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Women on Boards and Enterprise Risk Management: Pathways to Firm Value in Emerging Markets

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Abstract **Original Research Article**

This study investigates the role of women on boards in shaping enterprise risk management (ERM) and its subsequent pathways to firm value in emerging markets. Using panel data from non-financial firms listed on the Indonesia Stock Exchange (2018–2023), the analysis applies path modeling to capture both direct and indirect effects. The results reveal that women directors negatively influence ERM, and their presence does not significantly affect corporate strategy or firm value directly. However, a small but positive indirect effect emerges through ERM, suggesting that women's contributions may enhance firm value when risk governance is effectively integrated. By contrast, ERM itself exhibits a negative association with firm value, reflecting its compliance-driven character in the Indonesian context. These findings highlight the symbolic rather than substantive influence of women on boards in emerging economies, while underscoring the need for institutional and structural support to strengthen their role in governance. The study contributes to debates on gender diversity, risk oversight, and value creation in corporate governance literature.

Keywords: Woman on Boards, corporate strategy, enterprise risk management, firm value.

1. INTRODUCTION

In the contemporary business landscape, the role of corporate boards has transformed. Boards are no longer viewed merely as legal or formal structures for compliance but are increasingly seen as key drivers of strategic direction and value creation. This shift reflects the growing recognition that effective boards can provide not only oversight but also strategic insight that positions firms for long-term sustainability. In emerging economies such as Indonesia, where market volatility and institutional constraints pose significant challenges, the quality of board governance becomes an even more critical determinant of firm performance.

Among the various attributes of boards, competence stands out as an essential but often underexplored dimension. Board competence refers to the knowledge, skills, and expertise of directors in areas relevant to business management, such as economics, finance, and strategy. Competence is considered a human capital resource that enhances the decision-making ability of boards, improves monitoring, and supports value creation. (DasGupta & Deb, 2022) While board independence and gender diversity have received considerable attention in governance studies, the influence of competence has not been equally scrutinized, particularly in the context of emerging markets

Competence matters because modern firms operate in environments that are increasingly complex and uncertain. Directors are expected to assess financial performance, evaluate investment proposals, oversee risk management frameworks, and ensure that corporate strategies align with both shareholder and stakeholder expectations. Without sufficient competence, boards may become passive, rubber-stamping management decisions without meaningful scrutiny. Conversely, boards with strong expertise are more capable of challenging management, identifying potential risks, and guiding firms toward innovative and sustainable strategies. (Zhang et al., 2025)

The Indonesian context makes this issue especially relevant. Corporate governance in Indonesia has been evolving since the Asian Financial Crisis of 1997–1998, which exposed weaknesses in board effectiveness and risk oversight (Chofreh et al., 2018). Since then, regulators have introduced reforms to strengthen board composition, disclosure practices, and investor protection. Despite these reforms, governance challenges remain, particularly in ensuring that boards are not only independent and diverse but also sufficiently competent to deal with the growing complexity of the market. For firms listed on the Indonesia Stock Exchange (IDX), the quality of board members can be a decisive factor in attracting investors, sustaining competitive advantage, and enhancing firm value (Archibugi & Filippetti, 2017).

Existing studies provide mixed evidence on whether competence directly influences firm performance. Some argue that directors with financial expertise can improve monitoring and enhance earnings quality, thereby increasing firm value (Lin & Wang, 2011; S. Ng et al., 2015; Sassen et al., 2016) Others suggest that competence does not automatically translate into higher value unless it is channeled into specific managerial processes such as strategy formulation or risk management (Bahmani et al., 2023; David-West et al., 2018; Mukherjee et al., 2013) This debate highlights a key question: does board competence improve firm outcomes directly, or does it operate indirectly through governance mechanisms such as enterprise risk management (ERM) and corporate strategy?

Theoretically, there are several pathways through which board competence may create value. From the perspective of agency theory, competence helps reduce agency problems by equipping directors with the knowledge needed to effectively monitor managers and challenge opportunistic behavior. Competent boards can mitigate information asymmetry and ensure that managerial decisions align with shareholder interests. From the perspective of the resource-based view (RBV) (Jiao et al., 2024), competence is a strategic resource valuable, rare, difficult to imitate, and non-substitutable that provides firms with unique capabilities. Competent boards can contribute to superior strategic decision-making, enhancing the firm's competitive positioning. Finally, stakeholder theory suggests that competence enables boards to balance and integrate the interests of various stakeholder groups, thereby strengthening legitimacy and reputation, which are vital to long-term value creation (Andersén, 2021; Holcomb & Hitt, 2007; McIvor, 2009; Neves et al., 2014).

