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# The Role of Board Independence in Enhancing the Relationship between ESG Disclosure and Financial Performance

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## Abstract

This study aims to analyze the relationship between Environmental, Social, and Governance (ESG) disclosure and financial performance of non-financial companies listed on the Saudi Stock Exchange, with a focus on the moderating role of board independence. The study adopts a quantitative approach, employing multiple regression analysis and correlation tests to analyze data extracted from financial reports and sustainability disclosures covering the period from 2019 to 2023. The sample includes 375 observations across 75 non-financial companies operating in 18 different sectors. The findings reveal that social disclosure had the most significant impact on financial performance, followed by environmental disclosure, while governance disclosure exhibited a weak influence. Moreover, the results indicate that board independence did not enhance the relationship between ESG disclosure and financial performance, suggesting the need for more effective governance mechanisms to improve transparency, build investor trust, and achieve the objectives of Saudi Vision 2030.

**KeyWords:** Environmental, Social, and Governance (ESG) Disclosure; Corporate Governance; Board Independence; Financial Performance; Saudi Stock Exchange.

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# دور إستقلالية مجلس الإدارة في تعزيز العلاقة بين الإفصاح عن ESG والأداء المالي

## ملخص البحث

تهدف هذه الدراسة إلى تحليل العلاقة بين الإفصاح عن الجوانب البيئية والاجتماعية والحوكمة (ESG) والأداء المالي في الشركات غير المالية المدرجة في السوق المالية السعودية، مع التركيز على الدور المعدل لاستقلالية مجلس الإدارة. وقد اعتمدت الدراسة المنهج الكمي باستخدام تحليل الانحدار المتعدد واختبارات الارتباط لتحليل البيانات المستخرجة من التقارير المالية وتقارير الاستدامة خلال الفترة من 2019 إلى 2023. إذ شملت العينة 375 مشاهدة تغطي 75 شركة غير مالية من 18 قطاعاً مختلفاً. وقد أظهرت النتائج أن الإفصاح الاجتماعي كان الأكثر تأثيرًا على الأداء المالي، يليه الإفصاح البيئي، بينما أظهر الإفصاح عن الحوكمة تأثيرًا ضعيفًا. كما أشارت النتائج إلى أن استقلالية مجلس الإدارة لم تعزز العلاقة بين الإفصاح عن ESG والأداء المالي، بما يبرز الحاجة إلى آليات حوكمة أكثر فاعلية لتعزيز الشفافية، وبناء ثقة المستثمرين، وتحقيق أهداف رؤية السعودية 2030.

**الكلمات المفتاحية:** الإفصاح البيئي والاجتماعي والحوكمي(ESG) ؛ حوكمة الشركات؛ استقلالية مجلس الإدارة؛ الأداء المالي؛ السوق المالية السعودية.

# 1- Introduction

Financial performance is considered a fundamental indicator for measuring the efficiency of corporate management in utilizing resources, as noted by Mohammed (2021), with this efficiency reflected in annual financial reports. The Institute of Chartered Accountants in England has indicated that the lack of information in financial reports was one of the main causes of financial crises, such as the collapses in 2018 (Hashad, 2023). With growing global awareness, especially in developed countries, there has been an increasing demand for transparency in the disclosure of sustainability and financial information. The disclosure of Environmental, Social, and Governance (ESG) factors aims to enhance corporate competitiveness, as highlighted by (Chouaibi et al. 2022). Al-Khudairi (2020) also emphasized the importance of governance in reducing corruption and strengthening investor-management trust. Moreover, corporate social responsibility (CSR) is a core component of business operations, with Al-Jard (2020) explaining that CSR encompasses environmental, social, and economic dimensions, which are reflected in financial statements.

Due to the shortcomings of traditional financial disclosure, sustainability reporting has emerged in response to global initiatives, aiming to provide information on risks affecting the current and future financial performance of companies. The board of directors is considered a key governance mechanism, as its characteristics — such as size, independence, and member diversity — are linked to the integrity of financial disclosure. This was confirmed by the study of Sanda et al. (2011), which highlighted the role of board independence in enhancing transparency and attracting investors.

