

The Moderating Effect of Board characteristics in the Relationship Between ESG Disclosure and Financial Performance: Evidence from KSA

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ABSTRACT

With the increasing shift toward sustainable development and heightened societal scrutiny, companies are placing greater emphasis on environmental, social, and governance (ESG) disclosures. This study investigates the association between ESG disclosures and financial performance among companies listed on the Saudi Stock Exchange, focusing on how board characteristics influence this relationship. By analyzing a sample of Saudi-listed firms, the research assesses the impact of ESG disclosures, as well as their individual environmental, social, and governance components, on key financial performance indicators: Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS). The findings reveal a positive association between overall ESG disclosures and financial performance metrics. Environmental disclosures are particularly effective in enhancing ROA, social disclosures positively affect ROE, and governance disclosures significantly improve EPS. Additionally, the study highlights how board characteristics—such as ownership, size, and independence—moderate the relationship between ESG disclosures and financial performance. Specifically, board ownership has a positive moderating effect, while the impacts of board size and independence vary depending on the financial metric in question. These results emphasize the importance of ESG disclosures in influencing financial performance and underscore the significant role of board governance in strengthening this relationship. The study provides valuable insights from the Saudi context, offering both theoretical and practical implications for policymakers, investors, and corporate managers aiming to optimize ESG practices and enhance financial outcomes.

Keywords: ESG Disclosure, Board Characteristics, Financial Performance, Environmental Disclosures, Social Disclosures, Governance Disclosures, Sustainability; Saudi Arabia

Introduction

The synthesis of existing research provides valuable insights into the interplay between ESG disclosures, corporate governance, and financial performance, particularly within Saudi Arabia. Previous studies, such as those by Chebbi and Ammer (2022) and Arayssi et al. (2020), underscore the critical role of board composition in enhancing ESG transparency, focusing on the impact of corporate governance reforms and board diversity on disclosure practices within GCC countries. Similarly, Fuadah et al. (2022) and Qasem et al. (2022) explore how various governance mechanisms, including ownership structures and audit committees, moderate the relationship between ESG disclosures and firm performance, highlighting the significance of robust governance frameworks in promoting sustainable practices and improving financial outcomes.

In the context of Saudi Arabia, Ammer et al. (2020) and Alregab (2022) demonstrate that independent directors and strong ESG performance attract foreign investment and enhance firm value. This underscores

the link between sustainability initiatives, governance effectiveness, and financial performance. Research by Alsahlawi et al. (2021), Al-Ahdal et al. (2023), Rossi et al. (2021), and Hamad and Cek (2023) further investigates the moderating factors affecting the ESG-financial performance relationship, such as financial constraints, CEO power, and board characteristics, emphasizing their impact on the effectiveness of ESG disclosures in driving financial outcomes. Bamahros et al. (2022) and Umar et al. (2023) also stress the role of corporate governance mechanisms in ESG reporting, highlighting the importance of strong board oversight and governance practices in enhancing transparency and accountability.

Despite these insights, a critical research gap remains in understanding how specific governance factors, such as board ownership structures, board diversity, independence, expertise, and the presence of women on the board, shape the relationship between ESG disclosures and financial performance in Saudi Arabia. This gap impedes decision-makers, investors, and corporate leaders from making informed choices regarding corporate governance practices and ESG reporting strategies. Addressing this gap is essential for enhancing corporate transparency, governance effectiveness, and sustainable financial performance in the region.

This study aims to bridge these gaps by investigating how ESG disclosures affect financial performance within the Saudi Stock Exchange and examining the moderating effect of board characteristics on this relationship. The research questions guiding this study are: How do ESG disclosures impact financial performance in Saudi Arabia? And what is the moderating effect of board characteristics on the relationship between ESG disclosures and financial performance? The objectives are to explore the effect of ESG disclosures on the financial performance of non-financial companies listed on the Saudi Stock Exchange and to assess how board characteristics influence this relationship.

The significance of this study lies in its potential to provide valuable insights into the evolving landscape of corporate sustainability and governance in Saudi Arabia. By analyzing the impact of ESG disclosures on financial performance, the study aims to deepen the understanding of how sustainable practices can enhance corporate profitability and value creation. Additionally, investigating the moderating effect of board characteristics on the ESG-financial performance relationship will offer a nuanced perspective on the role of corporate governance in strengthening the positive outcomes of ESG initiatives. This research not only addresses a gap in the current literature but also offers practical implications for policymakers, investors, and corporate leaders striving to integrate sustainable practices into their business strategies for long-term success.

Utilizing a sample of 42 non-financial Saudi companies listed on the stock exchange from 2019 to 2023, the study finds that both board size and board independence are significantly and positively associated with ESG disclosure, while board gender diversity has a positive but insignificant effect. The study also reveals that board size and independence significantly influence environmental and social disclosures, whereas all aspects of board composition positively impact governance disclosure scores. Moreover, it confirms the significant and positive moderating influence of corporate governance reforms on the relationship between board composition and ESG disclosures.

By contributing to the literature on corporate governance and ESG disclosure in emerging markets like Saudi Arabia, this study provides new insights into how national regulatory bodies, such as the Saudi Capital Market Authority, impact ESG practices and disclosures. It addresses the lack of empirical evidence regarding the effect of corporate governance on ESG disclosure and offers valuable implications for regulators, policymakers, corporate management, and investors by emphasizing the importance of effective governance structures in enhancing ESG practices and financial performance.

The structure of the remaining paper is organized as follows: Section 2 provides a review of the relevant literature and outlines the development of the hypotheses. Section 3 details the study's methodology, encompassing the sample, data, measurements, and models used. Section 4 presents and discusses the descriptive analysis, Pearson's correlation, regression analysis results, and additional checks. Section 5 offers a discussion of the key findings. Finally, Section 6 concludes the study, highlighting its theoretical and practical implications, limitations, and suggestions for future research.

Literature Review and Development Hypotheses

Several studies have explored the relationship between ESG (Environmental, Social, and Governance) disclosures, board composition, and financial performance in various contexts, with a particular focus on Saudi Arabia and other emerging markets. Chebbi and Ammer (2022) examined the impact of board composition on ESG disclosure in Saudi Arabia, considering the moderating role of corporate governance reforms. They employed a quantitative methodology using data from Saudi listed firms, finding that governance reforms significantly enhance ESG disclosures, especially in companies with diverse board compositions. Fuadah et al. (2022) investigate the relationship between ownership structure, ESG disclosure, firm value, and firm performance, with the audit committee acting as a moderating variable. Their study utilizes a sample of

Indonesian firms and reveals that strong ownership structures and active audit committees positively influence ESG disclosures and, consequently, firm performance and value. Ammer et al. (2020) focus on whether corporate environmental sustainability practices affect firm value, emphasizing the role of independent directors. Through a quantitative analysis of Saudi companies, they find that independent directors play a crucial role in reinforcing the positive impact of environmental sustainability practices on firm value.