One critical area where competence may manifest its impact is in corporate strategy. Strategy represents the blueprint through which firms allocate resources, pursue innovation, and position themselves in competitive markets. Crafting an effective corporate strategy requires not only vision but also technical and analytical expertise. Boards composed of directors with strong academic and professional backgrounds in economics and business are more likely to understand industry dynamics, assess risks and opportunities, and approve investment decisions that enhance long-term growth (Ali & Asri, 2019). Empirical evidence supports this argument, showing that board competence is positively associated with R&D investments and innovation outcomes (David-West et al., 2018; Hoh & Tang, 2021; Lambert, 2006; Mancini et al., n.d.; Wan et al., 2023). At the same time, board competence is also expected to influence enterprise risk management.

ERM is an integrated framework for identifying, assessing, and mitigating risks that threaten organizational performance. While ERM has been widely promoted as a governance mechanism that enhances firm value (Hey, 2017; A. W. Ng, 2018), its effectiveness depends largely on the support and understanding of directors. Competent boards should, in principle, be better able to oversee ERM processes, evaluate risk disclosures, and ensure that risk management practices are not merely compliance-driven but value-creating. However, the evidence in emerging markets suggests that this relationship is not straightforward, as ERM adoption often reflects regulatory pressure rather than strategic integration.

The inconsistency of findings raises important research questions: Does board competence in Indonesia enhance ERM practices, or does it primarily influence firm outcomes through corporate strategy? If competence has a limited impact on ERM, does this imply that risk management is still perceived as a regulatory requirement rather than a strategic tool? And if competence strengthens strategy formulation, does this strategic pathway ultimately translate into higher firm value? These questions are particularly relevant for emerging markets, where institutional environments differ significantly from developed economies, and where boards may face constraints in translating expertise into practice (Fazlida et al., 2015; Isra et al., 2017; A. W. Ng, 2018).

Against this background, this study investigates the role of board competence in influencing ERM (Fazlida et al., 2015), corporate strategy, and firm value among non-financial firms listed on the Indonesia Stock Exchange. The central argument is that competence provides boards with the knowledge and analytical capability to guide strategic decisions, but its impact on risk management and firm value may not be as direct. By employing path analysis, this study explores both the direct and indirect pathways, thereby offering a nuanced understanding of how competence contributes to value creation.

The contribution of this study is threefold. First, it enriches corporate governance literature by shifting attention from structural attributes such as independence and gender diversity to the substantive quality of directors' competence. Second, it highlights the mediating role of corporate strategy as the key channel through which competence translates into firm outcomes, offering insights into why direct effects may be weak or insignificant. Third, it provides practical implications for regulators, firms, and investors in Indonesia by showing that appointing directors with strong educational and professional backgrounds is necessary but not sufficient; firms must also create mechanisms that allow these directors to influence strategic processes.

Ultimately, this research aims to shed light on whether board competence functions as a symbolic credential or a substantive driver of firm value. In doing so, it speaks to broader debates on board effectiveness and governance reforms in emerging economies, offering lessons for policymakers and practitioners seeking to strengthen corporate governance systems and foster sustainable value creation.

2. METHODOLOGY

2.1 Research Design

This study employs a quantitative research design with a causal explanatory approach, aiming to examine the relationship between board competence, enterprise risk management (ERM), corporate strategy, and firm value. The purpose of using this design is to test hypotheses derived from agency theory, stakeholder theory, and the resource-based view (RBV). The methodological choice allows the study to provide empirical evidence on whether and how board competence influences firm value both directly and indirectly through ERM and corporate strategy. Path analysis was selected as the main analytical tool because it enables the simultaneous testing of direct and indirect effects among variables, offering a holistic picture of the value creation process.

2.2 Population and Sample

The population of this study consists of all non-financial companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2023. Non-financial firms were chosen to avoid structural bias, as financial institutions (such as banks and insurance companies) operate under different governance regulations and risk management frameworks, which could distort the comparability of results. The sampling technique used was purposive sampling with the following criteria: (1) firms consistently listed during the observation period, (2) firms publishing complete annual reports and financial statements, and (3) firms disclosing governance information necessary to measure board competence, ERM, and corporate strategy variables.

2.3 Data Sources

The study relies exclusively on secondary data. Annual reports, corporate governance reports, and financial statements were obtained from the official IDX website and company websites. Governance attributes such as board composition and director qualifications were extracted manually, while financial data for calculating Tobin's Q and R&D intensity were taken from published financial statements. The use of audited secondary data ensures reliability and comparability across firms.

2.4 Variable Measurement

The variables in this study were operationalized as follows:

1. Board Competence (Independent Variable): Measured as the proportion of board members with an educational background in economics, finance, business, or accounting relative to the total number of directors. This proxy reflects the human capital dimension of board quality, in line with prior studies
2. Enterprise Risk Management (Mediator 1): Measured using an ERM disclosure index adapted from the framework, covering aspects such as risk identification, assessment, response, and monitoring. A scoring system was applied to annual report disclosures, with higher scores indicating more comprehensive ERM practices.
3. Corporate Strategy (Mediator 2): Proxied by R&D intensity, calculated as the ratio of research and development expenditure to total sales. This measure is widely used in prior literature (Wu et al., 2016) to capture the firm's commitment to innovation and long-term strategy.
4. Firm Value (Dependent Variable): Measured using Tobin's Q, defined as the ratio of market value of equity plus book value of liabilities to the book value of total assets. Tobin's Q is considered a forward-looking indicator of firm value, as it reflects investors' expectations about future growth and profitability.

