

THE NEXUS BETWEEN BOARD COMPOSITION AND FIRM PERFORMANCE: EVIDENCE FROM THE F4GBM INDEX

Debbie James Belawan and Chee-Ling Chin*

Faculty of Economics and Business,
Universiti Malaysia Sarawak, Malaysia
*Corresponding email: chlchin@unimas.my

ABSTRACT

This study examines the nexus between board composition and firm performance among companies listed under the FTSE4Good Bursa Malaysia (F4GBM) Index. A total of 116 F4GBM-listed companies were analyzed over a five-year period from 2019 to 2023 using panel data regression. Board composition was proxied by board size, board independence, and board gender diversity, while firm performance was measured by return on assets (ROA) and return on equity (ROE). The empirical results indicate that none of the board composition variables have a statistically significant impact on firm performance. However, the control variables show significant effects—debt ratio negatively influences performance, while firm size exhibits a positive relationship. The insignificant findings suggest that, among Malaysian ESG-compliant firms, the influence of board structure on financial performance may be limited due to standardized governance practices and regulatory requirements under Bursa Malaysia's corporate governance framework.

Keywords: *Board size, board independence, board gender diversity, firm performance, F4GBM Index*

INTRODUCTION

The relationship between board composition and firm performance has attracted growing attention in both academic and professional circles, as corporate governance continues to play a critical role in shaping firm success and sustainability. Within this context, the FTSE4Good Bursa Malaysia (F4GBM) Index provides a relevant platform for examining this nexus, as it comprises companies recognized for their strong commitment to environmental, social, and governance (ESG) practices. Board composition—comprising board size, gender diversity, and independence—serves as a vital mechanism of corporate governance, facilitating effective communication between directors, shareholders, and managers to ensure that corporate decisions align with stakeholder interests.

In Malaysia, research investigating the interplay between board composition and firm performance remains limited, particularly among firms with advanced ESG commitments. The adoption of corporate governance practices in Malaysia has gained significant momentum in recent years, aiming to enhance transparency, attract international investors, and reinforce accountability. At the same time, Malaysian corporations are under increasing pressure to balance financial performance with sustainability objectives, in line with global trends toward responsible corporate behavior. According to Bursa Malaysia (2024), the F4GBM Index seeks to raise the profile of companies with exemplary ESG performance and to promote greater disclosure of governance and sustainability best practices.

The board of directors plays a central role in guiding corporate strategy, overseeing management, and ensuring accountability to shareholders. Empirical evidence has shown that attributes such as board size, gender diversity, and independence can influence the effectiveness of board oversight and, consequently, firm performance. For instance, Gatehi (2022) notes that effective board composition helps mitigate agency problems and align managerial behavior with shareholder goals. However, persistent conflicts of interest and agency costs may still lead to suboptimal outcomes, as highlighted by Kabir et al. (2023), who found that inadequate board supervision can contribute to corporate underperformance and even failure.

Despite the strong governance orientation of F4GBM Index firms, the extent to which board composition influences both financial and ESG outcomes remains insufficiently explored. Previous findings have also been mixed—Li and Chen (2018) caution that gender quotas may inadvertently affect firm profitability, Almashtadani et al. (2022) report that larger boards may hinder decision-making efficiency, while Kijkasiwat and Mumtaz (2022) emphasize the positive influence of board independence on investor confidence and firm reputation. These inconsistencies underscore the need for further empirical research to clarify how different board characteristics shape firm performance within the context of sustainability-oriented firms in Malaysia.

Hence, this study aims to examine the nexus between board composition and firm performance among companies listed on the F4GBM Index from 2019 to 2023. Firm performance is measured using return on assets (ROA) and return on equity (ROE), while board composition is assessed through indicators of board size, gender diversity, and independence. By providing empirical evidence from the Malaysian market, this study seeks to enhance understanding of how governance structures contribute to both financial success and sustainable corporate practices. The findings are expected to offer valuable implications for policymakers, regulators, investors, and corporate leaders seeking to strengthen governance mechanisms and promote sustainable performance among listed companies.