Alsahlawi et al. (2021) explore the influence of environmental sustainability disclosure on stock returns of Saudi listed firms, considering financial constraints as a moderating factor. Their findings indicate that financial constraints can diminish the positive effect of sustainability disclosures on stock returns, highlighting the importance of financial health in leveraging ESG benefits. Al-Ahdal et al. (2023) study the moderating role of CEO power in the relationship between ESG disclosure and financial performance in emerging markets. Using data from multiple emerging economies, they conclude that CEO power can either enhance or undermine the effectiveness of ESG disclosures, depending on the CEO's commitment to sustainability. Arayssi et al. (2020) analyze the impact of board composition on the level of ESG disclosures in GCC countries. Their research employs a mixed-methods approach and finds that diverse and independent boards are associated with higher levels of ESG disclosures, suggesting that board diversity is key to improving transparency. Alregab (2022) investigates how ESG performance influences foreign ownership in Saudi firms. Using a quantitative approach, the study demonstrates that robust ESG performance attracts more foreign investors, underscoring the global importance of sustainable practices.

Rossi et al. (2021) explore whether board characteristics moderate the relationship between CSR (Corporate Social Responsibility) practices and financial performance in European ESG firms. Their findings reveal that specific board attributes, such as independence and diversity, significantly enhance the positive impact of CSR practices on financial performance. Hamad and Cek (2023) examine the moderating effects of corporate social responsibility on corporate financial performance in OECD countries. They find that CSR activities generally improve financial performance, but the extent of this improvement varies based on the level of CSR engagement. Al-Duais et al. (2021) investigate the influence of CEO characteristics and family ownership on CSR reporting in Saudi Arabia. Their study highlights that CEOs with a strong commitment to social responsibility and family-owned firms are more likely to engage in comprehensive CSR reporting. Qasem et al. (2022) study the types of institutional ownership and their impact on ESG reporting in Saudi listed firms. Their research indicates that certain types of institutional investors, particularly those with long-term investment horizons, positively influence ESG reporting practices. Bamahros et al. (2022) analyze corporate governance mechanisms and their effect on ESG reporting in the Saudi Stock Market. They find that effective governance mechanisms, such as strong board oversight and audit functions, are crucial for enhancing ESG disclosures.

Almubarak et al. (2023) explore the relationship among ESG, earnings management, and financial distress in an emerging market context. Their findings suggest that robust ESG practices can mitigate the negative effects of earnings management and financial distress, promoting overall corporate stability. Thuy et al. (2024) examine the effect of corporate governance on CSR in Vietnam, focusing on state ownership as a moderating role. They conclude that state-owned enterprises tend to have higher CSR engagement due to government mandates and oversight. Dakhli (2021) studies the impact of ownership structure on CSR, with financial performance acting as a moderating variable. The research shows that firms with concentrated ownership structures are more likely to engage in CSR activities when they have strong financial performance. Zahid et al. (2022) investigate the role of audit quality in the ESG-corporate financial performance nexus in Western European companies. Their results indicate that high-quality audits enhance the positive relationship between ESG practices and financial performance. Arayssi and Jizi (2024) explore the role of royal family board directors in ESG disclosures in GCC listed firms. Their study finds that firms with royal family board members tend to have higher ESG disclosure levels due to the reputational and regulatory advantages associated with such directors.

The existing body of research provides a comprehensive understanding of the relationship between ESG disclosures, corporate governance, and financial performance, particularly within the context of Saudi Arabia and other emerging markets. Chebbi and Ammer (2022) and Arayssi et al. (2020) both focus on the impact of board composition on ESG disclosure. Chebbi and Ammer (2022) highlight the importance of corporate governance reforms in Saudi Arabia, emphasizing that diverse and independent boards promote comprehensive ESG disclosures. Similarly, Arayssi et al. (2020) find that in GCC countries, including Saudi Arabia, diverse and independent boards are associated with higher levels of ESG disclosures. Both studies align in their objectives to examine how board composition influences ESG reporting, and their results consistently highlight the critical role of board diversity and independence. Fuadah et al. (2022) and Qasem et al. (2022) explore the relationship between ownership structure, ESG disclosures, and financial performance. Fuadah et al. (2022) specifically examine the role of the audit committee as a moderating variable and find that robust ownership structures and active audit committees enhance ESG disclosures, leading to better firm performance. Similarly, Qasem et al. (2022) focus on institutional ownership types and find that effective

governance mechanisms, such as strong board oversight, are essential for comprehensive ESG reporting. Both studies underscore the importance of ownership structure and governance mechanisms in leveraging the benefits of ESG practices.

Ammer et al. (2020) and Alregab (2022) provide insights into the financial implications of ESG practices. Ammer et al. (2020) demonstrate that independent directors enhance the positive effects of environmental sustainability practices on firm value, highlighting the importance of board independence. Alregab (2022) shows that strong ESG performance attracts foreign investors, emphasizing the global importance of sustainable practices in enhancing firm value. Both studies align in their exploration of the financial benefits of ESG practices and the role of corporate governance in maximizing these benefits. Alsahlawi et al. (2021) and Al-Ahdal et al. (2023) investigate the moderating factors affecting the ESG-financial performance relationship. Alsahlawi et al. (2021) find that financial constraints can weaken the positive relationship between sustainability disclosures and stock returns, highlighting the importance of financial stability. Al-Ahdal et al. (2023) explore the role of CEO power and find that strong CEO commitment to sustainability enhances the effectiveness of ESG disclosures. Both studies contribute to understanding the various factors that can influence the impact of ESG practices on financial outcomes.