As the Saudi financial market rapidly evolves under Vision 2030, the Saudi Stock Exchange has supported the United Nations' Sustainable Stock Exchanges initiative since 2018. This has prompted the 342 listed companies, spread across 22 sectors (www.saudiexchange.sa), to adopt sustainability standards and disclose ESG practices in accordance with the Saudi Corporate Governance Regulations of 2017.

Accordingly, this study emphasizes the importance of examining the impact of ESG disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange, with a particular focus on the moderating role of board independence. Previous studies indicate a positive relationship between ESG disclosure and financial performance; however, the influence of board independence on this relationship has not been sufficiently explored within the Saudi context. Thus, this study aims to fill this gap by providing quantitative evidence that contributes in improving disclosure practices and enhancing the quality of governance in alignment with Vision 2030.

Based on the above, the researchers formulated the study problem through the following two main questions:

**First question**: What is the impact of Environmental, Social, and Governance (ESG) disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange? This question can be divided into three sub-questions:

1. What is the impact of environmental disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange?
2. What is the impact of social disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange?
3. What is the impact of governance disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange?

**Second question**: What is the moderating role of board independence in the relationship between ESG disclosure and the financial performance of non-financial companies listed on the Saudi Stock Exchange?

In light of the research problem and its questions, the study focuses on two main objectives:

**First objective**: Analyze the impact of ESG disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange through the following sub-objectives:

1. Analyze the impact of environmental disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange.
2. Study the impact of social disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange.
3. Examine the impact of governance disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange.

**Second objective**: Study the moderating role of board independence in enhancing the relationship between ESG disclosure and the financial performance of non-financial companies listed on the Saudi Stock Exchange.

This study represents a qualitative contribution by shedding light on the Saudi market environment, which is unique in terms of market efficiency, transparency levels, and the amount of available information compared to other markets. The findings help in understanding the relationship between ESG disclosure and financial performance, with a focus on the role of board independence in strengthening this relationship and minimizing ambiguity in financial and accounting facts.

On a practical level, the study presents a practical model for understanding the impact of ESG disclosure on financial performance, considering board independence as a moderating factor. The results contribute to guiding companies toward effective disclosure and improved governance, thereby enhancing investors, regulatory, and public confidence in financial and sustainability reports. Furthermore, the study supports the objectives of Saudi Vision 2030 by promoting transparency.

# 2- Theories Explaining ESG

## 2-1 Governance Theories Explaining the Relationship between Shareholders and Management

Governance theories serve as a critical theoretical framework for understanding how the relationships between different parties within corporations are organized and how strategic objectives can be effectively achieved. Corporate governance relies on a set of theories that explain the relationship between shareholders and management, as well as the influence of various stakeholders on institutional and financial performance. Among the most prominent of these are the Agency Theory and the Stakeholder Theory, both commonly used to analyze and understand how governance practices affect corporate performance and the achievement of sustainability.

### 2-1-1 Agency Theory

This theory focuses on the contractual relationship between shareholders (owners) and executive managers who are delegated to make decisions and manage the company. According to the theory, conflicts of interest may arise when managers pursue personal goals at the expense of shareholders' objectives. Therefore, governance is seen as a mechanism to ensure performance transparency and reduce the risks associated with such conflicts.

Key governance mechanisms that address this conflict include managerial oversight, accurate financial disclosure, and the enhancement of board independence. These mechanisms contribute to balancing the interests of various parties and improving the financial performance of the company. The study by Widyasari & Adi (2023) confirmed that the effective application of agency theory principles reduces the risk of deviation from companies' strategic goals, leading to better financial performance and greater transparency.

### 2-1-2 Stakeholder Theory

This theory broadens the focus beyond just shareholders to include a wider range of parties that influence and are influenced by the company. According to the theory, stakeholders include shareholders, employees, suppliers, customers, the government, and society at large. It emphasizes that companies have social and ethical responsibilities toward these groups and that the success and sustainability of a company largely depend on the satisfaction of all stakeholders.