LITERATURE REVIEW

Agency Theory

Agency theory explains the relationship between shareholders (principals) and management (agents), highlighting potential conflicts that arise when their interests diverge. According to Pepper and Gore (2012), the theory provides a comprehensive framework for understanding how shareholder interests, managerial performance, and executive compensation interact in influencing business success. The theory assumes that managers act in the best interests of shareholders; however, in practice, this alignment is often imperfect. Hendrastuti and Harahap (2023) noted that inefficiencies and increased operational costs—known as agency costs—can emerge when agents pursue their own interests over those of the principals. Similarly, Aziz et al. (2023) argued that conflicts of interest arise when managerial objectives deviate from shareholder goals, leading to rising agency costs. Asymmetric information further compounds this issue, as shareholders are unable to monitor managerial actions continuously, creating ethical and governance challenges.

Within the context of this study, agency theory provides a theoretical foundation for examining how board composition affects firm performance among companies listed on the F4GBM Index. Effective board structures—through the inclusion of independent directors, balanced gender representation, and optimal board size—can mitigate agency problems by enhancing oversight and accountability. The presence of independent directors, in particular,

is expected to strengthen monitoring functions and improve managerial decision-making aligned with ESG and financial objectives. Thus, agency theory supports the notion that well-structured boards contribute to better governance and superior firm performance.

Board Size and Firm Performance

The relationship between board size and firm performance has been widely debated, with mixed empirical results. Larger boards are often associated with a broader range of expertise, experience, and perspectives, which can enhance decision-making quality and strengthen oversight (Jaafar et al., 2021). From the perspective of resource dependence theory, a larger board provides access to critical external resources and strategic linkages that can improve firm performance.

However, agency theory cautions that an excessively large board may create coordination difficulties, communication barriers, and slower decision-making processes (Jenter et al., 2023). Merendino and Melville (2019) further argued that large boards may limit the exchange of ideas and reduce the effectiveness of governance mechanisms. Similarly, Almarshhadani et al. (2022) found that larger boards can negatively affect financial performance due to inefficiencies and reduced accountability.

Contrarily, some studies emphasize that larger boards may mitigate the dominance of powerful individuals and strengthen collective oversight. Kour et al. (2025) suggested that board size can positively contribute to firm performance when it fosters diversity of opinions and balanced discussions. Muazaroh et al. (2025) also highlighted that larger boards are associated with lower liquidity risk and greater financial stability, while smaller boards may exert excessive pressure on CEOs, leading to higher investment risks. These findings indicate that the optimal board size may depend on firm-specific and industry-related factors. Given these conflicting perspectives, this study posits that board size plays a significant role in influencing firm performance among companies listed on the F4GBM Index.

Hypothesis 1: There is a significant relationship between board size and firm performance.

Board Gender Diversity and Firm Performance

Gender diversity on corporate boards has become a central theme in the discourse on inclusive governance and sustainable business practices. According to stakeholder and legitimacy theories, gender-diverse boards enhance firm reputation, stakeholder trust, and the quality of decision-making. Empirical evidence supports the view that female directors contribute positively to firm performance through ethical leadership, long-term orientation, and risk-averse decision-making (Nguyen et al., 2023; Anas et al., 2023). These studies demonstrate that women tend to emphasize sustainability and social responsibility, thereby aligning corporate strategies with broader stakeholder expectations.

Oyegoke et al. (2024) observed that female directors improve board monitoring and financial reporting transparency, while Kabir et al. (2023) found that gender-diverse boards enhance oversight quality and reduce agency costs. However, other studies have reported insignificant or mixed results. Reddy et al. (2019) discovered no significant link between gender diversity and firm performance in North America, suggesting that contextual governance factors and cultural dynamics may mediate the relationship. Likewise, Firew (2024) and Al-Matari and Mohammed (2024) revealed that the impact of gender diversity varies across industries and markets. As the evidence remains inconclusive, this study expects that gender diversity exerts a meaningful influence on firm performance.

Hypothesis 2: There is a significant relationship between board gender diversity and firm performance.

Board Independence and Firm Performance

Board independence is widely recognized as a cornerstone of sound corporate governance. Independent directors are expected to provide unbiased oversight, minimize agency conflicts, and safeguard shareholders' interests. Empirical evidence generally supports the positive influence of board independence on firm performance. Mokhtar et al. (2023) reported that independent boards enhance monitoring effectiveness and governance quality, while Wu (2021) found that independent directors contribute to long-term value creation through improved accountability. Ramdani and Witteloostuijn (2010) also asserted that independent directors mitigate managerial self-interest and strengthen strategic control.

