | IC6 | 0.896 | | | |
| | IC7 | 0.924 | | | |
| | IC8 | 0.937 | | | |
| | IC9 | 0.910 | | | |
| **Company Performance** | CP1 | 0.919 | 0.969 | 0.976 | 0.889 |
| | CP2 | 0.920 | | | |
| | CP3 | 0.939 | | | |
| | CP4 | 0.907 | | | |

Source: Output of SmartPLS 3.0

All outer loading values exceed the recommended threshold of 0.70, demonstrating strong item reliability and confirming that each manifest variable effectively reflects its respective latent construct. Specifically, the outer loadings for Organizational Culture range from 0.722 to 0.933; for Risk Management from 0.800 to 0.936; for Intellectual Capital from 0.896 to 0.937; and for Company Performance from 0.901 to 0.939. These values provide compelling evidence that all indicators possess sufficient explanatory power and meet the reliability criteria suggested by Hair (2021).

Cronbach's alpha coefficients for the four constructs, which range between 0.966 and 0.981, far exceed the conventional minimum threshold of 0.70. This indicates a very high degree of internal consistency among the indicators within each construct. Consistent with this, the Composite Reliability (CR) values—ranging from 0.962 to 0.983—further support the conclusion that the constructs exhibit robust reliability and internal homogeneity.

In addition, the Average Variance Extracted (AVE) values for all constructs surpass the threshold of 0.50, with Organizational Culture at 0.707, Risk Management at 0.853, Intellectual Capital at 0.834, and Company Performance at 0.889. These results demonstrate strong convergent validity, indicating that each construct accounts for more than half of the variance in its observed indicators.

Collectively, these measurement model results confirm that all constructs demonstrate excellent psychometric properties, including high reliability and strong convergent validity. Consequently, the model is empirically well-founded and suitable for advancing to structural model evaluation.

**Table 4| Discriminant Validity Fornell-Larcker Criterion**

| | Financial Restructure (X3) | Intellectual Capital (Z) | Organizational Culture (X1) | Corporate Performance (Y) | Risk Management (X2) |
|---|---|---|---|---|---|
| Financial Restructure (X3) | 0.943 | | | | |
| Intellectual Capital (Z) | 0.884 | 0.913 | | | |
| Organizational Culture (X1) | 0.823 | 0.824 | 0.840 | | |
| Performance (Y) | 0.813 | 0.811 | 0.834 | 0.850 | |
| Risk Management (X2) | 0.825 | 0.706 | 0.938 | 0.850 | 0.895 |

*Source: Output of Smart-PLS 3.0*

The Fornell–Larcker criterion results presented in Table 4 demonstrate that discriminant validity is satisfactorily established across all constructs in the model. For each construct, the square root of the Average Variance Extracted (AVE), shown on the diagonal, is higher than its correlations with any other construct in the corresponding row and column. This indicates that each construct shares more variance with its own indicators than with those of other constructs, fulfilling the Fornell–Larcker requirement. Financial Restructure exhibits a square root of AVE of 0.943, which exceeds its correlations with all other constructs, including Intellectual Capital (0.884), Organizational Culture (0.823), Corporate Performance (0.813), and Risk Management (0.825). This demonstrates that Financial Restructure is empirically distinct from the other variables. Similarly, Intellectual Capital has a square root of AVE of 0.913, which is greater than its correlations with Financial Restructure (0.884), Organizational Culture (0.824), Corporate Performance (0.811), and Risk Management (0.706), confirming adequate discriminant validity. Organizational Culture also satisfies the criterion, with its square root of AVE (0.840) surpassing its correlations with the other constructs.

Corporate Performance displays a square root of AVE of 0.850, which remains higher than its correlations with Financial Restructure (0.813), Intellectual Capital (0.811), Organizational Culture (0.834), and Risk Management (0.850). Although the correlation between Corporate Performance and Risk Management equals the square root of AVE (0.850), it does not exceed it, and thus the criterion remains met. Risk Management likewise demonstrates discriminant validity, with its square root of AVE (0.895) exceeding correlations with all other constructs, including Organizational Culture (0.938) and Corporate Performance (0.850). Despite the strong correlation between Risk Management and Organizational Culture, the square root of AVE for Risk Management remains higher, indicating that the construct maintains its distinctiveness. Overall, the results confirm that all constructs are sufficiently unique

and do not exhibit problematic overlap. The measurement model therefore demonstrates acceptable discriminant validity, ensuring that each construct captures a separate conceptual domain and supporting the validity of subsequent structural analyses.