In other words, any failure to meet the needs of these stakeholders can negatively impact the company's financial performance and market reputation. Al-Kenani's study (2023) illustrated that adhering to stakeholder theory principles significantly enhances the relationship between the company and its stakeholders, positively influencing financial performance and promoting institutional stability.

The findings of Sanda et al. (2011) indicate that integrating the principles of both agency and stakeholder theories provides a comprehensive framework for achieving governance quality. Within this framework, the board of directors plays a complementary role in minimizing conflicts and balancing the financial and social objectives of the company. Furthermore, Muller (2014) emphasized the importance of board independence as a tool for effective governance through the oversight of executive management and ensuring the interests of all stakeholders are considered.

In light of the aforementioned theories, it is evident that the success of corporate governance is not limited to managing the relationship between shareholders and managers; it also extends to all stakeholders who impact corporate performance. The importance of integrating these two theories lies in their ability to provide a comprehensive understanding of the complex relationship between governance practices and the achievement of financial and economic sustainability. Here, the role of independent boards of directors emerges as a critical factor in balancing these relationships and fostering trust among the various parties involved. This, in turn, contributes to achieving the goals of sustainability and institutional transparency, as confirmed by the study of Nguyen & Thi (2023), which found that increased transparency and board independence directly improve financial performance and promote institutional sustainability.

## 2-2 Literature Review and Hypotheses Development

The relationship between Environmental, Social, and Governance (ESG) disclosure and financial performance, as well as the moderating role of board independence, has garnered considerable interest from researchers and academics in recent years. This growing interest stems from the increasing awareness of the importance of governance and sustainability in improving financial performance and enhancing transparency in financial markets. Despite the abundance of studies addressing this topic, findings remain inconsistent, reflecting differences in economic, cultural, and regulatory environments, in addition to the varying analytical tools and methodologies used in each study. These studies aimed to explore and understand the impact of ESG disclosure practices on financial performance, with a focus on influencing factors such as board independence and its role as a moderating variable that can either enhance or constrain the relationship between key variables. The following section presents the most prominent previous studies that addressed the relationship between ESG disclosure and financial performance, in addition to studies that explored the role of board independence in enhancing or influencing this relationship, in order to identify research gaps that the current study seeks to address.

### 2-2-1 The Previous Studies on the Impact of ESG Disclosure on Financial Performance

The relationship between ESG disclosure and corporate financial performance has received increasing attention from researchers and academics. In this context, the study by Omar et al. (2014) aimed to examine the impact of social responsibility accounting disclosure on the financial performance of publicly traded Jordanian industrial companies during the period from 2005 to 2009, using a sample of 69 industrial companies listed on the Amman Stock Exchange. The results showed that investment in social activities negatively affected financial performance.

In contrast, Jitaree (2015) aimed to determine the level of social responsibility disclosure and its relationship with corporate financial performance during the period from 2009 to 2011, using a sample of 323 companies listed on the Thai Stock Exchange. The study found a positive relationship between social responsibility disclosure and financial performance.

Similarly, Othman (2016) focused on the relationship between financial performance and sustainability performance in Egyptian joint-stock companies from the perspective of board member diversity and ownership structure, using a sample drawn from the 2015 financial reports of companies included in the Egyptian Social Responsibility Index (S&P/EGX/ESG). The results indicated a significant positive relationship between sustainability performance reports and financial performance, with board diversity and ownership structure influencing sustainability reporting.

The existing literature reveals a diverse set of findings regarding the relationship between ESG (Environmental, Social, and Governance) disclosures and corporate financial performance, often influenced by the economic, cultural, and regulatory environments of different regions.

Blasi et al. (2018) conducted a comprehensive study on 988 U.S. firms across nine sectors from 2003 to 2015. Their findings indicated a positive relationship between corporate social responsibility (CSR) indicators and financial performance. In contrast, Deswanto and Siregar (2018), using data from 211 firms listed on the Indonesia Stock Exchange between 2012 and 2014, found insignificant positive impact of environmental disclosure on financial outcomes.