Nevertheless, not all studies have found significant effects. Guluma (2021) and Bamel et al. (2025) observed an insignificant relationship between board independence and firm performance, attributing it to limited operational knowledge among independent directors or their passive involvement. Chaabouni et al. (2025) emphasized that the effectiveness of independence varies with firm size, industry, and regulatory conditions. Similarly, Mishra (2020) argued that independence without sufficient expertise or engagement may not translate into improved performance outcomes. Given these mixed findings, hence, this study hypothesizes that board independence significantly affects firm performance among companies listed on the F4GBM Index.

Hypothesis 3: There is a significant relationship between board independence and firm performance.

METHODOLOGY

Data and Sample

This study adopts a quantitative research design to empirically examine the relationship between board composition and firm performance among companies listed on the FTSE4Good Bursa Malaysia (F4GBM) Index. The analysis utilizes panel data, allowing for both cross-sectional and time-series variations to enhance the robustness of the findings. The sample comprises 116 public listed companies out of a total of 147 firms under the F4GBM Index as of December 2024, selected based on data availability and consistency throughout the study period. The study covers a five-year period from 2019 to 2023, which captures recent corporate governance developments and ESG-related initiatives in Malaysia. Data for board characteristics and financial performance were obtained from annual reports, Bursa Malaysia disclosures, and financial databases.

This study employs several quantitative analytical techniques to examine the relationship between board composition and firm performance. Descriptive statistics are first used to summarize the key characteristics of the variables, followed by Pearson correlation analysis to assess the strength and direction of relationships among variables and to detect potential multicollinearity issues. Panel regression analysis is then conducted using both Fixed Effects (FE) and Random Effects (RE) models to capture firm-specific and time-invariant effects, with the Hausman test applied to determine the most appropriate model. To ensure the robustness and reliability of the results, diagnostic tests for multicollinearity, heteroskedasticity, and serial correlation are performed.

Empirical Model of the Study

The general form of the panel regression model is expressed as follows:

$$FP_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BGDV_{it} + \beta_3 BIND_{it} + \beta_4 FRMSIZE_{it} + \beta_5 FRMAGE_{it} + \beta_6 DEBTR_{it} + \epsilon_{it}$$

Where:

FP_{it}	= Firm performance
$BSIZE_{it}$	= Board size
$BGDV_{it}$	= Board gender diversity
$BIND_{it}$	= Board independence
$FRMSIZE_{it}$	= Firm size
$FRMAGE_{it}$	= Firm age
$DEBTR_{it}$	= Debt ratio
β	= Intercept
ϵ_{it}	= Error term

The dependent variable, firm performance (FP), is measured using two accounting-based indicators: return on assets (ROA) and return on equity (ROE). ROA is calculated as the ratio of net income to average total assets, whereas ROE is computed as the ratio of net income to average total equity.

The independent variables consist of key board characteristics, namely board size (BSIZE), board gender diversity (BGDV), and board independence (BIND). Board size (BSIZE) refers to the total number of directors serving on a firm's board, reflecting the extent of managerial and advisory resources available to the firm. Board gender diversity (BGDV) represents the proportion of female directors on the board, which captures the influence of gender representation on decision-making processes. Board independence (BIND) is measured as the percentage of independent directors relative to the total number of directors on the board, indicating the degree of monitoring effectiveness and governance quality.

Several control variables are incorporated to account for firm-specific characteristics that may affect firm performance. Firm size (FRMSIZE) captures the operational scale of the firm and is measured by natural logarithm of total assets. Firm age (FRMAGE) represents the number of years a firm has been in existence since incorporation, serving as a proxy for firm maturity and market experience. Debt ratio (DEBTR) measures the firm's financial leverage and is calculated as total debt divided by total assets.