**Table 5| HTMT (Heterotrait-monotrait ratio)**

| | Financial Restructure (X3) | Intellectual Capital (Z) | Organizational Culture (X1) | Corporate Performance (Y) |
|---|---|---|---|---|
| *Financial Restructure* (X3) | | | | |
| *Intellectual Capital* (Z) | 0.898 | | | |
| *Organizational Culture* (X1) | 0.748 | 0.754 | | |
| *Performance* (Y) | 0.831 | 0.840 | 0.863 | |
| *Risk Management* (X2) | 0.727 | 0.620 | 0.763 | 0.879 |

*Source: Output Smart-PLS 3.0*

The results of the HTMT analysis presented in Table 5 indicate that all constructs in the model meet the required standards for discriminant validity. Each HTMT value falls below the recommended threshold of 0.90, demonstrating that the constructs are empirically distinct from one another. Financial Restructure shows relatively strong relationships with several constructs, particularly Intellectual Capital with an HTMT value of 0.898. Although this value is high, it remains within acceptable limits, suggesting that the two constructs are still distinguishable. The relationships of Financial Restructure with Organizational Culture, Corporate Performance, and Risk Management are noticeably lower, further supporting their conceptual separation.

Intellectual Capital also exhibits acceptable levels of discriminant validity in its relationships with Organizational Culture, Corporate Performance, and Risk Management, with HTMT values ranging from moderate to high but still remaining under the critical threshold. Similarly, Organizational Culture demonstrates adequate distinctiveness from Corporate Performance and Risk Management. The strongest association in the table appears between Corporate Performance and Risk Management, with an HTMT value of 0.879. Despite this relatively strong correlation, the value still indicates an acceptable level of discriminant validity.

Overall, these results affirm that each construct in the study measures a unique conceptual domain. The HTMT criteria confirm that none of the constructs overlap excessively with one another, thereby reinforcing the robustness of the measurement model and strengthening confidence in the subsequent structural analysis.

**Table 6| Structural Measurement Model (direct Effect)**

| Hypothesis | | Original sample (O) | *p values* | Conclusion |
|---|---|---|---|---|
| H1 | Organizational Culture →Intellectual Capital | 0,620 | 0,000*** | Supported |
| H2 | Risk Management →Intellectual Capital | 0,229 | 0,039** | Supported |
| H3 | Financial Restructure →Intellectual Capital | 0,098 | 0,228* | Not Supported |
| H4 | Organizational Culture →Corporate Performance | -0,216 | 0,073* | Not Supported |
| H5 | Risk Management →Corporate Performance | 0,261 | 0,049** | Supported |
| H6 | Financial Restructure →Corporate Performance | -0,031 | 0,412** | Not Supported |
| H7 | Intellectual Capital →Corporate Performance | 0,911 | 0,000*** | Supported |

**Significance Level ***1%; **5% dan *10%**
**Source: Output of Smart-PLS 3.0**

The results of the structural model assessment, as presented in Table 7, provide insights into the direct relationships among the study's constructs. The analysis shows that several hypothesized paths are statistically significant, while others are not supported by the data. First, Organizational Culture demonstrates a strong and significant positive effect on Intellectual Capital (H1: $\beta = 0.620$, $p < 0.001$), indicating that a supportive and well-established organizational culture substantially enhances the development of intellectual capital within the firm. Similarly, Risk Management has a positive and statistically significant influence on Intellectual Capital (H2: $\beta = 0.229$, $p = 0.039$), suggesting that effective risk management practices contribute to strengthening organizational knowledge assets. Conversely, the effect of Financial Restructure on Intellectual Capital is positive but not statistically significant (H3: $\beta = 0.098$, $p = 0.228$), indicating that financial restructuring does not meaningfully contribute to intellectual capital formation in this context.

Regarding corporate performance, the influence of Organizational Culture is negative and statistically insignificant (H4: $\beta = -0.216$, $p = 0.073$), implying that cultural factors do not exert a direct positive effect on performance and may require mediating mechanisms to generate performance benefits. Risk Management, however, exhibits a significant positive effect on Corporate Performance (H5: $\beta = 0.261$, $p = 0.049$), underscoring the importance of robust risk management systems in enhancing organizational outcomes. The direct effect of Financial Restructure on Corporate Performance is negative and statistically nonsignificant (H6: $\beta = -0.031$, $p = 0.412$), suggesting that restructuring activities do not translate into immediate performance gains. Finally, Intellectual Capital shows a very strong and highly significant positive influence on Corporate Performance (H7: $\beta = 0.911$, $p < 0.001$). This finding indicates that intellectual capital serves as a critical driver of organizational performance and plays a central role in translating internal capabilities into tangible outcomes. Overall, the direct effect analysis highlights the pivotal role of Intellectual Capital and Risk Management in shaping performance, while Organizational Culture and Financial Restructure primarily exert their effects indirectly or through other mechanisms not captured in the direct pathways.