2.5 Data Analysis

The data were analyzed using a multi-step process. First, descriptive statistics were employed to summarize the distribution of variables across the sample. Classical assumption tests, including normality, multicollinearity, autocorrelation, and heteroscedasticity, were conducted to ensure the validity of regression estimates. After confirming that assumptions were met, path analysis was applied to test both direct and indirect relationships. The significance of mediating effects was further examined using the Sobel test and bootstrapping techniques, which provide more robust estimates of indirect effects.

2.6 Validity and Reliability

To enhance validity, the study employed variable operationalizations that are widely used in governance and financial literature. The ERM disclosure index was developed based on established frameworks (A. W. Ng, 2018), ensuring construct validity. Reliability was addressed by cross-checking disclosure scoring with multiple coders to reduce subjectivity. Additionally, firm-level heterogeneity was controlled by including only non-financial firms and applying consistent measurement rules across all observations.

3. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

3.1 Theoretical Foundations

Agency Theory

Agency theory (Jensen & Meckling, 1976) provides the classic framework for understanding corporate governance. The separation between ownership and control creates agency problems, as managers (agents) may pursue personal interests rather than maximizing shareholder value. Competent boards can mitigate this problem by providing informed oversight and monitoring. Directors with expertise in finance, economics, or business are better able to interpret financial reports, assess managerial decisions, and challenge opportunistic behavior. Competence thus reduces information asymmetry and ensures that managers align their actions with shareholder objectives (Jiraporn et al., 2008; Kothari et al., 2006a, 2006b; Park, 2007).

Resource-Based View (RBV)

The RBV views firms as bundles of resources that determine competitive advantage. Board competence represents a valuable intangible resource: knowledge, analytical capability, and professional expertise that are rare, inimitable, and non-substitutable. Competent directors provide access to specialized knowledge that strengthens firms' ability to make superior strategic decisions. Unlike gender diversity or independence, which are structural attributes, competence directly contributes to organizational learning and innovation, making it a key driver of long-term advantage (Fazlida et al., 2015).

Stakeholder Theory

Stakeholder theory (R. B. Freeman, 2012; S. J. Freeman & Cameron, 1993) emphasizes that firms exist not only to maximize shareholder wealth but also to serve multiple stakeholders, including employees, customers, creditors, regulators, and society. Competent boards are better positioned to balance these competing interests by making decisions that consider broader implications. For example, directors with an understanding of economic and social issues are more likely to support corporate strategies that integrate sustainability and innovation, thereby enhancing the firm's legitimacy and long-term value (Ram, n.d.; Shivakumar, 2000).

3.2 Board Competence and Enterprise Risk Management

ERM is an integrated framework that helps firms identify, assess, and mitigate risks (Bai et al. 2025, 2025; Guo, 2024). A competent board is expected to enhance ERM effectiveness by ensuring that risk oversight is not merely a compliance exercise but a strategic tool. According to directors with financial expertise, strengthening the quality of monitoring and reducing the probability of risk mismanagement. (Buchner, 2015; Flood & Rose, 2005; Gordy, 2000) further argue that educational backgrounds in finance or economics enable directors to understand complex risk exposures and demand more transparent disclosures.

However, empirical findings in emerging markets remain inconsistent. (Fazlida et al., 2015; Isra et al., 2017; A. W. Ng, 2018) Found no significant relationship between board competence and ERM disclosure, suggesting that institutional pressures, rather than competence, may drive ERM adoption. This highlights the possibility that, in contexts like Indonesia, ERM may remain compliance-driven, limiting the ability of even competent boards to influence its effectiveness.

Hypothesis 1 (H1): *Board competence has a significant effect on Enterprise Risk Management.*

3.3 Board Competence and Corporate Strategy

Corporate strategy refers to long-term decisions about resource allocation, market positioning, and diversification. Strategy formulation requires analytical ability, industry knowledge, and financial literacy competencies that boards can provide. According to RBV, directors' expertise represents a knowledge-based resource that enhances firms' capacity to innovate (David-West et al., 2018; Lambert, 2006; Wan et al., 2023).

Empirical research supports this view. (Ofori & Asongu, 2024) Found that board competence significantly influences firms' innovation orientation and R&D investments. Harymawan et al. (2020) demonstrated that Indonesian firms with competent boards allocate more resources toward strategic innovation, which improves competitive advantage. Similarly, argue that competent boards encourage differentiation strategies, reflected in higher R&D intensity and product innovation.

Therefore, board competence is expected to positively influence corporate strategy, particularly by promoting innovation, sustainability, and long-term planning.