RESULTS AND DISCUSSIONS

Descriptive Analysis

Table 1: Descriptive Statistics

Variable	Mean	Standard Deviation (SD)	Minimum	Maximum	Observations
ROA	5.386598	8.110131	-17.36	56.176	580
ROE	9.135102	14.02302	-41.366	84.517	580
BSIZE	8.712069	2.16301	5	16	580
BGDV	0.1226535	0.0328978	0.0625	0.4	580

BIND	0.9721203	0.2526926	0.2727273	1.6	580
FRMSIZE	15.05219	1.656572	11.06531	19.89273	580
FRMAGE	41.3431	28.2089	1	224	580
DEBTR	0.2547891	0.16826	0.0011048	0.8524185	580

Table 1 presents the descriptive statistics for the variables used in this study, based on 580 firm-year observations. The results indicate that firms, on average, recorded a ROA of 5.39% and a ROE of 9.14%. Both performance indicators display substantial variability (SD = 8.11% for ROA; SD = 14.02% for ROE), with values ranging from -17.36% to 56.18% for ROA and -41.37% to 84.52% for ROE. This dispersion reflects notable heterogeneity in profitability among firms, where some experienced losses while others achieved exceptionally high returns.

Regarding board characteristics, the average board size (BSIZE) is about 8.71 members, consistent with governance guidelines promoting moderately sized boards to balance expertise and coordination. The mean board gender diversity (BGDV) stands at 12.3%, with limited variation (SD = 3.29%), indicating that female representation on Malaysian boards remains relatively low. Meanwhile, board independence (BIND) averages 97.2%, suggesting that most boards are dominated by independent directors, reflecting strong compliance with corporate governance requirements.

In terms of firm-specific attributes, the mean firm size (FRMSIZE), measured as the natural logarithm of total assets, is 15.05, with modest variation, implying that most firms are medium to large in scale. Firm age (FRMAGE) averages 41 years, ranging from newly established to highly mature firms (maximum = 224 years), demonstrating a broad spectrum of corporate lifespans. The average debt ratio (DEBTR) is 25.5%, indicating moderate leverage levels among the sampled firms. However, the range from 0.1% to 85.2% reveals significant diversity in financing strategies.

Overall, these descriptive statistics highlight considerable variation across firms in terms of financial performance, governance structure, and firm demographics. Such heterogeneity underscores the appropriateness of using a fixed effects model to control for unobserved firm-level characteristics in subsequent regression analyses.

Correlation Analysis

Table 2: Pearson Correlation Coefficient

Variables	ROA	ROE	BSIZE	BGDV	BIND	FRMSIZE	FRMAGE	DEBTR
ROA	1.0000							
ROE	0.8996	1.0000						
BSIZE	-0.1337	-0.0806	1.0000					
BGDV	0.1500	0.0925	-0.8792	1.0000				
BIND	0.1714	0.1048	-0.9389	0.8678	1.0000			
FRMSIZE	-0.2552	-0.1714	0.4068	-0.3795	-0.4054	1.0000		
FRMAGE	-0.1984	-0.2281	0.0497	-0.0613	-0.0610	0.1267	1.0000	
DEBTR	-0.2490	-0.0957	0.1358	-0.1250	-0.1531	0.3734	-0.0092	1.0000

Table 2 presents the Pearson correlation coefficients among all study variables. The results show a strong positive correlation between return on assets (ROA) and return on equity (ROE)

($r = 0.8996$), indicating that firms with higher asset efficiency also tend to generate superior shareholder returns.

In relation to firm performance, board size (BSIZE), firm size (FRMSIZE), firm age (FRMAGE), and debt ratio (DEBTR) display weak negative correlations with ROA and ROE. This suggests that larger, older, and more leveraged firms may experience slightly lower profitability, possibly due to higher operating complexity and financial burden. Conversely, board gender diversity (BGDV) and board independence (BIND) exhibit weak positive associations with both performance indicators, implying that firms with more independent and gender-diverse boards may achieve marginally better financial outcomes, consistent with the agency theory perspective that diverse and independent boards enhance oversight and decision-making quality.

The correlation matrix also reveals strong interrelationships among governance variables. Board size (BSIZE) is highly negatively correlated with both board independence (BIND) ($r = -0.939$) and board gender diversity (BGDV) ($r = -0.879$), suggesting that larger boards tend to have fewer independent and female directors. Meanwhile, BIND and BGDV are strongly positively correlated ($r = 0.868$), indicating that firms emphasizing board independence often also promote gender diversity, reflecting alignment with best governance practices. Furthermore, firm size (FRMSIZE) is positively associated with both board size (BSIZE) and debt ratio (DEBTR), implying that larger firms typically have bigger boards and greater reliance on debt financing.