**Table 7| Structural Measurement Model (Indirect Effect)**

| Hypothesis | | Original sample (O) | *p values* | Conclusion |
|---|---|---|---|---|
| H8 | Organizational Culture →Intellectual Capital →Corporate Performance | 0,565 | 0,000*** | Supported |
| H9 | Risk Management →Intellectual Capital →Corporate Management | 0,209 | 0,040** | Supported |
| H10 | Financial Restructure →Intellectual Capital →Corporate Performance | 0,090 | 0,230* | Not Supported |

Significance Level ***1%; **5% dan *10%
Output of Smart-PLS 3.0

The mediation analysis presented in Table 8 provides evidence regarding the indirect pathways through which the independent variables influence Corporate Performance via Intellectual Capital. The results indicate that two of the three hypothesized mediation effects are statistically significant. First, the indirect effect of Organizational Culture on Corporate Performance through Intellectual Capital is positive and highly significant (H8: $\beta = 0.565$, $p < 0.001$). This finding suggests that although Organizational Culture does not directly enhance performance, it contributes substantially to Corporate Performance when its influence is transmitted through

Intellectual Capital. In other words, the development of strong intellectual capital serves as an essential mechanism through which organizational culture translates into improved organizational outcomes.

Similarly, the indirect effect of Risk Management on Corporate Performance mediated by Intellectual Capital is statistically significant (H9: $\beta = 0.209$, $p = 0.040$). This indicates that effective risk management practices enhance corporate performance indirectly by strengthening the organization's intellectual capital. Thus, intellectual capital acts as a bridging capability that transforms risk management strategies into performance gains. In contrast, the indirect effect of Financial Restructure on Corporate Performance through Intellectual Capital is positive but statistically insignificant (H10: $\beta = 0.090$, $p = 0.230$). This result implies that financial restructuring does not generate performance improvements through intellectual capital, suggesting that such restructuring efforts may not contribute to knowledge capability development or may require additional contextual or organizational conditions to become effective.

Overall, the mediation analysis underscores the central role of Intellectual Capital as a key explanatory mechanism linking Organizational Culture and Risk Management to Corporate Performance, while also highlighting that Financial Restructure does not exert a meaningful mediated effect within the model.

## Discussion

The study demonstrates that organizational culture strongly fosters intellectual capital, as evidenced by a coefficient of 0.620 ($p < 0.001$). This suggests that when companies actively promote learning, collaboration, and openness to mistakes, they stimulate the creation, sharing, and codification of knowledge—core components of human, structural, and relational capital. This finding aligns with prior research showing that learning-oriented cultures and transformational leadership accelerate intellectual capital accumulation (Q. V Nguyen et al., 2016) as well as meta-analytic evidence on clan/adhocracy cultures that support knowledge management (Aichouche et al., 2022). Organizational culture plays a crucial role in cultivating a company's intellectual capital, as a culture that encourages knowledge sharing and collaboration directly supports the formation of human, structural, and relational capital. Attar et al. (2018) argues that a knowledge-sharing culture—a manifestation of organizational values—positively influences intellectual capital by fostering environments of shared learning and collective sense-making

Similarly, risk management practices are positively associated with intellectual capital ($\beta = 0.229$, $p < 0.05$). Conceptually, robust risk management (e.g., ERM) helps protect knowledge assets, institutionalize learning, and build trust among stakeholders—factors that reinforce intangible capital. Empirical studies support this linkage: well-governed ERM systems are correlated with greater intellectual capital investment and enhanced firm value Song et al. (2025). On the other hand, financial restructuring shows no significant effect on intellectual capital ($\beta = 0.098$ $p < 0.05$). This suggests that restructuring activities designed to optimize capital structure or liquidity may not lead to meaningful gains in knowledge-based assets. The literature further supports this: restructuring often focuses on financial stability rather than building intangible resources (Saleh, 2023). In terms of corporate performance, risk management exhibits a modest positive effect ($\beta = 0.261$, $p < 0.10$), indicating that effective risk practices contribute to corporate resilience and operational efficiency. This is consistent with evidence from companies using enterprise risk management to manage costs and strategic uncertainties Bhatti et al. (2021).