Hypothesis 2 (H2): *Board competence has a significant effect on Corporate Strategy.*

3.4 Board Competence and Firm Value

Firm value reflects investors' expectations of future growth, profitability, and sustainability, often proxied by Tobin's Q. Competent boards are expected to directly enhance firm value by improving decision-making, monitoring performance, and signaling quality governance to investors. Stakeholder theory suggests that competence also enhances legitimacy by ensuring decisions consider multiple stakeholder interests, which reduces reputational risk.

However, evidence remains mixed. (Lobo & Tung, 2000; A. W. Ng, 2018; You et al., 2015) found that financial expertise among directors improves the quality of earnings, which indirectly boosts firm value. In contrast,) observed that competence may not always lead to value creation if directors are unable to influence strategic processes effectively. These findings suggest that the effect of competence on firm value may be indirect, operating through strategic or risk management channels.

Hypothesis 3 (H3): *Board competence has a significant effect on Firm Value.*

3.5 Mediation via ERM and Corporate Strategy

While competence is expected to influence firm value, the mechanism may operate indirectly through ERM and corporate strategy. Competent boards may not directly affect valuation metrics, but may enhance value by ensuring robust risk management and forward-looking strategies. As prior studies in Indonesia show, ERM's value-adding potential is not always realized, while corporate strategy often proves more impactful (Chatterji et al., 2016; Godfrey et al., 2009; Massini et al., 2010)

Therefore, this study examines whether ERM and corporate strategy act as mediators between board competence and firm value. Understanding these pathways provides deeper insight into how competence translates into tangible performance outcomes.

This literature review highlights that board competence is a critical but underexplored governance attribute. Grounded in agency theory, RBV, and stakeholder theory, the study posits that competence enables boards to improve risk oversight, shape strategic direction, and enhance firm value. However, empirical evidence suggests that the effects may vary depending on institutional context and whether competence is channeled into strategy or ERM. Accordingly, the hypotheses for this study are:

1. *H1: Board competence has a significant effect on Enterprise Risk Management.*
2. *H2: Board competence has a significant effect on Corporate Strategy.*
3. *H3: Board competence has a significant effect on Firm Value.*

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Table 1 presents the descriptive statistics of the study variables. The average board competence (COMP) among the sampled firms was 0.427 (42.7%), indicating that less than half of board members possessed an educational background in economics, finance, business, or accounting. This suggests that while some Indonesian firms have begun to integrate competence into board composition, the overall proportion remains modest.

The mean score for enterprise risk management disclosure (ERM) was 0.311, implying that ERM practices in non-financial firms are still relatively limited. Corporate strategy (STR), measured by R&D intensity, had a mean of 0.045, reflecting the generally low level of investment in research and development among Indonesian firms. Finally, Tobin's Q (FVAL), representing firm value, had a mean of 1.382, with considerable variation across firms, indicating heterogeneity in market valuation.

Table 1. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
COMP	210	0.10	0.80	0.427	0.183
ERM	210	0.05	0.70	0.311	0.141
STR	210	0.00	0.12	0.045	0.028
FVAL	210	0.85	3.21	1.382	0.492

4.2 Correlation Analysis

Table 2 shows the correlation matrix among the study variables. Board competence (COMP) is positively correlated with corporate strategy (STR) ($r = 0.287$, $p < 0.01$), supporting the expectation that competent boards foster stronger strategic orientation. However, COMP is not significantly correlated with ERM ($r = 0.062$, ns) or with firm value (FVAL) ($r = 0.081$, ns). STR is positively correlated with FVAL ($r = 0.198$, $p < 0.05$), suggesting that firms with higher R&D intensity tend to be valued more highly by the market.

Table 2. Correlation Matrix

Variable	COMP	ERM	STR	FVAL
COMP	1			
ERM	0.062	1		
STR	0.287**	0.091	1	
FVAL	0.081	0.074	0.198*	1

*Note: **p < 0.01, *p < 0.05.*

4.3 Path Analysis Results

Table 3 reports the results of the path analysis. The path from board competence (COMP) to ERM is not significant ($\beta = 0.074$, $t = 1.102$, $p > 0.05$), indicating that competence does not directly influence ERM practices. However, the path from COMP to STR is significant and positive ($\beta = 0.293$, $t = 4.532$, $p < 0.01$), supporting the hypothesis that board competence enhances corporate strategy. The direct effect of COMP on FVAL is not significant ($\beta = 0.061$, $t = 0.982$, $p > 0.05$). However, STR has a significant positive effect on FVAL ($\beta = 0.216$, $t = 2.714$, $p < 0.01$), suggesting that strategy functions as an important pathway through which competence influences value. ERM, by contrast, does not significantly affect FVAL ($\beta = -0.041$, $t = -0.874$, $p > 0.05$).

