





RESEARCH PAPER

Enterprise risk management manufacturing industry quality determinants: Malaysia and Indonesia context

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ABSTRACT

Goal: Large manufacturing companies face significant risks due to importing raw materials and exposure to fluctuating exchange rates. Enterprise Risk Management (ERM) is vital in this sector to manage its distinctive risks. This study finds ERM factors in Indonesia and Malaysia that affect company value and empirically evaluates risk management in their organizations.

Design / Methodology / Approach: The factors that influence the quality of a company's ERM examined in this study include auditor quality, ownership concentration, board monitoring, gender on the board of commissioners, gender on the board of directors, and human capital. This study's population is 2018-2020; 300 Indonesian and 252 Malaysian manufacturing companies contributed 552 research observations.

Results: This study shows that a qualified auditor, board monitoring, gender ratio on the board of commissioners, and human capital may uncover ERM implementation issues. On the other hand, higher share ownership does not affect ERM. Implications for practitioners and suggestions for future researchers are also described.

Limitations of investigation: The crucial role of Enterprise Risk Management (ERM) in mitigating these unique industry risks, this study underscores the limitations inherent in factors such as auditor quality, ownership concentration, board monitoring, and gender diversity within corporate leadership.

Practical implication: The necessity for manufacturing companies to prioritize specific aspects of Enterprise Risk Management (ERM) in their organizational strategies.

Originality / Value: This research illuminates the nuanced interplay of factors shaping Enterprise Risk Management (ERM) efficacy within the dynamic context of the manufacturing industry.

Keywords: ERM; Auditor quality; Ownership concentration; Gender; Human capital.

1 INTRODUCTION

Since the 1990s, interest in Enterprise Risk Management (ERM) has grown as businesses face a variety of shocks in competitive environments (Yang et al., 2018), particularly in light of increasing risk complexity, increasing dependencies between risk sources, enhanced risk identification and quantification, and IT. For example, in 2018, PT Astra International Tbk faced a significant supply chain risk when several of its suppliers were found to be using uncertified palm oil, which led to a loss of market access to specific markets that require certification. The incident highlighted the importance of effective risk management in supply chain

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management and the need for companies to ensure compliance with industry regulations and standards. PT Astra International Tbk addressed the issue by implementing a more rigorous certification process for its suppliers and improving its traceability and sustainability practices (Yayasan KEHATI, 2019). ERM systems in rating processes and more vital rules after the financial crisis are factors (Hoyt & Liebenberg, 2011). According to Alijoyo (2022), entrepreneurs must be ready to tackle diverse challenges and ever-changing factors; managing risks is a protective strategy for business owners against various issues. The phenomenon faced by PT Astra International Tbk related to supply chain risk provides a clear picture of the importance of Enterprise Risk Management (ERM) in the context of sustainability and compliance. In an effort to address these risks, the company implemented a more stringent certification process and improved traceability practices. This shows a proactive response to reduce risk and improve compliance. This study will explore the extent to which ERM is carried out, through various perspectives that influence the success of ERM.

Enterprise Risk Management (ERM) has been implemented worldwide in various industries and countries. ERM is a comprehensive and adaptable risk management framework that can be customized to meet the specific needs of different industries and organizations. Prior empirical research on ERM has typically focused on specific industries, for example, with a focus on the insurance industry (Altuntas et al., 2011; Hoyt & Liebenberg, 2011) or specific geographical areas, such as using US data (Beasley et al., 2005; Pagach & Warr, 2010), Chinese data (Li et al., 2014) or Pakistan data (Yang et al., 2018). ERM has been successfully implemented in various industries, including banking and finance, healthcare, energy, manufacturing, construction, and transportation. By implementing ERM effectively, manufacturing companies in Indonesia and Malaysia can increase their resilience, minimize losses, and take advantage of opportunities in a changing business environment (Pertheban et al., 2023; Syrová & Špička, 2023).