In the Arab context, Al-Matarnah (2019) examined 13 Jordanian mining and extractive companies from 2012 to 2015 and found a positive influence of sustainability disclosure on financial performance. Similarly, Al-Jard (2020) reported that social responsibility disclosures had a favorable effect on financial performance in a study of 24 companies listed on the Damascus Securities Exchange from 2011 to 2016.

Almeyda and Dermansyah (2019) analyzed 77 companies from G7 countries (2015–2018) and observed that environmental disclosure positively influenced financial performance, although social and governance disclosures did not show a clear effect. Warsa and Ganda (2019), in a study of 10 mining companies listed on the Johannesburg Stock Exchange (2010–2014), reported a negative relationship between environmental disclosure and financial performance but a positive link between social disclosure and financial outcomes.

Other regional studies provide further insights. Kwan et al. (2020) analyzed 58 companies from Malaysia and Singapore (2005–2013) and found a positive correlation between governance and financial performance. In Norway, Giannopoulos et al. (2020) found strong evidence of a relationship between ESG initiatives and financial performance in a study of 20 companies (2010–2019). Triyani et al. (2020) also found a positive effect of ESG disclosure on financial performance in a study of 159 companies listed on the Indonesia Stock Exchange (2012–2016). Likewise, Zainon et al. (2020) highlighted the significant role of social disclosure compared to environmental and governance dimensions in a sample of 114 Malaysian firms in 2019.

Focusing on the Saudi context, Younis (2021) studied 60 industrial companies listed on the Saudi stock market from 2015 to 2019 and found that while sustainability report disclosure had a significant effect on financial performance, the quality of disclosure did not. Alsahlawi et al. (2021), examining 24 Saudi companies from 2015 to 2019, observed a negative impact of environmental disclosure on financial performance. In Egypt, Bakhit et al. (2021) studied 30 companies (2017–2019) and confirmed a significant influence of environmental and governance disclosures, but no notable impact from social responsibility activities.

More recently, Firmansyah et al. (2023) found that ESG disclosure had a negative effect on financial performance in Saudi Arabia between 2010 and 2020. In contrast, Abdulhadi (2023), examining 110 Egyptian firms from 2017 to 2020, reported a significant positive effect of environmental and social disclosures.

In summary, these studies demonstrate mixed findings. While many highlight a positive relationship between ESG practices and financial performance, others report neutral or even negative effects. These differences underscore the influence of institutional frameworks, disclosure quality, and regional priorities on the ESG–performance link.

### 2-2-2 The Previous Studies Addressing the Impact of Board Independence on Financial Performance

Board independence is widely regarded as a cornerstone of effective corporate governance. It plays a critical role in promoting transparency and ensuring objective managerial decision-making, which may ultimately influence firms' financial performance either positively or negatively. Due to its significance, this topic has attracted the interest of many scholars and researchers, resulting in a growing body of empirical studies exploring the relationship between board independence and financial performance.

Several studies have confirmed a positive impact of board independence. For instance, Sanda et al. (2011) analyzed a sample of 89 companies listed on the Nigerian Stock Exchange from 1996 to 2004 and reported a significant positive relationship between board independence and financial performance. Similarly, Muller (2014), in a study of 100 companies listed on the London Stock Exchange during 2010–2011, found board independence to be a key factor in enhancing financial outcomes. Consistent results were reported by Maniruzzaman and Hussain (2019), who examined 150 manufacturing firms in Bangladesh from 2006 to 2017, and Khalifa et al. (2020), who investigated 47 companies in the UAE markets (Dubai and Abu Dhabi) from 2006 to 2015.

However, not all studies support a positive association. Hamdan (2016), in a study of 48 firms listed on the Bahrain Stock Exchange, found a negative effect of board independence on financial performance based on ROA, ROE, and Tobin's Q. Similarly, Nguyen and Thi (2023) analyzed 52 construction and real estate companies in Vietnam between 2006 and 2020 and found that a higher proportion of independent directors led to a decline in business efficiency.