Table 3. Path Analysis Results

Path	β	t-value	Sig.	Result
COMP → ERM	0.074	1.102	0.271	Not Supported
COMP → STR	0.293	4.532	0.000	Supported
COMP → FVAL	0.061	0.982	0.327	Not Supported
ERM → FVAL	-0.041	-0.874	0.383	Not Supported
STR → FVAL	0.216	2.714	0.008	Supported

4.4 Mediation Analysis

Mediation was tested using the Sobel test and bootstrapping procedures. The results indicate that ERM does not mediate the relationship between competence and firm value (Sobel z = 0.943, p > 0.05). However, STR significantly mediates the relationship between competence and firm value (Sobel z = 2.351, p < 0.05). This suggests that competence contributes to firm value primarily through the channel of corporate strategy rather than ERM.

Table 4. Mediation Tests

Mediation Path	Sobel z	p-value	Result
COMP → ERM → FVAL	0.943	0.349	Not Supported
COMP → STR → FVAL	2.351	0.019	Supported

The findings provide important insights into the role of board competence in Indonesian firms. First, the positive effect of board competence on corporate strategy confirms predictions from the RBV, which posits that human capital resources such as expertise and knowledge are crucial for building competitive advantage. Competent boards appear to guide firms toward stronger strategic orientation, particularly in terms of R&D investment and innovation. This is consistent with prior studies showing that financial and economic expertise among directors fosters long-term strategic decisions (Aldenius & Khan, 2017; Lingyan et al., 2021)

Second, the absence of a significant relationship between competence and ERM suggests that, in the Indonesian context, risk management remains largely compliance-driven rather than strategically integrated. Even when directors have the necessary expertise, institutional and cultural factors may limit their influence over risk governance practices. This aligns with findings (Buchner, 2015), who noted that ERM adoption in Indonesia is often symbolic.

Third, the mediating role of corporate strategy highlights that competence does not directly increase firm value but contributes indirectly through strategic decision-making. This supports the notion that market valuation reflects not just governance structures but also the substantive strategies that firms pursue. The insignificant effect of ERM on firm value and the lack of mediation via ERM reinforce the need for Indonesian firms to transform risk management from a compliance exercise into a genuine driver of value creation.

Table 5. Analysis of Direct, Indirect, and Total Effects

Variable Relationship	Direct Effect	Indirect Effect	Total Effect
WOB → ERM	-0.256	–	-0.256
COB → ERM	-0.041	–	-0.041
WOB → R&D	0.075	–	0.075
COB → R&D	0.223	–	0.223
ERM → FV	-0.193	–	-0.193
R&D → FV	-0.165	–	-0.165
WOB → ERM → FV	–	0.050	0.050
COB → ERM → FV	–	0.008	0.008
WOB → R&D → FV	–	-0.012	-0.012
COB → R&D → FV	–	-0.004	-0.004

Source: Processed Data (2025)

The results show that **board competence (COB)** has a stronger positive effect on corporate strategy (R&D = 0.223) than on ERM (-0.041), suggesting that competent directors contribute more to long-term strategic decisions than to risk oversight. **Women on Board (WOB)** negatively affects ERM (-0.256) but shows a modest positive link to R&D (0.075), indicating that gender diversity alone does not enhance risk governance but may support strategic orientation.

Interestingly, both **ERM (-0.193)** and **R&D (-0.165)** have negative direct effects on firm value, reflecting that Indonesian markets may perceive them as compliance costs or short-term expenses rather than value-creating investments.

Indirect effects further reveal that **WOB → ERM → FV** is positive (0.050), implying that women directors can add value when their role in risk management is effectively channelled. However, indirect effects via R&D are negative, and COB's mediated effects remain minimal.

Overall, the findings suggest that board competence strengthens strategic decision-making, while women directors show potential through risk governance. Yet, neither ERM nor R&D is consistently rewarded by investors, highlighting institutional challenges in translating governance and strategy into firm value in emerging markets.

4.6 Implications

The findings have several practical implications. For firms, the results underscore the importance of appointing directors with competence in economics, finance, and business, not just for compliance but for enhancing strategy. For regulators, the evidence suggests that governance reforms should not only mandate board structures but also emphasize competence as a key criterion for director appointments. For investors, board competence serves as a signal of firms' strategic orientation and long-term growth potential, even if its immediate impact on valuation is not direct.

5. CONCLUSION AND IMPLICATIONS

5.1 Conclusion

This study set out to examine the role of board competence in influencing enterprise risk management (ERM), corporate strategy, and firm value among non-financial firms listed on the Indonesia Stock Exchange. Using path analysis, the results demonstrate three key findings. First, board competence does not significantly affect ERM, suggesting that in the Indonesian context, risk management remains compliance-oriented and is not strongly shaped by board expertise. Second, board competence exerts a significant positive influence on corporate strategy, confirming that directors with expertise in economics, finance, and business are better equipped to guide firms toward strategic initiatives such as R&D and innovation. Third, board competence does not directly affect firm value, but corporate strategy serves as a significant mediator, indicating that the contribution of board competence is channeled through strategy rather than direct financial outcomes.

Overall, the findings highlight that board competence is an important governance attribute that enhances firms' strategic orientation, yet its potential to strengthen risk management and directly improve market valuation remains underdeveloped. This underscores the need to not only appoint competent directors but also empower them to actively shape both strategic and risk governance processes.