Rossi et al. (2021) and Hamad and Cek (2023) explore the moderating effects of board characteristics and CSR on financial performance. Rossi et al. (2021) show that specific board attributes, such as independence and diversity, significantly enhance the positive impact of CSR practices on financial performance. Hamad and Cek (2023) find that the level of CSR engagement moderates the CSR-financial performance relationship. Both studies highlight the nuanced nature of the ESG-financial performance relationship and the critical role of board and CSR characteristics. Bamahros et al. (2022) further emphasize the importance of corporate governance mechanisms in ESG reporting. Their research indicates that effective governance, such as strong board oversight and audit functions, is crucial for comprehensive ESG disclosures. This finding aligns with the insights from Chebbi and Ammer (2022) and Fuadah et al. (2022), reinforcing the significance of robust corporate governance in promoting sustainability. Overall, these studies collectively highlight the critical role of board composition, ownership structure, and governance mechanisms in shaping the effectiveness of ESG disclosures and their impact on financial performance. They underscore the importance of diverse and independent boards, strong ownership structures, and active governance in enhancing transparency, accountability, and financial performance through robust ESG practices. Based on the previous studies and the proposed research, the research hypotheses can be derived as follows:

Hypothesis 1: There is a positive impact of ESG disclosure scores on the financial performance of companies listed on the Saudi Stock Exchange.

The first hypothesis can be divided into three sub-hypotheses addressing the environmental, social, and governance dimensions of ESG disclosure.

Hypothesis 1a: There is a positive impact of environmental (E) disclosure scores on the financial performance of companies listed on the Saudi Stock Exchange.

Hypothesis 1b: There is a positive impact of social (S) disclosure scores on the financial performance of companies listed on the Saudi Stock Exchange.

Hypothesis 1c: There is a positive impact of governance (G) disclosure scores on the financial performance of companies listed on the Saudi Stock Exchange.

Hypothesis 2: The financial performance- ESG disclosure association is positively moderated by board characteristics.

The second hypothesis can be divided into three sub-hypotheses.

Hypothesis 2a: The financial performance- Environmental disclosure association is positively moderated by board characteristics.

Hypothesis 2b: *The financial performance- Social disclosure association is positively moderated by board characteristics.*

Hypothesis 2c: *The financial performance- Governance disclosure association is positively moderated by board characteristics.*

Methodology

3.1 Sample and Data

To examine the moderating effect of board characteristics on the relationship between ESG disclosure and financial performance in Saudi companies, we utilized a sample of 42 non-financial companies listed on the main market of the Saudi Stock Exchange (Tadawul) for the period 2019–2023. This period was chosen for several reasons. Firstly, the timeframe from 2019 to 2023 extends beyond the period studied by Chebbi and Ammer (2022), which covered 2015–2021. This extension allows for an updated analysis of how board characteristics influence ESG disclosures and financial performance in light of recent developments and regulatory changes. Secondly, the period captures the full implementation of the Saudi Code of Corporate

Governance reforms introduced in 2017, which have influenced board composition and governance practices. Analyzing data from this period enables us to assess the moderating effects of these reforms on ESG disclosure and financial outcomes, following up on the earlier findings of Chebbi and Ammer (2022). Thirdly, this timeframe coincides with the continued evolution of Saudi Arabia's Vision 2030, which emphasizes sustainability and corporate transparency. By extending the study period, we can explore how ongoing economic diversification and sustainability efforts impact the relationship between board characteristics and ESG disclosures. Finally, the data from 2019 to 2023 ensures that our analysis is current and relevant, reflecting the latest trends and regulatory changes in Saudi Arabia. This approach builds on previous research and offers insights into how board characteristics affect ESG disclosure and financial performance in a rapidly evolving market. Data were collected from Bloomberg's database, which includes comprehensive information on ESG disclosures across its environmental, social, and governance dimensions, board characteristics (such as board independence, board ownership, and board size), and key financial performance indicators including return on assets, return on equity, and earnings per share. This approach allows for a thorough investigation of how board attributes influence ESG disclosures and financial performance within the evolving Saudi market.

Table 1 summarizes the variables used in an analytical study on the relationship between corporate governance and firm financial performance. The dependent variables are measures of profitability, such as return on assets (ROA), return on equity (ROE), and earnings per share (EPS). The independent variables are measures of corporate governance, such as ESG scores, board ownership, board size, board independence, and percentage of independent board members. Control variables include firm size and industry. The table is based on previous studies that have shown a positive relationship between good corporate governance and firm financial performance.

Table 1 provides a detailed measurement of various variables used in a study, categorized into dependent, independent, moderating, and control variables. The dependent variables include Return on Assets (ROA), Return on Equity (ROE), and Earnings per Share (EPS), all measured as the ratio of net income to total assets, according to Sharawi (2022). The independent variable is ESG data disclosure, ranging from 0% to 100% based on Bloomberg's weighted scoring system, as cited by Chebbi & Ammer (2022). Moderating variables include Board Ownership, Board Size, and Board Independence, with measurements based on the percentage of board member ownership, the number of directors, and the number of independent directors, respectively, from Sharawi (2022) and Chebbi & Ammer (2022). Control variables consist of Firm Size, measured as the natural log of total assets, and Industry, represented by industry dummies, both referenced from Sharawi (2022).

3.2 Measurement

Table 1: Variables Measurement

Variable	Measurement	Supporting literature
Dependent variables		
ROA	Ratio of net income to total assets	Sharawi (2022)
ROE	Ratio of net income to total assets	Sharawi (2022)
EPS	Ratio of net income to total assets	Sharawi (2022)
Independent variables		
ESG	ESG data disclosure for sample companies, ranging from 0% (no disclosure) to 100% (full disclosure), based on Bloomberg's weighted scoring system.	Chebbi & Ammer (2022)
Moderating Variables		
Board Own	Percentage of ownership of members in the board of directors	Sharawi (2022)
Board Size	Number of directors sitting on the board of directors	Chebbi & Ammer (2022)
Board Independence	Number of independent directors sitting on the board	Chebbi & Ammer (2022)
Board Ownership	The proportion of independent directors on the board	Sharawi (2022)
Control variables		
Firm size	Natural log of the firm's total assets.	Sharawi (2022)
Industry	Industry dummies.	Sharawi (2022)

3.3 Models of the study

Table 2 presents two research models for examining the effect of ESG disclosure on financial performance. The first model tests the direct impact of ESG disclosure on financial performance, accounting for factors such as firm age, leverage, and board characteristics. The second model explores the moderating effect of board characteristics (ownership, size, and independence) on the relationship between ESG disclosure and financial performance, by including interaction terms between ESG and these board characteristics. Both models also control for industry-specific effects.