Aernan et al. (2023) also observed a negative relationship in their study of 12 non-financial Nigerian companies from 2011 to 2020.

Meanwhile, other studies have found insignificant relationship between board independence and financial performance. For example, Pasko et al. (2021), in their analysis of agricultural companies listed on the Chinese stock exchange from 2008 to 2017, reported no meaningful effect. Similarly, Abu Zaqiya et al. (2022) found no impact of independent board members on the performance of 20 industrial firms listed on the Amman Stock Exchange (2018–2020). Gatehi and Nasieku (2022) reached the same conclusion in their study of 26 non-financial firms listed on the Nairobi Stock Exchange from 2014 to 2019.

In the context of Saudi Arabia, Al-Amoudi and Al-Mutairi (2024) conducted a study on 10 cement companies listed on the Saudi Stock Exchange between 2017 and 2022 and found a significant positive effect of board independence on financial performance.

In summary, the literature presents mixed evidence regarding the relationship between board independence and firm performance. While many studies support a positive association, others report negative or statistically insignificant results. These inconsistencies may stem from variations in economic environments, regulatory frameworks, cultural differences, sample sizes, and research methodologies. Therefore, further research is warranted to better understand the conditions under which board independence enhances or impedes financial performance across different contexts.

Based on the reviewed studies, the researchers formulated the study hypotheses as follows:

Main Hypothesis (H1): There is a significant positive impact of Environmental, Social, and Governance (ESG) disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange.

**Sub-hypotheses derived from H1**:

**H1a**: There is a significant positive impact of environmental disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange.

**H1b**: There is a significant positive impact of social disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange.

**H1c**: There is a significant positive impact of governance disclosure on the financial performance of non-financial companies listed on the Saudi Stock Exchange.

**Main Hypothesis (H2)**:

Board independence enhances the positive impact of the relationship between ESG disclosure and the financial performance of non-financial companies listed on the Saudi Stock Exchange.

# 3- The Applied Study

The applied study aims to achieve the research objective and test its hypotheses. This will be accomplished by addressing the study population and sample, data sources, measurement of study variables, the study model, and the statistical methods used, followed by the analysis of the results.

## 3-1 Study Population

The study population consists of non-financial companies listed on the Saudi Stock Exchange that belong to various economic sectors. These sectors include:

(Energy, Basic Materials, Capital Goods, Commercial and Professional Services, Transportation, Consumer Durables, Consumer Services, Media and Entertainment, Retailing and Distribution of Luxury Goods, Retailing and Distribution of Consumer Goods, Food Production, Healthcare, Pharmaceuticals, Software and IT Services, Telecommunications, Utilities, and Real Estate Management and Development).

Four financial sectors were excluded from the study, namely: (Insurance, Banking, Financial Services, and Real Estate Investment Funds). This exclusion is due to the specific nature of these sectors' activities and their subjection to different regulatory and legal requirements, which may affect the accuracy and objectivity of the study results. This delimitation aims to ensure data homogeneity and achieve a more precise and clear analysis of the relationships among the different variables.

## 3-2 The Study Sample

The study sample was selected from the non-financial companies listed on the Saudi Stock Exchange according to the following criteria:

1. The company must be a publicly listed joint-stock company on the Saudi Stock Exchange.
2. Availability of the required financial data to measure the study variables for the period from 2019 to 2023.
3. Continuous trading of the company's shares on the Saudi Stock Exchange during the study period.
4. The Saudi Riyal must be used as the primary currency in the preparation of financial reports.

Based on these criteria, the study sample consisted of 75 non-financial companies listed on the Saudi Stock Exchange, totaling 375 observations (75 companies × 5 years), which represents 42% of the total study population.