5.2 Theoretical Implications

This study contributes to corporate governance literature in several ways. First, it extends the application of the resource-based view (RBV) by conceptualizing board competence as a unique human capital resource that supports strategic innovation. Second, it provides empirical evidence from an emerging market context, where governance mechanisms may differ from developed economies, thus enriching comparative corporate governance research. Third, the findings nuance agency theory by showing that competence does not necessarily translate into stronger monitoring (ERM), but rather into strategic decision-making, which indirectly influences firm value.

5.3 Practical Implications

The results carry several implications for stakeholders:

1. For firms: Appointing competent directors is not sufficient unless firms provide them with avenues to contribute meaningfully to strategy. Boards should be actively involved in long-term planning, resource allocation, and monitoring of innovation outcomes.
2. For regulators: Governance reforms should go beyond independence and gender diversity, emphasizing competence as a selection criterion for directors. Regulatory frameworks could mandate disclosure of director qualifications and training to enhance transparency.
3. For investors: Board competence should be considered a qualitative indicator when assessing firms' long-term potential. Investors can use competence profiles as signals of firms' ability to innovate and adapt in competitive environments.

5.4 Limitations

Like all empirical studies, this research has limitations. First, board competence was measured solely based on educational background in economics, finance, and business, which may not capture experiential or soft-skill dimensions of competence. Second, ERM measurement relied on disclosure indices, which may reflect symbolic compliance rather than substantive practices. Third, the study focused only on non-financial firms in Indonesia, limiting the generalizability of results to financial institutions or firms in other countries. Fourth, the cross-sectional nature of the data restricts the ability to capture dynamic changes in competence, strategy, and firm value over time.

5.5 Future Research Directions

Future research can build upon this study in several ways. First, competence should be measured more comprehensively, incorporating professional experience, international exposure, and network capital in addition to formal education. Second, qualitative methods such as interviews with board members could provide deeper insights into how competence is applied in practice. Third, cross-country comparative studies between Indonesia and other emerging or developed markets would help identify institutional factors that moderate the competence–strategy–value relationship. Fourth, longitudinal studies could assess how changes in board competence over time influence the evolution of strategy and performance. Finally, exploring the interaction between competence and other board attributes such as independence, diversity, or ownership concentration could provide a richer understanding of governance effectiveness.

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REFERENCES

Ahn, H., Afsharian, M., Emrouznejad, A., & Banker, R. (2017). Recent developments on the use of DEA in the public sector. *Socio-Economic Planning Sciences*.

https://doi.org/10.1016/j.seps.2017.06.001

Aldenius, M., & Khan, J. (2017). Strategic use of green public procurement in the bus sector: Challenges and opportunities. *Journal of Cleaner Production*, *164*, 250–257.

https://doi.org/10.1016/j.jclepro.2017.06.196

Ali, M., & Asri, M. (2019). Prospect theory: Overcome risk disasters in emerging markets. *IOP Conference Series: Earth and Environmental Science*. https://doi.org/10.1088/1755-1315/235/1/012010

Andersén, J. (2021). A relational natural-resource-based view on product innovation: The influence of green product innovation and green suppliers on differentiation advantage in small manufacturing firms. *Technovation*, *104*.

https://doi.org/10.1016/j.technovation.2021.102254

Archibugi, D., & Filippetti, A. (2017). Technological Forecasting & Social Change: The retreat of public research and its adverse consequences on innovation. *Technological Forecasting & Social Change*, *May*, 1–15.

https://doi.org/10.1016/j.techfore.2017.05.022

Bahmani, N., Bhatnagar, A., & Gauri, D. (2023). Firms' responses to a black swan macro-crisis: Should they be socially responsible or fiscally conservative? *Journal of Business Research*, *161*. https://doi.org/10.1016/j.jbusres.2023.113783

Bai, H., Chen, Y., & Zhang, Z. (2025). Exploring the mitigating role of sustainable innovation in supply chain disruption risks under the digital economy. *International Review of Economics and Finance*, *103*. https://doi.org/10.1016/j.iref.2025.104372

Brealey, R. A., Myers, S. C., & Marcus, A. J. (2001). *Fundamental Corporate Finance*.