Overall, the correlation results indicate that while governance and firm characteristics exhibit various interlinkages, most correlations with firm performance are modest in magnitude. The high correlations among certain board variables warrant careful attention to multicollinearity, which was subsequently addressed in the regression analysis.

Regression Analysis

Diagnostic tests confirmed that the fixed effects model was the most appropriate for this study. To address the issues of heteroskedasticity and serial correlation, robust standard errors were applied. Table 3 presents the fixed effect regression results examining the impact of board characteristics on firm performance, measured by ROA and ROE. Model 1 uses ROA as the dependent variable, while Model 2 employs ROE. The analysis also includes firm size, firm age, and debt ratio as control variables to capture firm-specific effects.

Table 3: Regression Results

	Model 1	Model 2
	ROA	ROE
BSIZE	0.8816 (0.112)	1.4309 (0.138)
BGDV	1.9569 (0.513)	6.0255 (0.247)
BIND	6.3811 (0.214)	8.7255 (0.359)
FRMSIZE	2.9589* (0.083)	7.5790*** (0.006)
FRMAGE	-0.0781 (0.658)	-0.2510 (0.461)

DEBTR	-9.6859*** (0.005)	-16.1516** (0.014)
Number of Observations	580	580
R-squared	0.0059	0.0004

*Robust Standard errors are in parentheses. *, Statistically significant at 10% level.
, Statistically significant at 5% level. *, Statistically significant at 1% level.*

The findings indicate that board size (BSIZE) exhibits a positive but statistically insignificant relationship with firm performance in both models. This suggests that while a larger board may provide access to diverse expertise and advice, the marginal benefits may not be substantial enough to significantly enhance firm profitability. Hence, Hypothesis 1 is not supported. This outcome aligns with prior studies that argue excessively large boards can lead to coordination inefficiencies and slower decision-making processes, thereby offsetting potential governance benefits.

Similarly, board gender diversity (BGDV) is positively associated with both ROA and ROE, yet the relationships are statistically insignificant. Although the positive coefficients imply that greater female representation on boards could contribute to improved strategic oversight and decision-making quality, the lack of significance suggests that gender diversity effects remain limited among Malaysian listed firms. Thus, Hypothesis 2 is also not supported. This finding is consistent with mixed empirical evidence in emerging markets, where cultural and structural factors may constrain the influence of gender-diverse boards on firm outcomes.

The results for board independence (BIND) show positive but insignificant effects on ROA and ROE. This indicates that a higher proportion of independent directors does not necessarily translate into improved financial performance. One possible explanation is that independent directors in Malaysian firms may play a more symbolic role in fulfilling regulatory requirements rather than actively influencing operational and strategic decisions. Consequently, Hypothesis 3 is not supported.

Among the control variables, firm size (FRMSIZE) shows a positive and significant effect on both ROA and ROE. This implies that larger firms tend to achieve higher profitability, likely due to economies of scale, greater resource access, and enhanced market power. Conversely, firm age (FRMAGE) is negatively associated with firm performance but remains statistically insignificant, suggesting that older firms do not necessarily outperform younger ones. In contrast, debt ratio (DEBTR) displays a strong and negative relationship with both ROA and ROE. This finding implies that higher leverage adversely affects profitability, possibly due to increased financial risk and interest obligations that constrain managerial flexibility and resource allocation.

The R-squared values for Model 1 (0.0059) and Model 2 (0.0004) indicate that the explanatory power of the models is relatively low, suggesting that other unobserved factors may play a more substantial role in determining firm performance beyond the examined board attributes.

Overall, the regression results reveal that board characteristics—size, gender diversity, and independence—do not significantly influence firm performance among F4GBM companies. The findings highlight that firm-specific factors, particularly firm size and financial leverage, have stronger impacts on profitability. These results provide evidence that corporate governance mechanisms alone may not guarantee superior performance unless supported by sound financial management and efficient operational practices.