This study aims to increase empirical evidence in the manufacturing industry. Large manufacturing companies face a high risk because of the production process in which raw materials are imported, and export sales are affected by fluctuating dollar exchange rates, so risk management must be implemented. Enterprise Risk Management (ERM) is crucial for the manufacturing industry due to the unique risks associated with this sector. The manufacturing industry is characterized by complex supply chains, intense competition, and rapidly evolving technologies, which create various risks that can impact the industry's profitability and sustainability (Zou et al., 2019). Effective ERM can help manufacturing companies proactively identify and manage these risks, reducing the likelihood of operational disruptions, reputational damage, and financial losses. For instance, ERM can help companies to manage supply chain risks by identifying and mitigating potential disruptions in the supply chain, such as natural disasters, political unrest, or labor disputes (Islam & Tedford, 2012). Furthermore, ERM can help manufacturing companies manage risks associated with product quality, warranty claims, and product recalls, which can significantly impact a company's financial performance and reputation. Effective risk management can help manufacturers to identify potential quality issues early on and implement appropriate corrective actions to minimize the impact of product defects. Competent auditors can identify risks that management may have missed, providing additional insight into potential threats. Auditors can make recommendations based on their findings, helping organizations improve their risk management strategies and processes (Velte, 2023). In other ways, auditor quality does not affect ERM (Zahid et al., 2022).

The empirical literature has focused on the determinants of ERM, including board monitoring (Gordon et al., 2009), firm competitive effect (Shivaani & Agarwal, 2020), and audit firm impact (Jones et al., 2018). A rapidly changing business environment can create new risks and challenges that may have yet to be accounted for in the risk management framework, requiring a constant review and update of the ERM process to ensure its effectiveness, so that ownership concentration affects ERM (Bakos & Dumitraşcu, 2021). Previous research shows that ownership concentration does not affect ERM (Ong et al., 2024). One of the crucial factors is the support and commitment of senior management towards ERM. If the senior management is fully committed to ERM, it can lead to inadequate resources, adequate risk assessment, and poor risk management practices. Furthermore, profitability also can impact the quality of ERM by affecting the availability of resources, risk appetite, and quality of data available for risk assessment, all of which are crucial factors in effective risk management. Human capital influences the organizational culture related to risk management. Employees

who are educated about the importance of ERM tend to be more proactive in identifying risks. Effective ERM requires good communication and collaboration across the organization. Solid human capital supports better interactions between teams. Thus, investment in human capital development is key to improving the effectiveness of ERM in an organization (Settembre-Blundo et al., 2021). But, previous research shows that, Human capital does not affect ERM (Tasmin et al., 2020).

While there has been considerable research on enterprise risk management (ERM) in general, there still needs to be more in our understanding of how ERM applies to specific industries, such as manufacturing. Some critical gaps in ERM research for the manufacturing industry include insufficient attention to cultural and organizational factors. There is, however, a gap in the literature on studies conducted in Asian contexts. ERM is influenced by organizational and cultural factors, such as board monitoring, gender on the board of commissioners, gender on the board of directors, and human capital.

Gender diversity in the board of directors may affect enterprise risk management (ERM) in several ways. Having a gender-diverse board of directors means more diverse perspectives and experiences in decision-making. It can lead to better identification, assessment, and management of risks (Elnahass et al., 2023). A more diverse board can bring broader skills and knowledge, leading to more innovative and effective risk management strategies. Women directors may also have better risk awareness and be more likely to raise concerns about risks their male counterparts may overlook (Ferrary & Déo, 2023). Studies have shown that gender-diverse boards are more likely to ask tough questions, challenge management decisions, and reduce the likelihood of groupthink (Mateos de Cabo et al., 2012). This article aims to bridge that gap by identifying the quality determinants of ERM in the manufacturing sector in Indonesia and Malaysia. The purpose of this study aims to: 1.) Does auditor quality have an impact on corporate risk management? 2.) Does ownership concentration have an impact on corporate risk management (ERM)? 3.) Does board monitoring have an impact on corporate risk management (ERM)? 4.) Does gender diversity of the board of commissioners have a positive impact on corporate risk management (ERM)? 5.) Does gender diversity of the board of directors have a positive impact on corporate risk management (ERM)? 6.) Does human capital have a positive impact on corporate risk management (ERM)?