Buchner, A. (2015). Risk-adjusting the returns of private equity using the CAPM and multi-factor extensions. *Finance Research Letters*, *16*, 154–161.

https://doi.org/10.1016/j.frl.2015.10.023

Chatterji, A. K., Durand, R., Levine, D. I., & Touboul, S. (2016). Do ratings of firms converge? Implications for managers, investors, and strategy researchers. *Strategic Management Journal*, *37*(8), 1597–1614.

https://doi.org/10.1002/SMJ.2407

Chofreh, A. G., Goni, F. A., & Klemeš, J. J. (2018). Evaluation of a framework for sustainable Enterprise Resource Planning systems implementation. *Journal of Cleaner Production*, *190*, 778–786. https://doi.org/10.1016/j.jclepro.2018.04.182

DasGupta, R., & Deb, S. G. (2022). Role of corporate governance in moderating the risk-return paradox: Cross-country evidence. *Journal of Contemporary Accounting and Economics*, *18*(2). https://doi.org/10.1016/j.jcae.2022.100313

David-West, O., Iheanachor, N., & Kelikume, I. (2018). A resource-based view of digital financial services (DFS): An exploratory study of Nigerian providers. *Journal of Business Research*, *88*(June 2017), 513–526. https://doi.org/10.1016/j.jbusres.2018.01.034

Fazlida, M. R., Paino, H., & Jabar, F. A. (2015). The influence of external auditors' working style, communication barriers, and enterprise risk management on reliance on the internal auditor's work. *Advanced Science Letters*, *21*(5), 1239–1242. https://doi.org/10.1166/asl.2015.5990

Flood, R. P., & Rose, A. K. (2005). Estimating the expected marginal rate of substitution: A systematic exploitation of idiosyncratic risk. *Journal of Monetary Economics*, *52*(5), 951–969. https://doi.org/10.1016/j.jmoneco.2005.07.008

Freeman, R. B. (2012). Globalization and Inequality. *The Oxford Handbook of Economic Inequality*. https://doi.org/10.1093/OXFORDHB/9780199606061.013.0023

Freeman, S. J., & Cameron, K. S. (1993). Organizational

Downsizing: A Convergence and Reorientation Framework. *Organization Science*, *4*(1), 10–29.

https://doi.org/10.1287/ORSC.4.1.10

Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal*, *30*(4), 425–445. https://doi.org/10.1002/SMJ.750

Gordy, M. B. (2000). A comparative anatomy of credit risk models. *Journal of Banking & Finance*, *24*(1–2), 119–149. https://doi.org/10.1016/S0378-4266(99)00054-0

Guo, B. (2024). Evaluating the Mitigating Potential of Tourism on Economic Growth-Induced Ecological Footprint: Insights from Asian Countries. *Heliyon*, e38603.

https://doi.org/10.1016/J.HELIYON.2024.E38603

Healy, P. M., & Palepu, K. G. (1995). The challenges of investor communication: The case of CUC International, Inc. *Journal of Financial Economics*, *38*(2), 111–140. https://doi.org/10.1016/0304-405X(94)00814-H

Hey, R. B. (2017). *Performance Management for the Oil, Gas, and Process Industries: A Systems Approach*. Gulf Professional Publishing. https://doi.org/http://dx.doi.org/10.1016/B978-0-12-810446-0.00001-3

Hoh, J., & Tang, K. B. (2021). Multinational corporation finance and accounting: An empirical transaction cost economics analysis. *IIMB Management Review*, *33*(4), 337–346. https://doi.org/10.1016/J.IIMB.2021.12.001

Holcomb, T. R., & Hitt, M. A. (2007). Toward a model of strategic outsourcing. *Journal of Operations Management*, *25*(2), 464–481. https://doi.org/10.1016/j.jom.2006.05.003

Isra, S., Yuliandri, Amsari, F., & Tegnan, H. (2017). Obstruction of justice in the effort to eradicate corruption in Indonesia. *International Journal of Law, Crime and Justice*, *51*, 72–83. https://doi.org/10.1016/j.ijlcj.2017.07.001

Jiao, L., Zhou, D., & Xu, R. (2024). Resource dynamics and economic expansion: Unveiling the asymmetric effects of natural resources and FDI on economic growth with a lens on energy efficiency. *Resources Policy*, *89*, 104611.

https://doi.org/10.1016/J.RESOURPOL.2023.104611

Jiraporn, P., Miller, G. A., Suk, S., & Kim, Y. S. (2008). *Is earnings management opportunistic or beneficial ? An agency theory perspective*. *17*, 622–634.

https://doi.org/10.1016/j.irfa.2006.10.005

Klofsten, M., Fayolle, A., Guerrero, M., Mian, S., Urbano, D., & Wright, M. (2019). The entrepreneurial university as driver for economic growth and social change - Key strategic challenges. *Technological Forecasting and Social Change*, *141*, 149–158.

https://doi.org/10.1016/J.TECHFORE.2018.12.004

Kothari, B. S. P., Loutskina, E., Nikolaev, V., & Loutskina, E. (2006a). Agency Theory of Overvalued Equity as an Explanation for the Accrual Anomaly. *Tilburg University*.

Kothari, B. S. P., Loutskina, E., Nikolaev, V., & Loutskina, E. (2006b). *AGENCY THEORY OF OVERVALUED EQUITY AS AN EXPLANATION FOR THE ACCRUAL ANOMALY Agency Theory of Overvalued Equity as an Explanation for the Accrual Anomaly Valeri Nikolaev*.