The insignificance of board-related variables can be explained by several factors. First, companies listed in the F4GBM Index are required to adhere to sustainability and governance benchmarks, resulting in a high degree of homogeneity in governance practices that limits variability in board characteristics. Second, some firms may engage in symbolic compliance, adopting diversity and independence measures mainly to meet regulatory requirements rather than as a genuine performance-enhancing strategy. Third, the study period from 2019 to 2023 coincided with the COVID-19 pandemic, during which macroeconomic disruptions may have overshadowed the influence of corporate governance factors. Lastly, board diversity and independence might exert a greater impact on non-financial outcomes—such as sustainability performance, corporate reputation, or ESG scores—rather than on short-term financial indicators like ROA and ROE.

CONCLUSION

In conclusion, this study examined the impact of board composition—specifically board gender diversity, board size, and board independence—on firm performance among companies listed on the F4GBM Index of Bursa Malaysia over the five-year period from 2019 to 2023. Firm performance was assessed using ROA and ROE, guided by agency theory, which posits that well-structured boards reduce agency costs by improving oversight and aligning management decisions with shareholder interests. This study provides evidence that board composition variables—board size, board independence, and board gender diversity—do not significantly influence firm performance among Malaysian firms listed on the F4GBM Index. Instead, firm-specific characteristics such as size and leverage play a more substantial role in explaining variations in profitability.

The findings imply that within the F4GBM context, where governance standards are already high and relatively uniform, differences in board structure may not create performance advantages. For policymakers and regulators, this suggests that enhancing board diversity and independence alone may not guarantee superior financial performance unless accompanied by active governance engagement and strategic oversight. Future research may consider incorporating non-financial performance indicators like ESG scores or innovation outcomes and longer time horizons to better capture the broader impact of board composition on firm success.

REFERENCES

- Almashhadani, M., Almashhadani, H. A. (2022, July). The beneficial of firm size, board size, ownership structure, and independence in developing markets' firm performance: Evidence from Asia. *International Journal of Business and Management Invention (IJBMI)*. <https://doi.org/10.35629/8028-1107018892>
- Al-Matari, & Mohammed, E. (2024). Board of directors' attributes effects on firm performance and the moderating role of women: Alternative measurements. *Journal of Governance and Regulation*, 13(2), 31–49. <https://doi.org/10.22495/jgrv13i2art3>
- Anas, M., Gulzar, I., Tabash, M. I., Ahmad, G., Yazdani, W., & Alam, M. F. (2023). Investigating the Nexus between Corporate Governance and Firm Performance in India: Evidence from COVID-19. *Journal of Risk and Financial Management*, 16(7), 307. <https://doi.org/10.3390/jrfm16070307>
- Bamel, N., Khatri, K., Bamel, U., & Kumar, S. (2025). ESG Disclosure and Firm Performance in Global South Economy: Does Industry Profile Moderate the