2 LITERATURE REVIEW

2.1 Enterprise Risk Management

Guidelines exist for enterprise-wide holistic risk management. COSO's 2017 framework is one of the most popular. According to COSO (2017), a company's enterprise risk management system should focus on achieving the following four objectives: (1) Strategy, which should align with the company's mission and lend support to it. (2) Operations: making productive and effective use of the resources available to the organization (3) Reporting: the dependability of the reporting mechanism utilized by the firm; and (4) Compliance refers to an organization's adherence to the regulations and legislation that are in effect. In addition, risk management refers to ISO 31000 which aims to help organizations develop, implement and improve an effective risk management framework to achieve objectives and improve decision making. ISO 31000 provides comprehensive guidance for organizations in managing risks systematically and structured, so that they can achieve their objectives more effectively.

Assessing enterprise-wide risk management efforts can be challenging, particularly when evaluating companies across different industries and regions. Analysts often use announcements of Chief Risk Officer (CRO) appointments or a keyword search in annual reports to evaluate a company's risk management efforts. While these methods can provide valuable insights into a company's risk management practices, they have limitations (Lechner & Gatzert, 2018; Liebenberg & Hoyt, 2003; Pagach & Warr, 2011). Assessing enterprise-wide risk management can also be done using various tools and methods, including the use of the ERM Index (Farrell & Gallagher, 2015; Gordon et al., 2009) and ERM Survey (Beasley et al., 2005; Sekerci, 2015).

These procedures can be detrimental because of the lack of a suitable and reliable measurement for the level of ERM participation. To distinguish between European insurance companies with adequate risk management systems and those without, we employ the Standard & Poor's ERM rating (McShane et al., 2011). This rating system is a thorough and advanced evaluation that (centers on five essential factors of a corporation's risk management

structure, including its risk management culture, risk controls, emerging risk management, risk models, and strategic risk management. Table 1, provided in the study, summarizes the fundamental characteristics of the five S&P ERM rating categories.

Table 1 - A Description of the S&P ERM Rating Scores

ERM's score	Description
Very strong	The insurer excels in implementing the ERM framework, achieving a satisfactory rating for its economic capital model. They can consistently identify, measure, manage, and control risks and enterprise-wide within established risk tolerances. Risk management is crucial in the insurer's strategic decision-making.
Strong	The risk models or emerging risk management are rated "neutral," while other ERM aspects are deemed "positive." The insurer adopts an integrated and enterprise-wide approach to risk management and considers it in its business strategy. However, their implementation is not as advanced as that of a "powerful ERM" insurer.
Adequate strong risk controls	The insurer's risk controls receive a "positive" rating, but their other primary features are evaluated as merely adequate, including a "neutral" rating for strategic risk management adoption. They still lack a comprehensive view of all hazards that impact the entire company.
Adequate	The insurer receives a "neutral" rating for its risk management culture and control implementation. Although they can identify and manage risks, some material risks are not yet included in their process. Additionally, there is a lack of enterprise-wide and comprehensive risk coordination throughout the organization.
Weak	Risk management culture and risk controls are rated as "negative" by the insurer's implementation. Inadequate internal capacity for recognizing and managing risk exposures, as well as a lack of established risk tolerance guidelines

Source: McShane et al. (2011).