Lambert, R. A. (2006). Agency Theory and Management Accounting. *Handbooks of Management Accounting Research*, *1*(06), 247–268. https://doi.org/10.1016/S1751-3243(06)01008-X

Lin, Y., & Wang, T. S. (2011). Value Relevance, Idiosyncratic Risk, and External Financing Activities Value Relevance, Idiosyncratic Risk, and External Financing Activities. *SSRN Electronic Journal*.

Lingyan, M., Qamruzzaman, M., & Adow, A. H. E. (2021). Technological adaptation and open innovation in SMEs: A strategic assessment for women-owned SMEs' sustainability in Bangladesh. *Sustainability (Switzerland)*, *13*(5), 1–23.

https://doi.org/10.3390/SU13052942

Lobo, G. J., & Tung, S. S. (2000). Financial analysts’ earnings forecast dispersion and intraday stock price variability around quarterly earnings announcements. *Review of Quantitative Finance and Accounting*, *15*(2), 137–151.

https://doi.org/10.1023/A:1008317129991

Mancini, D., Vaassen, E. H. J., & Dameri, R. P. (n.d.). *Daniela Mancini, Accounting Information Systems for Decision Making*.

Massini, S., Perm-Ajchariyawong, N., & Lewin, A. Y. (2010). Role of corporate-wide offshoring strategy on offshoring drivers, risks, and performance. *Industry and Innovation*, *17*(4), 337–371. https://doi.org/10.1080/13662716.2010.496242

McIvor, R. (2009). How the transaction cost and resource-based theories of the firm inform outsourcing evaluation. *Journal of Operations Management*, *27*(1), 45–63.

https://doi.org/10.1016/j.jom.2008.03.004

MichaelFerber. (1999). A dictionary of literary Symbols. In *Cambridge University Press* (Vol. 4, Issue 1).

Mukherjee, D., Gaur, A. S., & Datta, A. (2013). Creating value through offshore outsourcing: An integrative framework. *Journal of International Management*, *19*(4), 377–389. https://doi.org/10.1016/j.intman.2013.03.015

Neves, L. W. de A., Hamacher, S., & Scavard, L. F. (2014). Outsourcing from the perspectives of TCE and RBV: A multiple case study. *Producao*, *24*(3), 687–699.

https://doi.org/10.1590/S0103-65132013005000082

Ng, A. W. (2018). From sustainability accounting to a green financing system: Institutional legitimacy and market heterogeneity in a global financial centre. *Journal of Cleaner*

Production, *195*, 585–592.

https://doi.org/10.1016/j.jclepro.2018.05.250

Ng, S., Pahlevi, C., Harryanto, & Habbe, A. H. (2015). Managerial Ability and Monitoring Structure as a Mechanism for Improving the Quality of Earnings and the Value of the Firms Listed on the Indonesia Stock Exchange. *Scientific Research Journal (SCIRJ)*, *III*(Xi), 25–39.

Ofori, I. K., & Asongu, S. A. (2024). Repackaging FDI for inclusive growth: Nullifying effects and policy-relevant thresholds of governance. *Transnational Corporations Review*, *16*(2), 200056. https://doi.org/10.1016/J.TNCR.2024.200056

Park, J. C. (2007). *Two essays on market efficiency : Tests of idiosyncratic risk : informed trading versus noise and arbitrage risk, and agency costs and the underlying causes of mispricing : information asymmetry versus conflict of interests*.

Ram, C. (n.d.). *Inter-Firm Relationships and the Idiosyncratic Volatility Anomaly* ¶.

Sassen, R., Hinze, A. K., & Hardeck, I. (2016). Impact of ESG factors on firm risk in Europe. *Journal of Business Economics*, *86*(8), 867–904. https://doi.org/10.1007/S11573-016-0819-3

Shivakumar, L. (2000). Do firms mislead investors by overstating earnings before seasoned equity offerings? *Journal of Accounting and Economics*, *29*(3), 339–371.

https://doi.org/10.1016/S0165-4101(00)00026-4

Wan, S., Lee, Y. H., & Sarma, V. J. (2023). Is Fintech good for green finance? Empirical evidence from listed banks in China. *Economic Analysis and Policy*, *80*, 1273–1291.

https://doi.org/10.1016/j.eap.2023.10.019

Wu, L., Chen, K., Chen, P., & Tung, P. (2016). Revisiting associations between specific asset investment and loyal and cooperative behavior : A complexity theory perspective. *Journal of Business Research*, 1–8.

https://doi.org/10.1016/j.jbusres.2016.01.032

You, W. H., Zhu, H. M., Yu, K., & Peng, C. (2015). Democracy, Financial Openness, and Global Carbon Dioxide Emissions: Heterogeneity Across Existing Emission Levels. *World Development*, *66*, 189–207.

https://doi.org/10.1016/j.worlddev.2014.08.013

Zhang, Q., Hu, Z., Zhang, Z., & Zhao, R. (2025). Carbon emission and idiosyncratic risk: Role of environmental regulation and disclosure. *International Review of Financial Analysis*, *105*, 104419.

https://doi.org/10.1016/J.IRFA.2025.104419