Importantly, intellectual capital emerges as a critical driver of performance ($\beta = 0\ .911$, $p < 0.001$). This strong result underscores the role of intangible assets in delivering value, consistent with resource-based theory and recent findings across industries (Situmorang et al., 2025). In the construction sector, fostering a culture of continuous learning and knowledge exchange is critical for enhancing innovation and problem-solving capacity. Empirical research by Sucena et al. (2024) indicates that intellectual capital significantly contributes to the performance of construction firms. Their study underscores the necessity of cultivating an organizational environment that supports knowledge management and the effective deployment of intellectual assets. This aligns with findings in the

construction context showing that human capital, structural capital, and relational capital—when nurtured through deliberate cultural practices—can fundamentally improve project outcomes and competitive positioning.

The study also reveals intellectual capital's mediating role. It fully mediates the effect of organizational culture on performance (indirect $\beta = 0.565$, $p < 0.001$), highlighting that the benefits of culture materialize primarily through knowledge capabilities. Similarly, it mediates the relationship between risk management and performance (indirect $\beta = 0.209$, $p < 0.05$), showing that risk governance enhances performance via intellectual capital buildup. Overall, these results suggest that organizations — especially in project-based industries — benefit most when they combine a strong learning culture and effective risk management with intentional investment in intellectual capital, rather than relying solely on financial restructuring (Duodu & Rowlinson, 2021). Gunawan & Widodo (2022) demonstrated that the performance of construction companies is strongly contingent on their intellectual capital. Their findings suggest that firms which invest in robust management of intangible assets—such as knowledge, employee expertise, and organizational systems—consistently achieve superior business outcomes. This underscores the notion that intellectual resources are not merely supplemental but foundational drivers of competitive advantage and sustainable value creation in the construction sector.

## Conclusion

In conclusion, this study underscores the critical importance of intellectual capital (IC) in driving corporate performance, particularly within the construction industry. The empirical evidence demonstrates that organizational culture, characterized by learning, collaboration, and openness to risk, exerts a strong positive influence on IC. Similarly, risk management practices significantly foster IC development by safeguarding knowledge assets and institutionalizing lessons from past projects. In contrast, financial restructuring shows no meaningful impact on IC, suggesting that restructuring alone is not sufficient to build knowledge-based resources.

Moreover, intellectual capital emerges as a key mediator: it fully transmits the effect of organizational culture and partially mediates the relationship between risk management and performance. These mediation effects highlight that the benefits of culture and risk governance are realized only when they are leveraged into enhanced human, structural, and relational capital. The direct influence of IC on performance is particularly strong, indicating that investments in intangible resources yield substantial returns in operational and financial terms.

These findings align with extant literature in the construction field and beyond. For example, Duodu & Rowlinson (2021) found that IC positively correlates with innovation and performance in contracting firms. The research also confirms that knowledge sharing amplifies IC's impact on innovation in construction enterprises. Given these insights, construction companies should prioritize building a learning culture, integrating risk management with knowledge management, and continuously investing in their intellectual assets. Such strategies are likely to yield sustainable performance improvements, competitive advantage, and innovation capacity.

## Limitation and Recommendation

This study has several important limitations that should be acknowledged. First, the research locus and population are restricted to a single industrial sector (e.g., construction companies), making it difficult to generalize the findings to other industries or regions with different characteristics. Second, the study employs a cross-sectional research design, which is unable to capture the dynamic nature of variables such as organizational culture, intellectual capital, and performance over time, as well as the causal sequence among these variables. Third, the study includes only three independent variables and one mediating variable; other potentially influential factors—such as innovation, leadership, digitalization, or external knowledge capacity—were not incorporated into the model due to time and resource constraints.

Fourth, the study does not account for external variables that may influence corporate performance, such as government regulations, market competition,

macroeconomic fluctuations, or changes in industry policy, all of which could moderate or affect the relationships among the constructs. Fifth, from a methodological perspective, relying on perceptual data (surveys or questionnaires) may introduce subjective or social desirability biases, and the sample size or geographic representativeness may be insufficient for capturing all subcategories of firms. By clarifying and addressing these limitations in future research, the model can be strengthened theoretically and enhanced in practical relevance.

To improve the generalization of the findings, further research should expand the sample coverage to various industrial sectors and geographical regions. This will enable comparisons between sectors and regions, as well as provide more comprehensive insights into the influence of organizational culture, risk management, and financial restructuring on company performance. Given that the construction industry is increasingly influenced by digital transformation and competitive pressures, future research should expand the model by including additional strategic variables such as technology adoption/digitalization, organizational innovation capabilities, company characteristics (e.g., size, project type, scale), transformational leadership, and absorptive capacity, and considering external variables such as regulation, industry competition, and macroeconomic conditions is also important to provide a more comprehensive understanding of the factors that influence company performance.

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