Table 2: Research Models

The first model to test the Effect of ESG Disclosure on Financial Performance
$FP = \beta_0 + \beta_1 \text{ ESG} + \beta_2 \text{ Age} + \beta_3 \text{ Lev} + \beta_4 \text{ Board own} + \beta_5 \text{ Board size} + \beta_6 \text{ Board Independence} + \beta_7 \text{ Industry dummies}$
The second model to test the Moderating Effect of Board Characteristics on the association between ESG disclosure and Financial Performance
$FP = \beta_0 + \beta_1 \text{ ESG} + \beta_2 \text{ Age} + \beta_3 \text{ Lev} + \beta_4 \text{ Board own} + \beta_5 \text{ Board own} * \text{ESG} + \beta_6 \text{ Board size} + \beta_7 \text{ Board size} * \text{ESG} + \beta_8 \text{ Board Independence} + \beta_9 \text{ Board Independence} * \text{ESG} + \beta_{10} \text{ Industry dummies}$
$\beta_0 - \beta_{10}$ = Regression coefficients, ε = Error term

Figure 1. Conceptual framework

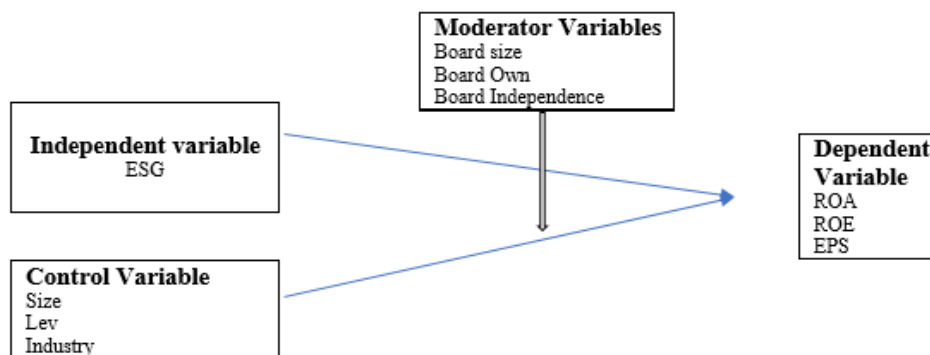


Figure 1 illustrates the conceptual framework of the study, where ESG disclosure is the independent variable expected to affect financial performance metrics (ROA, ROE, EPS). The relationship between ESG disclosure and these financial outcomes is moderated by board characteristics, including Board Size, Board Ownership, and Board Independence. Control variables such as Size, Leverage (Lev), and Industry are included to account for external influences. This framework aims to examine how board characteristics impact the effect of ESG disclosure on financial performance, while controlling for additional relevant factors.

Analysis and Results

4.1 Descriptive Analysis

Table 3 reveals several important insights into the ESG performance and other financial metrics of the sampled companies. The overall average ESG score is 27.5, with a median of 19.65, indicating a relatively low to moderate commitment to ESG criteria across the companies. The standard deviation of 14.02 suggests considerable variability in ESG performance, with the 25th and 75th percentiles at 12 and 25.03, respectively. This wide range indicates that while some companies are highly committed to ESG practices, many are still in the early stages of integration.

Table 3: Descriptive Statistics

Variables	N	Mean	SD	25th percentile	Median	75th percentile
ROA	210	3.02	7.02	0.67	1.87	3.98
ROE	210	6.34	7.04	0.980	2.100	4.870
EPS	210	0.987	2.1	1.020	1.870	2.740
ESG	210	27.5	14.02	12	19.65	25.03
Environmental	210	15.3	18.06	0	6.830	22.040
Social	210	18.65	19.65	7.480	15.840	19.430
Governance	210	56.76	20.43	12.020	16.940	19.650
Board Own	210	22.87	12.03	5.040	7.400	11.030
Age	210	1.54	0.34	1.020	1.030	1.440
Size	210	11.02	0.65	10.200	10.800	11.320
LEV	210	43.02	18.45	9.400	16.030	18.320

Focusing on the environmental component, the average score is 15.3, with a median of 6.83. This suggests that environmental practices are less emphasized compared to other ESG aspects. The high standard deviation of 18.06 further underscores the variability in environmental practices among the companies. Notably, the 25th percentile is 0, indicating that at least 25% of the companies do not disclose or have minimal environmental initiatives, highlighting a significant area for improvement. The social component, with an average score of 18.65 and a median of 15.84, shows a slightly higher integration of social aspects compared to environmental ones. However, the standard deviation of 19.65 indicates a wide range of social responsibility practices, with the 25th and 75th percentiles at 7.48 and 19.43, respectively. This spread suggests that while some companies are actively engaged in social initiatives, others lag behind. Governance scores are notably higher, with an average of 56.76 and a median of 16.94. The standard deviation of 20.43 reflects significant differences in governance practices, with the 25th and 75th percentiles at 12.02 and 19.65, respectively. This suggests that governance practices are more consistently applied across companies compared to environmental and social practices, indicating a stronger emphasis on governance structures.

In terms of general financial metrics, the return on assets (ROA) and return on equity (ROE) show moderate levels, with means of 3.02 and 6.34, respectively. The earnings per share (EPS) has a mean of 0.987, indicating moderate profitability across the sample. Leverage (LEV) shows a mean of 43.02, with high variability (standard deviation of 18.45), indicating different levels of debt usage among the companies. Board ownership (Board Own) has a mean of 22.87, suggesting significant shareholding by board members, which could imply aligned interests with shareholders. Company size (Size) and age (Age) are relatively stable, with low standard deviations, indicating that most companies in the sample are similar in these aspects. Overall, these observations highlight that while governance practices are relatively more developed, there is a significant range in the adoption and disclosure of environmental and social practices among the companies. This indicates potential areas for companies to enhance their ESG performance, particularly in environmental and social dimensions.

4.2. Pearson Correlation

The correlation matrix in table 4 presents the relationships between various financial and governance variables. Notable observations include a strong positive correlation between ROA and ROE (0.56**), indicating that as Return on Assets increases, Return on Equity also tends to increase significantly. Similarly, ESG has a moderate positive correlation with ROE (0.52*) and ROA (0.34**), suggesting that better environmental, social, and governance practices are associated with higher profitability metrics. The leverage (LEV) shows significant positive correlations with ROA (0.53*) and ROE (0.372**), implying that higher leverage may be associated with higher returns. Additionally, a negative correlation is observed between EPS and LEV (-0.640), indicating that higher earnings per share are associated with lower leverage. Significant relationships are denoted with asterisks, indicating statistical significance at either the 0.01 or 0.05 levels, enhancing the reliability of these correlations.