**Table 1: Distribution of the Study Sample Items**

| No. | Sector Name | Number of Companies | Selected Companies | Number of Observations | Percentage |
|---|---|---|---|---|---|
| 1 | Energy | 7 | 5 | 25 | 71% |
| 2 | Basic Materials | 45 | 15 | 75 | 33% |
| 3 | Capital Goods | 14 | 5 | 25 | 36% |
| 4 | Commercial and Professional Services | 6 | 2 | 10 | 33% |
| 5 | Transportation | 7 | 2 | 10 | 29% |
| 6 | Durable Consumer Goods | 6 | 3 | 15 | 50% |
| 7 | Consumer Services | 13 | 4 | 20 | 31% |
| 8 | Media and Entertainment | 4 | 2 | 10 | 50% |
| 9 | Retail and Distribution of Luxury Goods | 8 | 5 | 25 | 63% |

| No. | Sector Name | Number of Companies | Selected Companies | Number of Observations | Percentage |
|---|---|---|---|---|---|
| 10 | Retail and Distribution of Consumer Goods | 8 | 3 | 15 | 38% |
| 11 | Food Production | 19 | 7 | 35 | 37% |
| 12 | Household and Personal Products | 1 | 0 | 0 | 0% |
| 13 | Healthcare | 10 | 2 | 10 | 20% |
| 14 | Pharmaceuticals | 3 | 2 | 10 | 67% |
| 15 | Applications and Techn-logy Services | 5 | 2 | 10 | 40% |
| 16 | Telecommunications | 4 | 4 | 20 | 100% |
| 17 | Utilities | 6 | 4 | 20 | 67% |
| 18 | Real Estate Management and Development | 13 | 8 | 40 | 62% |
| | Total | 179 | 75 | 375 | 42% |

Source: Prepared by researchers.

## 3-3 Data Collection Sources

The study relies on secondary data collected from the following sources:

1. Annual financial reports of companies listed on the Saudi Stock Exchange.
2. ESG practices disclosure reports and sustainability reports of companies.
3. Data published on the Saudi Stock Exchange website (Tadawul).
4. Reports issued by regulatory and supervisory authorities, such as the Saudi Capital Market Authority.
5. Previous studies and research, as well as scientific papers related to the study topic.

## 3-4 Study Variables

The study included the following variables:

**Independent Variables**: Environmental, Social, and Governance Disclosure (ESG):

The independent variables consist of three main dimensions:

1. **Environmental Disclosure**: Measures the level of the company's commitment to environmental standards and how this is reflected in its financial reports.
2. **Social Disclosure**: Measures the company's commitment to its social responsibility toward employees and the local community.

3. **Governance Disclosure**: Measures the level of transparency and governance practices within the company.

The researchers established 17 items for the environmental variable, 17 items for the social variable, and 15 items for the governance variable, as shown in the following table:

**Table 2: Items Used for Measuring Independent Variables**

| No. | Environmental Dimension Items | No. | Social Dimension Items | No. | Governance Dimension Items |
|---|---|---|---|---|---|
| 1 | Greenhouse Gas Emissions | 1 | Safety Practices | 1 | Shareholders' Rights |
| 2 | Carbon Emissions | 2 | Workforce Diversity | 2 | Internal Control |
| 3 | Energy Consumption | 3 | Human Rights | 3 | Anti-Corruption |
| 4 | Pollution Control | 4 | Corporate Social Responsibility | 4 | Disclosure and Transparency |
| 5 | Climate Change | 5 | Business and Ethical Practices | 5 | Company Structure |
| 6 | Environmental Risk Management | 6 | Employee Treatment and Working Conditions | 6 | Risk and Compliance |
| 7 | Water and Air Pollution | 7 | Support for Awareness Campaigns | 7 | Shareholder Access to Information |
| 8 | Waste Management | 8 | Employment of People with Disabilities | 8 | Capital Preservation |
| 9 | Use and Sustainability of Natural Resources | 9 | Internal Training | 9 | Shareholder Confidence |
| 10 | Recycling | 10 | Talent Development Contribution | 10 | Committee Meetings |
| 11 | Environmentally Friendly Products | 11 | Reducing Unemployment | 11 | Audit Committee |
| 12 | Noise Management | 12 | Scholarships | 12 | Rewards |
| 13 | Green Initiatives | 13 | Women Employment | 13 | Effective Implementation of Governance |
| 14 | Eco-Friendly Lighting | 14 | Donations to Charities | 14 | Document Retention |