Despite the growing importance of holistic risk management systems, just 52% of financial services organizations had an ERM or equivalent system in 2010 (Deloitte, 2011). Thus, questions arise about why some firms adopt ERM while others do not, how an ERM system influences a firm's performance, and whether it improves shareholder value. There is many quantitative research uses multivariate methodologies to investigate the elements that influence the adoption (or level) of an ERM framework (Abbas et al., 2021; Baxter et al., 2013; Gatzert & Martin, 2015; Panfilo, 2019; Tasmin & Muazu, 2017).

It has been reported that qualified auditors can help detect errors in ERM implementation and that firms inspected by qualified auditors implement risk management better. Ping and Muthuveloo (2015) summarized the results and revealed that Big Four auditors can identify risks, improving risk assessment and monitoring. According to the literature, the Big Four are more attentive to annual reports to maintain their reputation. There are countless examples of the significance of this relationship in practice. For example, in 2015, the multinational automotive company, Volkswagen, faced a major scandal when it was revealed that it had intentionally installed "defeat devices" in its diesel engines to cheat emissions tests. The company's auditor, KPMG, was criticized for failing to detect fraudulent practices and providing a clean audit opinion on the company's financial statements. The incident highlighted the importance of auditor quality in ensuring the integrity and transparency of a company's risk management practices and the need for auditors to exercise professional skepticism and due diligence in their evaluations. According to Hidayah et al. (2021), one example of many essential things in managing risk is company transparency in disclosing information. Auditor quality can significantly affect enterprise risk management (ERM) as auditors play a critical role in assessing and providing assurance on the effectiveness of a company's risk management practices. Therefore, we assume:

H1: The quality of auditors impacts enterprise risk management (ERM).

We want to look into how significant shareholders' presence affects ERM quality. It is frequently argued that corporate control free-riding problems associated with a dispersed principal are mitigated by ownership concentration (Mafrolla et al., 2016). Similarly, large investors are incentivized to exercise greater management oversight and control to reduce manufacturing costs and increase their monitoring role in the companies in which they invest. It is calculated as the percentage of a company's stock held by institutional investors that exceeds 5% of outstanding shares. The consequence is that corporate governance plays a significant role in determining the value of risk management through quality governance in terms of strong internal and external corporate governance. Investors more influenced by

business risk management policies are more likely to be accountable for the external demand to implement ERM controls (Liebenberg & Hoyt, 2003). It is classified as a monitoring agent (Wahab et al., 2008). According to Fama and Jensen (1983), outside directors have considerable reputational incentives to monitor CEOs and management adequately. Significant "outside" ownership can assist in reducing agency conflicts because they have the capacity and incentive to avoid insider expropriation. Significant outside ownership plays a monitoring function in this regard and can be expected to put more pressure on management to release further information. According to Hoyt and Liebenberg (2011), ERM use is favorably associated with institutional ownership. These findings support the hypothesis that institutional investor pressure significantly predicts ERM adoption. Hence, we assume the hypothesis:

H2: Ownership concentration impacts enterprise risk management (ERM).

The board of directors and commissioners are responsible for monitoring the company. According to the OECD, good corporate governance requires the board to provide strategic guidance, supervise management, and explain the commissioners' responsibilities to shareholders. Beasley et al. (2005) established a link between independent board members and ERM implementation. The preceding explanation indicates a positive relationship between board supervision and ERM. Independent board members can play a positive role in implementing ERM, but the board must remain independent by analyzing and monitoring risks and formulating policies. The board must also clearly identify different types of information and decisions, including the resolution of company objectives, based on past data and analysis. Matching the company's board with its ERM system is essential for ERM performance. Therefore, we suggest that the company's ERM system align with essential performance elements. According to Raber (2003), management has identified and brought to the board's attention the primary risks that the company faces, as well as a plan to address those risks. As a result, we propose:

H3: Board monitoring impacts enterprise risk management (ERM).