Table 4: Correlation matrix

Variables	ROA	ROE	EPS	ESG	Board Own	Age	Size	LEV
ROA	1							
ROE	0.56**	1						
EPS	0.23*	0.114	1	.012**	0.453	0.145*	0.543	-0.640
ESG	0.34**	0.52*	0.23	1	-0.532	0.120	0.621	0.262*
Board Own	0.13*	0.23**	-0.122	-0.123	1	-0.022	-0.030	0.123
Age	0.150	0.234	-0.217	0.123**	0.346	1	-0.24	0.223
Size	0.089	-0.376	0.430	-0.233	0.290	0.24	1	0.137
LEV	0.53*	0.372**	-0.462	-0.393	0.349	0.346	0.143	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

4.3. Results of Regression Analysis

Table 5 shows that ESG disclosure positively and significantly affects all three metrics, with t-values of 5.456 for ROA, 12.481 for ROE, and 12.605 for EPS, all at $p < 0.001$. Among the control variables, firm age has a significant positive effect on ROA but a negative effect on both ROE and EPS. Firm size negatively impacts ROA but shows insignificant impact on ROE and EPS. Leverage negatively affects ROA but positively impacts ROE and EPS. Board ownership has a positive significant effect across all metrics, while board size negatively impacts ROA and ROE, but not EPS. Board independence positively impacts ROA and ROE, though not strongly significant, and negatively impacts EPS. The models explain a substantial portion of the variability in financial performance, with adjusted R-squared values of 27.90% for ROA, 28.40% for ROE, and 25.70% for EPS. The F-statistics indicate that the models fit the data well, and Durbin-Watson values suggest minimal

autocorrelation in residuals. In conclusion, ESG disclosure positively influences financial performance, and various board characteristics and control variables play significant roles in shaping financial outcomes

Table 5: Effect of ESG Disclosure on Financial Performance

Variables	ROA (1)		ROE (2)		EPS (3)	
	t	sig	t	sig	t	sig
(Constant)	-2.725	0.007	-3.019	0.003	-3.055	0.002
ESG	5.456	0.000	12.481	0.000	12.605	0.000
Age	12.225	0.000	-5.316	0.000	-5.405	0.000
Size	-5.246	0.000	-5.945	0.383	-6.041	0.354
LEV	-6.173	0.000	5.979	0.000	6.037	0.000
Board Own	7.698	0.000	6.571	0.000	6.487	0.000
Board Size	-5.237	0.003	-3.623	0.003	-6.378	0.239
Board Independence	4.973	0.054	3.681	0.037	-4.328	0.054
Industry dummies	Yes		Yes		Yes	
Sample size	210.000		210		210	
Adj R ²	27.90%		28.40%		25.70%	
F. statistic	46.875**		54.769**		43.945**	
Durbin-Watson	1.508		1.085		1.088	

Table 6 reveals that ESG disclosure has a significant positive effect on ROA ($t = 7.085$, $p < 0.001$) and ROE ($t = 11.164$, $p < 0.001$), but a significant negative impact on EPS ($t = -10.306$, $p < 0.001$). Control variables such as age, size, and leverage also play crucial roles. Firm age positively affects all financial performance indicators (ROA: $t = 4.443$, ROE: $t = 4.487$, EPS: $t = 4.586$; all $p < 0.001$), and firm size has a positive significant effect across all models (ROA: $t = 5.268$, ROE: $t = 5.090$, EPS: $t = 5.198$; all $p < 0.001$). Conversely, leverage negatively impacts financial performance (ROA: $t = -5.244$, ROE: $t = -5.570$, EPS: $t = -5.636$; all $p < 0.001$). The moderating effects of board characteristics are also evident. Board ownership has a negative significant effect on all financial metrics (ROA: $t = -5.477$, ROE: $t = -4.648$, EPS: $t = -4.554$; all $p < 0.001$), but the interaction term with ESG disclosure is positively significant (ROA: $t = 5.175$, ROE: $t = 4.503$, EPS: $t = 4.548$; all $p < 0.001$), indicating that board ownership positively moderates the relationship between ESG disclosure and financial performance. Board size positively impacts all metrics, with the highest significance for EPS (ROA: $t = 1.548$, $p < 0.001$; ROE: $t = 2.256$, $p < 0.001$; EPS: $t = 3.485$, $p < 0.001$), and its interaction with ESG is mixed, positive for ROA and ROE but negative for EPS. Board independence has a minimal positive impact on ROA and ROE but an insignificant impact on EPS, while its interaction term with ESG is positive for ROA and ROE but negative for EPS. Model statistics such as adjusted R-squared values and F-statistics indicate that the models explain a substantial portion of the variability in financial performance and fit the data well. Durbin-Watson values suggest no significant autocorrelation in residuals. In conclusion, the table illustrates the complex relationships between ESG disclosure, board characteristics, and financial performance, highlighting the significant moderating roles of board characteristics and the substantial influence of control variables like age, size, and leverage on financial outcomes.

Table 6: Moderating Effect of Board Characteristics on the association between ESG disclosure and Financial Performance

Variables	ROA (1)		ROE (2)		EPS (3)	
	t	sig	t	sig	t	sig
(Constant)	1.243	0.214**	1.458**	0.014	1.495**	0.014
ESG	7.085**	0.00	11.164	0.00	-10.306	0.00
Age	4.443**	0.00	4.487	0.00	4.586	0.00
Size	5.268**	0.00	5.090	0.00	5.198	0.00
LEV	-5.244**	0.00	-5.570	0.00	-5.636	0.00
Board Own	-5.477**	0.00	-4.648	0.00	-4.554	0.00
Board Own*ESG	5.175**	0.00	4.503	0.00	4.548	0.00
Board Size	1.548**	0.00	2.256	0.00	3.485	0.00
Board Size * ESG	4.383**	0.00	4.834	0.00	-5.035	0.00
Board Independence	0.736**	0.00	0.374	0.00	0.120	0.00
Board Independence* ESG	5.215**	0.00	4.173	0.00	-1.240	0.00
Industry dummies	Yes		Yes		Yes	
Sample size	210		210		210	
Adj R ²	32.80%		37.26%		33.60%	
F. statistic	54.026**		63.490**		56.500**	
Durbin-Watson	1.024		1.234		1.523	

4.3.1. Additional Analysis

The analysis in table 7 investigates the effect of environmental, social, and governance disclosures on three financial performance indicators: Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS). **Model 1 (ROA)** reveals that environmental disclosures significantly positively impact ROA ($t=4.265$, $p<0.01$). Other factors like firm age, board size, and board independence also positively influence ROA, indicating that companies with larger and more independent boards tend to have better asset returns. However, leverage (LEV) and board ownership negatively impact ROA, suggesting that higher debt levels and significant ownership by board members might reduce asset efficiency. **Model 2 (ROE)** highlights that social disclosures positively affect ROE ($t=2.725$, $p<0.05$). In this model, firm age, size, and board independence exhibit positive effects on equity returns, emphasizing the beneficial role of larger, more experienced, and independent boards. Conversely, leverage and board ownership negatively impact ROE, indicating potential risks associated with high debt and significant board member ownership. **Model 3 (EPS)** demonstrates that governance disclosures have a positive effect on EPS ($t=1.363$, $p<0.01$). Similar to the previous models, firm age, board size, and board independence positively influence EPS, reflecting that larger and more independent boards contribute to better earnings per share. However, leverage and board ownership have negative effects, highlighting the adverse impact of high debt and concentrated board ownership on earnings. Overall, the models indicate that environmental, social, and governance disclosures play a crucial role in enhancing financial performance, with varying impacts on different financial metrics. Additionally, board-related variables such as board size, board independence, and board ownership significantly contribute to financial outcomes, underscoring the importance of board structure and governance in corporate performance.