| No. | Environmental Dimension Items | No. | Social Dimension Items | No. | Governance Dimension Items |
|---|---|---|---|---|---|
| 15 | Consumption Aware-ness Training | 15 | Sports Sponsorship | 15 | Publishing the Governance Manual on Company Website |
| 16 | Sustainability Report Publication | 16 | Employee Benefits | | |
| 17 | Smart Work Environment | 17 | CSR Report Publication | | |

Source: Prepared by researchers.

## 3-5 Methods of Measuring Study Variables

The table below outlines the methods for measuring the variables and the supporting studies:

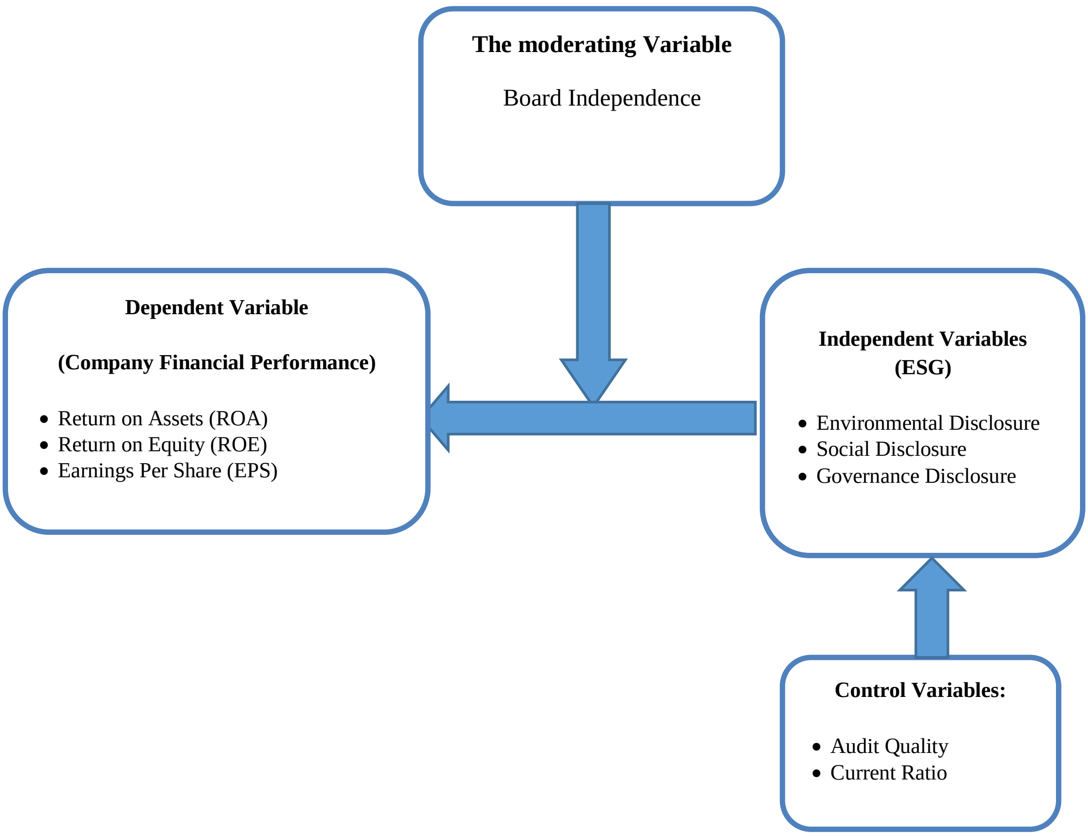
### Table 3: Methods used for Measuring the Variables