- Relationship. *International Review of Economics & Finance*, 104093. <https://doi.org/10.1016/j.iref.2025.104093>
- Bock, T. (2020, December 9). *What is Heteroscedasticity?* Displayr. <https://www.displayr.com/what-is-heteroscedasticity/>
- Bursa Malaysia. (2024). *FTSE4Good Bursa Malaysia (F4GBM) Index*. https://www.bursamalaysia.com/trade/our_products_services/indices/ftse4good-bursa-malaysia-f4gbm-index
- Chaabouni, I., Mbarek, N. B., & Ayadi, E. (2025). Do ESG Risk Scores and Board Attributes Impact Corporate Performance? Evidence from Saudi-Listed Companies. *Journal of Risk and Financial Management*, 18(2), 83–83. <https://doi.org/10.3390/jrfm18020083>
- Firew, B. G. (2024). Gender diversity and firm performance: evidence from Malaysia boardrooms. *Cogent Economics & Finance*, 12(1). <https://doi.org/10.1080/23322039.2024.2381135>
- Fulk, G. (2023). Descriptive Statistics, An Important First Step. *Journal of Neurologic Physical Therapy*, 47(2), 63–63. <https://doi.org/10.1097/npt.0000000000000434>
- Gatehi, G. T., & Nasieku, T. (2022). Effect of Board Characteristics on Financial Performance of Non-financial Firms Listed at the Nairobi Securities Exchange. *Advanced Journal of Social Science*, 11(1), 1–12. <https://doi.org/10.21467/ajss.11.1.1-12>
- Guluma, T. F. (2021). The impact of corporate governance measures on firm performance: the influences of managerial overconfidence. *Future Business Journal*, 7(1). Springer. <https://doi.org/10.1186/s43093-021-00093-6>
- Hendrastuti, R., & Harahap, R. F. (2023). Agency theory: Review of the theory and current research. *Jurnal Akuntansi Aktual*, 10(1), 85. <https://doi.org/10.17977/um004v10i12023p085>
- Jaafar, M. N., Muhamat, A. A., Shahar, W. S., & Saddam, S. Z. (2021). Characteristic of Board Directors and Financial Performance: Evidence from Companies Listed in Ftse Bursa Malaysia Klc Index. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 11(1). <https://doi.org/10.6007/ijarafms/v11-i1/9091>
- Jenter, D., Schmid, T., & Urban, D. (2023). Does Board Size Matter? *SSRN Electronic Journal*, 65. <https://doi.org/10.2139/ssrn.4371743>
- Kabir, A., Ikra, S. S., Saona, P., & Azad, M. a. K. (2023). Board gender diversity and firm performance: new evidence from cultural diversity in the boardroom. *LBS Journal of Management & Research*, 21(1), 1–12. <https://doi.org/10.1108/lbsjmr-06-2022-0022>
- Kijkasiwat, P., Hussain, A., & Mumtaz, A. (2022). Corporate Governance, Firm Performance and Financial Leverage across Developed and Emerging Economies. *Risks*, 10(10), 185. <https://doi.org/10.3390/risks10100185>
- Kour, M., Taneja, S., & Ozen, E. (2025). Demystifying the Connection between Corporate Board Structure and Financial Performance in Maritime Firms. *Transactions on Maritime Science*, 14(1). <https://doi.org/10.7225/toms.v14.n01.w07>
- Li, H., & Chen, P. (2018). Board gender diversity and firm performance: The moderating role of firm size. *Business Ethics a European Review*, 27(4), 294–308. <https://doi.org/10.1111/beer.12188>
- Merendino, A., & Melville, R. (2019). The board of directors and firm performance: empirical evidence from listed companies. *Corporate Governance*, 19(3), 508–551. <https://doi.org/10.1108/cg-06-2018-0211>
- Mokhtar, I., Osman, I., Setapa, F., Arifin, N. a. M., Shafi, R. M., & Muda, R. (2023). Capital Structure–Firm Performance Nexus: The Moderating Effect of Board Independence. *Information Management and Business Review*, 15(4(SI)I), 38–47. [https://doi.org/10.22610/imbr.v15i4\(si\)i.3575](https://doi.org/10.22610/imbr.v15i4(si)i.3575)

- Muazaroh, Lestari, W., & Purnama Sari, L. (2025). The role of gender diversity, board size, and ESG disclosure in improving performance and managing risks. *Problems and Perspectives in Management*, 23(1), 288–298. [https://doi.org/10.21511/ppm.23\(1\).2025.21](https://doi.org/10.21511/ppm.23(1).2025.21)
- Nguyen, D. T., Hoang, T. G., Phi, N. T. M., & Truong, T. H. H. (2023). Do ESG ratings mediate the relationship between board gender diversity and firm financial performance? Evidence from the U.S. Market. *The Economics and Finance Letters*, 10(2), 163–171. <https://doi.org/10.18488/29.v10i2.3396>
- Oyegoke, A. A., Iyoha, F., Eriabie, S., & Adeyemo, K. A. (2024). Oyegoke: Board Gender Diversity and Troubled Firms' Profitability Evidence from Listed Manufacturing Firms in Nigeria. *International Journal of Economics and Financial Issues*, 15(1), 202–207. <https://doi.org/10.32479/ijefi.17051>
- Pepper, A., & Gore, J. (2012). Behavioral Agency Theory. *Journal of Management*, 41(4), 1045–1068. <https://doi.org/10.1177/0149206312461054>
- Ramdani, D., & Witteloostuijn, A. van. (2010). The Impact of Board Independence and CEO Duality on Firm Performance: A Quantile Regression Analysis for Indonesia, Malaysia, South Korea and Thailand. *British Journal of Management*, 21(3), 607–627. <https://doi.org/10.1111/j.1467-8551.2010.00708.x>
- Reddy, S., & Jadhav, A. M. (2019). Gender diversity in boardrooms – A literature review. *Cogent Economics & Finance*, 7(1), 1644703. <https://doi.org/10.1080/23322039.2019.1644703>