Model 4 (ROA) shows that environmental disclosures significantly positively affect ROA ($t=3.84$, $p<0.01$). Firm size and board independence positively influence ROA, suggesting that larger companies and those with more independent boards tend to have better asset returns. However, leverage (LEV) continues to negatively impact ROA, indicating that higher debt levels reduce asset efficiency. Additionally, board ownership negatively impacts ROA, showing that significant ownership by board members might lead to conflicts of interest or risk aversion, hindering performance.

Model 5 (ROE) indicates a significant positive effect of environmental disclosures on ROE ($t=2.386$, $p<0.05$). Firm age and board independence positively influence ROE, emphasizing the beneficial role of experienced companies and independent boards in enhancing equity returns. However, leverage and board ownership again negatively impact ROE, highlighting potential risks associated with high debt and concentrated board ownership. Interestingly, board size does not show a significant effect in this model, suggesting its impact on ROE might be less pronounced.

Model 6 (EPS) reveals that governance disclosures significantly positively impact EPS ($t=1.74$, $p<0.01$). Firm age, size, and board independence positively influence EPS, reflecting that larger and more experienced companies with independent boards tend to have better earnings per share. Leverage negatively impacts EPS, indicating that high debt levels adversely affect earnings. Board ownership also negatively influences EPS, suggesting that significant ownership by board members might lead to decisions that do not maximize shareholder value. Overall, the models highlight that environmental and governance disclosures significantly enhance financial performance, with varying impacts on different financial metrics. Board-related variables such as firm size, board independence, and board ownership continue to play crucial roles in corporate performance. The findings underscore the importance of robust board structures and effective governance practices in achieving better financial outcomes.

Model 7 (ROA) investigates the combined effect of environmental, social, and governance disclosures on ROA. However, neither environmental nor social disclosures show significant effects on ROA in this model. Firm age ($t=2.937$, $p<0.01$), firm size ($t=3.935$, $p<0.05$), and board independence ($t=3.210$, $p<0.01$) positively influence ROA, indicating that larger, older firms and those with independent boards tend to have better returns on assets. Leverage ($t=-0.220$, $p<0.01$) and board ownership ($t=-0.217$, $p<0.05$) continue to negatively impact ROA, reflecting the detrimental effects of high debt and significant board ownership on asset efficiency. **Model 8 (ROE)** evaluates the combined impact on ROE. This model shows that social disclosures have a significant positive effect on ROE ($t=2.002$, $p<0.05$). Firm age ($t=3.297$, $p=0.110$) and board independence ($t=2.239$, $p<0.01$) positively influence ROE, underlining the beneficial role of experience and independent boards in enhancing equity returns. Leverage ($t=-0.134$, $p<0.01$) and board ownership ($t=-0.345$, $p<0.05$) negatively impact ROE, indicating that high debt levels and concentrated board ownership can reduce returns on equity. Firm size ($t=4.024$, $p<0.05$) also positively affects ROE, suggesting that larger firms benefit more in terms of equity returns. **Model 9 (EPS)** focuses on the combined effect on EPS. Governance disclosures significantly positively impact EPS ($t=0.218$, $p<0.01$). Firm age ($t=5.297$, $p=0.120$) and board independence ($t=3.297$, $p<0.01$) positively influence EPS, indicating that older firms with independent boards have higher earnings per share. Leverage ($t=-0.216$, $p<0.01$) and board ownership ($t=0.653$, $p<0.01$) continue to negatively impact EPS, suggesting that high debt levels and significant board ownership can reduce earnings per share.

Firm size ($t=3.297$, $p<0.01$) positively affects EPS, highlighting the advantage larger firms have in generating higher earnings per share. Overall, the analysis of Models 7, 8, and 9 highlights that social and governance disclosures significantly enhance financial performance, with distinct effects on different financial metrics. Board-related variables such as firm size, board independence, and board ownership play crucial roles in corporate performance. The findings emphasize the importance of effective governance practices and board structures in achieving better financial outcomes.

Discussion

The analysis in this study reveals significant relationships between ESG disclosures, board characteristics, and financial performance metrics, contributing to the broader understanding of these dynamics in the context of Saudi Arabia and other emerging markets. The findings from Tables 5 and 6 consistently show that ESG disclosures have a positive and significant impact on financial performance metrics such as ROA, ROE, and EPS. Specifically, the positive effects of ESG disclosures on ROA, ROE, and EPS align with the results from previous studies, such as those by Ammer et al. (2020) and Alregab (2022), which demonstrated that strong ESG performance enhances firm value and attracts foreign investors. This suggests that companies with robust ESG practices are likely to experience improved financial outcomes, reflecting a positive investor sentiment and market confidence. The analysis highlights the moderating role of board characteristics in the ESG-financial performance relationship. Board ownership's positive moderation effect suggests that when board members hold significant ownership stakes, it may enhance the effectiveness of ESG disclosures, potentially due to increased personal stakes in the company's performance. This finding supports the observations by Fuadah et al. (2022), who noted that strong ownership structures positively influence ESG practices and firm performance.

However, the mixed effects of board size and board independence on financial metrics indicate that these factors play complex roles. Board size's positive impact on metrics such as ROA and ROE but not EPS, combined with its interaction with ESG disclosures, reflects the nuanced influence of board composition. This is in line with the findings of Rossi et al. (2021), who showed that board attributes like independence and diversity significantly enhance CSR's positive impact on financial performance. The negative effect of board independence on EPS, despite its overall positive impact on ROA and ROE, suggests that while independent boards might contribute to strategic decision-making and overall company performance, they might also face challenges in directly enhancing earnings per share. This could be due to various factors such as board dynamics or strategic priorities that do not immediately translate into improved EPS.