Board gender diversity (as firm resources) may influence enterprise risk management. Diversity on the board of commissioners guides the audit committee examining financial statements. Socially, traditionally, and culturally, women and men differ. Women avoid cheating more (Mateos de Cabo et al., 2012). It is generally linked to environmental transparency, which includes board gender diversity. This distinction can be seen in personality, lifestyle, leadership, communication, and working styles. Fakir and Jusoh (2020) found a positive relationship between the proportion of women on boards and environmental disclosure. The resource dependence theory (RDT) supports the idea that board gender diversity can help companies acquire critical resources from the environment (Provan et al., 1980). Female directors can bring valuable information, gain support, and promote social responsibility (Hillman et al., 2007; Wang & Coffey, 1992). Therefore, RDT can explain the role of board gender diversity in enterprise risk management, including environmental and social goals. A survey by PwC 2018 found that 46% of directors ranked gender diversity as the most crucial board attribute for an effective board, the highest since the survey began asking such questions in 2012. We assume, based on the preceding argumentation.

H4: Gender diversity on the board of commissioners positively affects Enterprise Risk Management (ERM).

H5: Gender diversity on the board of directors positively affects Enterprise Risk Management (ERM).

Human capital refers to the value employees can offer to their organizations. Improving human resources means fostering quality, dignity, excellence, and character (Baron & Armstrong, 2007). Said et al. (2013) identified a substantial association between chairman and CEO age, gender, and background knowledge. The fraction of female directors and chairpersons/CEOs with financial backgrounds has no relationship to CEO age. Utilizing the setting of the South African public sector, Moloi (2018) examined the human capital deployed to evaluate its role in limiting effective risk management methods and practices, including the inability of staff to control functions such as ERM with optimal employees or to fill vacancies with qualified candidates, could hamper an essential control environment function, leading to high levels of irregular expenditure and wasteful expenditure. Human capital can affect enterprise risk management (ERM) in several ways. Employees' knowledge, skills, and experience can impact how they identify, assess, and mitigate risks in their roles, ultimately affecting the overall effectiveness of the company's ERM. For example, employees trained to identify and report risks, who understand the importance of complying with regulations and internal policies, and who can communicate effectively with others can help ensure that risks

are managed appropriately. Here is the hypothesis:

H6: Human capital positively affects Enterprise Risk Management (ERM).

3 METHOD

This research is a research with a quantitative approach which utilizes secondary data. The sampling method of this research uses Simple random sampling. Simple random sampling is a sampling technique in which each member of the population has an equal chance of being selected. This study's population is a manufacturing company listed on Indonesia Stock Exchange and the Malaysia Stock Exchange from 2018-2020. The total number of research observations was 552, with 252 data from Malaysian companies and 300 data from Indonesian companies. Research on the risks faced by firms in Malaysia and Indonesia provides insights into risk management in different contexts, including the impact of regulation and the economic environment. Research on how government policies in Malaysia and Indonesia affect firms can provide insights for better policy development. Comparison of economic growth and its impact on firms can be an interesting research subject. Thus, firms in Malaysia and Indonesia offer many opportunities for research and academic study that can enrich the understanding of business practices, risk management, sustainability, and innovation in different contexts.

The information for this study was compiled from the companies' annual reports and financial statements. After that, we calculate all of the variables and analyze the results. Therefore, it entails recording, collecting, selecting, tabulating for quantitative analysis, and presenting as processed data.

Gordon et al. (2009) developed The Enterprise Risk Management Integrated (ERMI) Framework, which identifies four main goals for effective ERM: strategy, operations, reporting, and compliance. These goals are critical for assessing the overall effectiveness of an organization's ERM program.

Descriptive and inferential statistical methods were used to analyze the research data. In this particular research endeavor, the hypothesis was put to the test through the utilization of multiple regression modeling as well as SPSS 18, respectively. The following equation represents the research model for this study:

$$ERMit = \beta_0 + \beta_1AUDITit + \beta_2BOWNit + \beta_3BODMit + \beta_4BKOMit + \beta_5BDIRit + \beta_6HCAPit + \epsilon it$$

Description:

β_1-6 = Coefficient for each independent variable

ERM = Enterprise risk management

AUDIT = Audit quality

BOWN = Ownership Concentration

BODM = Board Monitoring

BKOM = Gender on the Board of Commissioners

BDIR = Gender on the Board of Directors

HCAP = Human Capital

In multiple regression analysis, the stages include descriptive statistics, the classical assumption test, the normalcy test, the autocorrelation test, the multicollinearity test, and the heteroskedity test. When testing hypotheses with a significance threshold of 0.05 or below, the t-test was utilized.