The additional analysis from Table 7 underscores the distinct impacts of environmental, social, and governance disclosures on different financial performance metrics. Environmental disclosures positively impact ROA, social disclosures enhance ROE, and governance disclosures improve EPS. These findings suggest that the type of ESG disclosure can have varying effects on financial performance, reflecting the different ways these components influence corporate operations and investor perceptions. Control variables such as firm age, size, and leverage play significant roles in shaping financial outcomes. For instance, firm age positively influences ROA but negatively impacts ROE and EPS, possibly reflecting the balance between experience and the need for strategic renewal. Firm size shows mixed effects, and leverage's negative impact on ROA but positive effect on ROE and EPS highlights the trade-offs between financial risk and return.

The results align with and extend the findings of previous research. For example, Chebbi and Ammer (2022) and Arayssi et al. (2020) found that diverse and independent boards significantly enhance ESG disclosures. Similarly, Alsahlawi et al. (2021) and Al-Ahdal et al. (2023) identified moderating factors such as financial constraints and CEO commitment, which are echoed in the current study's examination of board characteristics and their influence on ESG disclosure effectiveness. Overall, the study underscores the importance of ESG disclosures in enhancing financial performance and highlights the significant role of board characteristics in moderating this relationship. The findings suggest that while ESG practices are crucial for financial success, the effectiveness of these practices is influenced by various board attributes and control variables. This highlights the need for companies to adopt comprehensive ESG strategies and optimize board compositions to maximize financial outcomes. The results also provide valuable insights for policymakers and investors looking to understand the interplay between governance, ESG practices, and corporate performance in emerging markets like Saudi Arabia.

Table 7: Effect of environmental disclosures, social disclosures, and governance disclosures on Financial Performance

Variables	ROA (1)						ROE (2)						EPS (3)					
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8		Model 9	
	t	sig	t	sig	t	sig	t	sig	t	sig	t	sig	t	sig	t	sig	t	sig
(Constant)	1.243	0.214	1.458	0.014	0.387	0.031	2.263	0.002	2.386	0.007	0.272	0.210	0.182	0.210	0.364	0.032	1.495	0.014
Environmental	4.265	0.000					3.84	0.003					0.265	-0.217				
Social			2.725	0.033					0.282	0.126					2.002	0.043		
Governance					1.363	0.002					1.74	0.002					0.218	0.003
Age	3.237	0.0029	4.238	0.0035	2.272	0.0034	2.792	0.0013	3.386	0.0003	2.038	0.0001	2.937	0.0002	3.297	0.0010	5.297	0.0020
Size	2.760	0.030	3.386	0.004	1.826	0.023	3.286	0.002	3.283	0.001	1.397	0.002	3.935	0.0031	4.024	0.0022	3.297	0.003
LEV	-4.780	0.003	-2.388	0.04	-1.252	0.03	-2.894	0.01	4.324	0.0023	-0.286	0.032	-0.220	0.002	-0.134	0.002	-0.216	0.001
Board Own	-4.486	0.004	-4.282	0.002	-2.286	0.004	-2.347	0.005	2.083	0.0013	-0.264	0.001	-0.217	0.0025	-0.345	0.0035	0.653	0.002
Board Size	3.064	0.003	1.375	0.002	3.175	0.002	4.397	0.002	3.937	0.003	2.936	0.001	4.202	0.0002	3.921	0.0002	1.393	0.000
Board Independence	2.023	0.002	3.735	0.0024	1.927	0.0012	2.745	0.001	1.296	0.002	2.653	0.0021	3.210	0.0003	2.239	0.0000	3.297	0.0002
Industry dummies	Yes		Yes		Yes		Yes										Yes	
Sample size	210		210		210		210		210		210		210		210		210	
Adj R ²	36.80%		38.09%		43.08%		35.96%		38.54%		42.04%		37.29%		39.62%		40.53%	
F. statistic	54.026**		56.52**		58.83**		53.98**		56.74**		58.01**		55.12**		57.1**		57.7**	
Durbin-Watson	1.024		1.045		1.123		1.234		1.037		1.436		1.742		1.243		1.424	

Conclusion

This study highlights the significant relationships between Environmental, Social, and Governance (ESG) disclosures, board characteristics, and financial performance metrics in Saudi Arabia and other emerging markets. The analysis reveals that ESG disclosures positively impact financial performance indicators such as Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS). This confirms that strong ESG practices correlate with improved financial outcomes and enhanced investor confidence. Additionally, the study emphasizes the moderating role of board characteristics, such as board ownership, size, and independence, which affect the effectiveness of ESG disclosures on financial performance. The findings of this study hold significant implications for companies, investors, and policymakers. For companies, prioritizing robust ESG disclosures is crucial, as these are positively associated with improvements in financial performance. By implementing comprehensive ESG strategies and enhancing transparency, firms can attract investors and enhance their value. Additionally, optimizing board composition—by increasing board ownership and finding a balance in board size and independence—can further amplify the positive impact of ESG disclosures on financial performance. For investors, assessing the quality of ESG disclosures and the effectiveness of board governance is essential when making investment decisions, as companies with strong ESG practices and sound board governance are likely to offer better financial returns and reduced risk. Policymakers should consider the study's implications for regulatory frameworks, advocating for policies that promote robust ESG disclosures and diverse, independent board compositions. Such measures could lead to significant improvements in corporate governance and sustainability practices, ultimately contributing to more favorable market outcomes.

The study's focus on companies listed on the Saudi Stock Exchange may limit the generalizability of the findings to other regions or markets with different economic or regulatory environments. Additionally, the reliance on available financial and ESG disclosure data may introduce limitations in data accuracy and completeness. The study provides a snapshot at a specific point in time, and changing market conditions or corporate strategies could affect the relevance of the findings. While various control variables are considered, other relevant factors influencing financial performance might not be accounted for. Future research could expand to include companies from different regions or countries, allowing for comparative analysis across diverse markets. Longitudinal studies would offer insights into how changes in ESG disclosures and board characteristics impact

financial performance over time. Sector-specific analyses could provide detailed insights into how these factors influence financial outcomes in different industries. Additionally, exploring additional moderating and mediating factors, such as corporate culture or stakeholder engagement, could enrich the understanding of the relationships between ESG practices, board characteristics, and financial performance. Incorporating qualitative research methods, such as interviews or case studies, could complement the quantitative findings and offer a deeper understanding of the mechanisms at play.

References

1. Abdelgawad, H. N. M. The effect of board culture diversity on ESG disclosure: Evidence from the Kingdom of Saudi Arabia.
2. Al Amosh, H., & Khatib, S. F. (2021). Corporate governance and voluntary disclosure of sustainability performance: The case of Jordan. *SN Business & Economics*, 1(12), 165.
3. Al-Ahdal, W. M., Farhan, N. H., Vishwakarma, R., & Hashim, H. A. (2023). The moderating role of CEO power on the relationship between environmental, social and governance disclosure and financial performance in emerging market. *Environmental Science and Pollution Research*, 30(36), 85803-85821.
4. Alazzani, A., Wan-Hussin, W. N., Jones, M., & Al-Hadi, A. (2021). ESG reporting and analysts' recommendations in GCC: The Moderation role of royal family directors. *Journal of Risk and Financial Management*, 14(2), 72.
5. Al-Duais, S. D., Qasem, A., Wan-Hussin, W. N., Bamahros, H. M., Thomran, M., & Alquhaif, A. (2021). CEO characteristics, family ownership and corporate social responsibility reporting: The case of Saudi Arabia. *Sustainability*, 13(21), 12237.
6. Alfalih, A. A. (2023). ESG disclosure practices and financial performance: a general and sector analysis of SP-500 non-financial companies and the moderating effect of economic conditions. *Journal of sustainable finance & investment*, 13(4), 1506-1533.
7. Almubarak, W. I., Chebbi, K., & Ammer, M. A. (2023). Unveiling the connection among ESG, earnings management, and financial distress: Insights from an emerging market. *Sustainability*, 15(16), 12348.
8. Alregab, H. (2022). The role of environmental, social, and governance performance on attracting foreign ownership: evidence from Saudi Arabia. *Sustainability*, 14(23), 15626.
9. Alsahlawi, A. M., Chebbi, K., & Ammer, M. A. (2021). The impact of environmental sustainability disclosure on stock return of Saudi listed firms: The moderating role of financial constraints. *International Journal of Financial Studies*, 9(1), 4.
10. Ammer, M. A., Aliedan, M. M., & Alyahya, M. A. (2020). Do corporate environmental sustainability practices influence firm value? The role of independent directors: Evidence from Saudi Arabia. *Sustainability*, 12(22), 9768.
11. Arayssi, M., & Jizi, M. (2024). Royal family board directors and the level of ESG disclosures in GCC listed firms. *Journal of Accounting & Organizational Change*, 20(1), 58-83.
12. Arayssi, M., Jizi, M., & Tabaja, H. H. (2020). The impact of board composition on the level of ESG disclosures in GCC countries. *Sustainability Accounting, Management and Policy Journal*, 11(1), 137-161.
13. Bamahros, H. M., Alquhaif, A., Qasem, A., Wan-Hussin, W. N., Thomran, M., Al-Duais, S. D., ... & Khojally, H. M. (2022). Corporate governance mechanisms and ESG reporting: Evidence from the Saudi Stock Market. *Sustainability*, 14(10), 6202.
14. Chebbi, K., & Ammer, M. A. (2022). Board composition and ESG disclosure in Saudi Arabia: The moderating role of corporate governance reforms. *Sustainability*, 14(19), 12173.
15. Dakhli, A. (2021). The impact of ownership structure on corporate social responsibility: the moderating role of financial performance. *Society and Business Review*, 16(4), 562-591.
16. Fuadah, L. L., Mukhtaruddin, M., Andriana, I., & Arisman, A. (2022). The ownership structure, and the environmental, social, and governance (ESG) disclosure, firm value and firm performance: the audit committee as moderating variable. *Economies*, 10(12), 314.
17. Hamad, H. A., & Cek, K. (2023). The moderating effects of corporate social responsibility on corporate financial performance: Evidence from OECD countries. *Sustainability*, 15(11), 8901.
18. Kouaib, A. (2022). Corporate sustainability disclosure and investment efficiency: The Saudi Arabian context. *Sustainability*, 14(21), 13984.
19. Qasem, A., AL-Duais, S. D., Wan-Hussin, W. N., Bamahros, H. M., Alquhaif, A., & Thomran, M. (2022). Institutional ownership types and ESG reporting: the case of Saudi listed firms. *Sustainability*, 14(18), 11316.
20. Qasem, A., AL-Duais, S. D., Wan-Hussin, W. N., Bamahros, H. M., Alquhaif, A., & Thomran, M. (2022). Institutional Ownership Types and ESG Reporting: The Case of Saudi Listed Firms. *Sustainability* 2022, 14, 11316.
21. Qasem, A., AL-Duais, S. D., Wan-Hussin, W. N., Bamahros, H. M., Alquhaif, A., & Thomran, M. (2022). Institutional Ownership Types and ESG Reporting: The Case of Saudi Listed Firms. *Sustainability* 2022, 14, 11316.

22. Rossi, M., Chouaibi, J., Chouaibi, S., Jilani, W., & Chouaibi, Y. (2021). Does a board characteristic moderate the relationship between CSR practices and financial performance? Evidence from European ESG firms. *Journal of Risk and Financial Management*, 14(8), 354.
23. Sharawi, H. H. M. (2022). Effective Audit Committee and Financial Reporting Quality: The Mediating Effect of Audit Quality: Evidence from KSA. *Alexandria Journal of Accounting Research*, 6(2), 47-79.
24. Sharawi, H., & Shahawi, M. M. (2024b). The Impact of ESG Disclosure on Financial Reporting Quality: Evidence From KSA. *Journal of Survey in Fisheries Sciences*, 98-108.
25. Sharawi, H., Sabr, S., & AL mohamad, M. R. (2024b). The Moderating Role of Board Ownership on The Relationship Between Gender Diversity and Accounting Fraud: Evidence From KSA. *Journal of Survey in Fisheries Sciences*, 11(4), 109-118.
26. Thuy, H. X., Khuong, N. V., Anh, L. H. T., & Quyen, P. N. (2024). Effect of corporate governance on corporate social responsibility in Vietnam: state-ownership as the moderating role. *Journal of Financial Reporting and Accounting*, 22(3), 701-727.
27. Umar, U. H., Firmansyah, E. A., Danlami, M. R., & Al-Faryan, M. A. S. (2023). Revisiting the relationship between corporate governance mechanisms and ESG disclosures in Saudi Arabia. *Journal of Accounting & Organizational Change*.
28. Zahid, R. A., Khan, M. K., Anwar, W., & Maqsood, U. S. (2022). The role of audit quality in the ESG-corporate financial performance nexus: Empirical evidence from Western European companies. *Borsa Istanbul Review*, 22, S200-S212.