4 RESULT AND DISCUSSION

Table 2 provides information on the coefficients of the regression model used in the study, which indicates the average cost increase associated with a 1-point increase in each predictor variable.

Table 2 - Measurement of Each Variable in Regression Analyses

Variable	Measurement
Enterprise Risk Management	Enterprise Risk Management Index (ERMI) (Gordon et al., 2009).
Quality Auditor	Set 1, if a company is audited by the top four auditing firms (Price Waterhouse Coopers, Deloitte & Touche, Ernst & Young, and KPMG), 0 otherwise (Golshan & Rasid, 2012).
Ownership Concentration	The more significant number of Shareholders / total company

Board Monitoring	shares (set 1 if >20%), 0 otherwise (Mafrolla et al., 2016).
Gender on the Board of Commissioners	Number of directors / natural logarithm of sales (Gordon et al., 2009).
Gender on the Board of Directors	Number of female commissioners / total commissioners (Mateos de Cabo et al., 2012).
Human Capital	Number of female directors / total directors (Mateos de Cabo et al., 2012).
	Number of directors with financial or legal background/total number of directors (Said et al., 2013).

Source: Authors (2023).

For instance, the coefficient of audit quality (AUDIT) in the regression model is 1.03, meaning that a 1-point increase in audit quality is associated with an average increase of 1.03 points in ERM. On the other hand, the coefficient of ownership concentration (BOWN) is -0.59, indicating that a 1-point increase in ownership concentration is associated with an average decrease of 0.59 points in ERM. These coefficients provide helpful information for understanding the impact of each predictor variable on ERM.

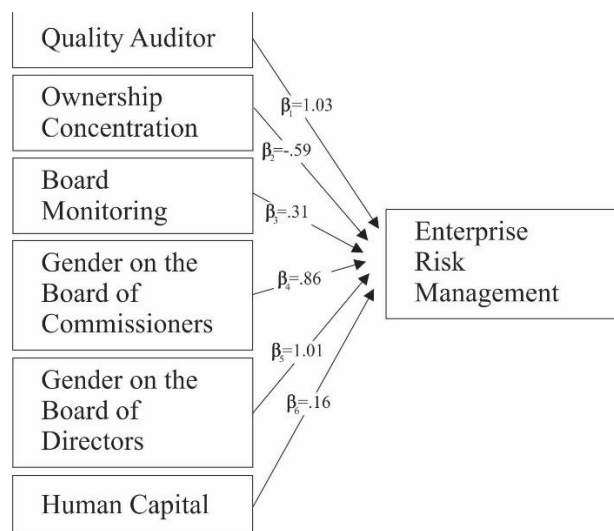


Figure 1 - Multiple regression results of the conceptual framework
Source: Authors (2023).

Figure 1 presents the study's results in a conceptual framework, which helps illustrate how the various predictor variables are related to ERM. The regression equation used in the study (Equation 1) obtained the regression results for the relationship between the predictor variables and ERM.

$$ERM = 2.44 + 1.03AUDIT + (.59)BOWN + .31BODM + .86BKOM + 1.01BDIR + .16HCAP$$

The six independent variables affect ERM by 51%, while external variables outside this study influence the remaining 49%. Utilize the R2 score to demonstrate the extent of variance in the dependent variable that the regression model explains.

Table 3 proves the first hypothesis. It shows that the audit quality variable, as measured by big 4 and non-big 4 KAP external audits, has a significant effect on all samples in Indonesia and Malaysia, as shown by the <5% significant p-value.

Table 3 - Result of Multiple Linear Regression Analysis Coefficients

Hypotheses	Var	All		Malaysia		Desc	Indonesia		
		B	Sig.	B	Sig.		B	Sig.	Desc
	Cons	2.44	.00	5.34	.00		1.16	.001	
H1	AUDIT	1.03	.01	1.51	.02	Accepted	.60	.00	Accepted
H2	BOWN	-.59	.07	.26	.41	Not Accepted	.14	.61	Not Accepted
H3	BDOM	.31	.03	9.83	.01	Accepted	4.42	.00	Accepted
H4	BKOM	.86	.04	6.04	.04	Accepted	.30	.03	Accepted
H5	BDIR	1.01	.00	1.35	.00	Accepted	.13	.00	Accepted
H6	HCAP	.16	.02	.74	.03	Accepted	.99	.03	Accepted
	Adj R ²	.51		.89			.71		

F	1.85	.08	1.64	1.37	8.60	.000
N	552		252		300	

Note: CI=0.05

Source: Authors (2023).

This study proves that organizations reviewed by qualified auditors adopt superior risk management, supporting the claim that trained auditors successfully spot faults in ERM implementation. This study supports Ping and Muthuveloo (2015), which shows that Big Four auditors can identify risks, enhancing risk assessment and monitoring. High-quality auditors can provide a more thorough and objective evaluation of the company's ERM framework, identify weaknesses, and provide improvement recommendations. On the other hand, low-quality auditors may need more expertise, experience, or independence to provide an accurate and reliable assessment, leading to a false sense of security for the company and its stakeholders.

Second, ownership concentration may affect ERM. This study found that block holders do not significantly affect ERM for Indonesian and Malaysian companies or the overall sample. Block holder ownership affects ERM with a p-value of 0.07, more than 0.05. This study does not support Mafrolla et al. (2016) research that higher ownership concentration in a company leads to a more robust demand for identifying financial, operational, regulatory, reputational, and information risks. However, ownership concentration does not necessarily affect enterprise risk management if the company has effective corporate governance mechanisms, such as an independent board of directors, strong internal controls, and transparent reporting practices. For example, PT Unilever Indonesia Tbk, a subsidiary of Unilever, is a company with high ownership concentration, with Unilever NV and Unilever PLC holding a combined stake of over 85%. However, the company has implemented robust corporate governance practices, such as appointing independent directors to the board and establishing an audit committee. It ensures that the company's risk management practices are subject to independent scrutiny and oversight. As a result, the company has maintained a strong reputation for corporate responsibility and sustainability and has been recognized as a leader in ERM and corporate governance in Indonesia.

Third, the board of commissioners monitoring may influence ERM. This study found that the number of commissioners to sales ratio measures board oversight. This study shows the board of commissioners' monitoring effect on Indonesian and Malaysian companies. Sample tests show that board monitoring has a significant impact on ERM. This research supports the argument that board members positively relate to the ERM adoption stage. This study in Indonesian and Malaysian companies supports the idea that an effective board of commissioners encourages ERM adoption (Beasley et al., 2005). Effective board monitoring can help ensure that the company's risk management processes are appropriately designed, implemented, and evaluated and that management is held accountable for managing risks in line with the company's strategic objectives. For example, in 2017, Malaysia's largest palm oil producer, FGV Holdings Berhad, faced allegations of labor abuses, environmental violations, and financial irregularities. The company's board of directors was criticized for failing to adequately monitor and address these risks, leading to reputational damage and declining shareholder value. In response, the company implemented several governance reforms, including appointing independent directors to the board and establishing a board committee to oversee sustainability and human rights issues. These reforms improved the company's risk management practices and helped restore investor confidence.

The following variable is the gender of the commissioner and the board. In this study, evaluating all samples shows that the gender percentage of commissioners and boards affects ERM. Independent testing of samples from Indonesian and Malaysian businesses revealed a gender effect on ERM commissioners. This study can help to support the fourth hypothesis, which looks at the impact of gender on ERM. This study supports a previous study (Fakir & Jusoh, 2020), which found a positive relationship between board gender proportions. The proportion of women on board directors in Indonesia and Malaysia may explain these expected results. In Indonesia, 12.47% of business commissioners are female, while 14.10% are in Malaysia. This small sum can make gender diversity's role in avoiding risk and fraud significant. For example, Sime Darby Berhad, a Malaysian multinational conglomerate involved in various sectors, including plantation, property, and automotive. The company has implemented a gender diversity policy that aims to increase the representation of women on its board of directors and senior management positions. The company believes a diverse

board can provide better risk oversight and more effective decision-making. As of 2021, the company's board of directors comprises six women and seven men, reflecting a strong commitment to gender diversity and improved risk management practices.

Lastly, human capital is assessed by the proportion of directors with accounting/financial/business/management backgrounds. Ramadhan et al. (2022) said a strategy is essential, particularly within management accounting. Human capital significantly affected ERM in the testing of Indonesian and Malaysian enterprises. This study can establish that human capital influences ERM. The average human capital in Indonesian enterprises is 54.75 percent, while in Malaysia, it is 39 percent. The average value of corporate human capital in Indonesia (above 50%) and Malaysia is also high. Evidence that significant levels of human capital can influence risk management affects measurement possibilities. In the Indonesian manufacturing industry, one example of how human capital can impact ERM is PT Krakatau Steel, a state-owned steel manufacturer. In 2015 the company faced a significant financial crisis due to a combination of factors, including declining demand, high debt levels, and operational inefficiencies. To address these challenges, the company implemented a comprehensive restructuring plan that included investments in human capital. As a result of these efforts, Krakatau Steel was able to reduce its debt levels, improve operational efficiencies, and achieve profitability in 2018 after several years of losses. The company's investment in human capital played a critical role in its successful turnaround and demonstrated the importance of a skilled and knowledgeable workforce in effective ERM practices.

5 CONCLUSION

This article studies the enterprise risk management manufacturing industry quality determinants in Malaysia and Indonesia. This study shows that a skilled auditor may uncover ERM implementation issues. Board monitoring and human capital also affect ERM. These results suggest that increased board of commissioners monitoring enables active engagement, which improves the company's risk management. Ownership concentration and gender ratio on the board of commissioners do not affect ERM. This study cannot substantiate the claim that gender diversity among board directors improves risk management in Indonesia and Malaysia. Board gender ratios do not affect ERM. It indicates that personality, leadership, communication, and working styles are irrelevant to business risk management in Indonesia and Malaysia.

The finding that companies should consider the critical implementation of ERM concerning quality auditors, board of directors' monitoring impact, gender ratio, and human capital on firm value suggests that these factors are crucial in determining the success of ERM practices and, in turn, the company's value. ERM determinants and company values need more research. Multi-growing nation data samples (like Vietnam and Thailand) must show geographical and industry variances in ERM variables and performance. The availability of trustworthy data and data collection challenges must be addressed. Future studies could focus on data and text mining to solve this problem. It is crucial because ERM's importance is expected to grow, especially in the digital banking and finance sectors. For cybersecurity failure risk perception), new and upgraded risk-based regulatory frameworks demand comprehensive risk management systems to analyze and manage risks comprehensively according to the proportionality principle. Empirical literature explains ERM's motivations and values. This research can be a consideration for the world of practice so that ERM is improved through Auditor Quality, Ownership Concentration, Board Monitoring, Human Capital, and gender considerations. This research has limitations in quantitative data, but has not been confirmed directly with ERM experts in both countries. Because macro factors may affect the running of ERM. Thus, for future research, qualitative in-depth studies are needed so that information on the differences that occur becomes more detailed.

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