| No. | Variables | | Measurement | Supporting Studies |
|---|---|---|---|---|
| 1 | Independent | Environmental | Measured with a dummy variable; it takes the value (1) when disclosure occurs, and (0) otherwise. Disclosure rate is measured using the following formula: (Total points obtained by the company ÷ Number of items) × 100 | (Habbash & Al-Malki, 2018) (Jabbar & Malik, 2023) |
| | | Social | | |
| | | Governance | | |
| 2 | Dependent (Financial Performance) | Return on Assets (ROA) | Net Profit ÷ Total Assets | (Giannopoulos & others, 2022) (Widyasari & Ad, 2023) |
| | | Return on Equity (ROE) | Net Profit ÷ Total Equity | (Koundouri & others, 2022) (Tamrabet & Mouchri, 2021) |
| | | Earnings per Share (EPS) | Net Profit ÷ Number of Outstanding Shares | (Yahya et al., 2021) |
| 3 | Moderator | Board Independence | Measured with a dummy variable; takes value (1) if 50% or more of board members are independent, and (0) otherwise. | (Ayyad, 2024) |
| 4 | Control | Audit Quality | Measured with a dummy variable; takes value (1) if the company's financial statements are audited by one of the Big Four audit firms, and (0) otherwise. | (Badawi, 2017) |
| | | Current Ratio | Current Assets ÷ Current Liabilities | (Al-Kenani, 2023) (Muafa, 2024) |

Source: Prepared by researchers.

## 3-6 Model of the Applied Study

The study model was constructed based on previous studies and in alignment with the title of the study, which indicates the moderating role of board independence in the relationship between environmental, social, and governance (ESG) disclosures and financial performance of non-financial companies listed on the Saudi Stock Exchange.




Source: Prepared by researchers based on previous studies.

## 3-7 Statistical Methods and Data Analysis

To achieve the study's objectives and test its hypotheses, the researchers used a set of statistical methods that contribute to understanding the relationships between variables and analyzing the data accurately. These methods include:

1. **Descriptive Analysis**: To examine the data and determine the general characteristics of the sample, including measures of central tendency (mean, median) and dispersion (standard deviation).
2. **Correlation Test**: To measure the strength and direction of the relationship between independent, dependent, moderating, and control variables.
3. **Multiple Regression Analysis**: To test the impact of independent variables on the financial performance of companies. It is also used to test the interactive effect of board independence as a moderating variable.
4. **Moderating Effect Test**: To measure the moderating role of board independence in the relationship between ESG disclosures and financial performance.
5. **Analysis of Variance (ANOVA)**: To measure the significance of the statistical model and its suitability for analysis.
6. **Hypothesis Testing**: Hypotheses are tested using statistical criteria such as the t-value and p-value significance level.

### 3-7-1 Descriptive Analysis of the Study Variables

Descriptive analysis was conducted on a sample of 338 observations from non-financial companies listed on the Saudi Stock Exchange, after excluding 38 outlier observations to ensure the accuracy of the results. The table below shows the descriptive statistics for the study variables:

**Table 4: Descriptive Statistics for the Study Variables**

| Study Variables | | Observations | Mean | Std. Deviation | Max Value | Min Value |
|---|---|---|---|---|---|---|
| **Company Financial Performance (Dependent)** | Earnings per Share (EPS) | 338 | 2.01 | 6.71 | 61.44 | - 23.36 |
| | Return on Assets (ROA) | 338 | 0.04 | 0.08 | 0.28 | - 0.37 |
| | Return on Equity (ROE) | 338 | 0.06 | 0.25 | 0.60 | -2.33 |
| **ESG (Independent)** | Environmental Dimension | 338 | 0.20 | 0.30 | 1 | 0 |

| Study Variables | | Observations | Mean | Std. Deviation | Max Value | Min Value |
|---|---|---|---|---|---|---|
| | Social Dimension | 338 | 0.29 | 0.33 | 1 | 0 |
| | Governance Dimension | 338 | 0.43 | 0.38 | 1 | 0 |
| **Control Variables** | Audit Quality | 338 | 0.55 | 0.50 | 1 | 0 |
| | Current Ratio | 338 | 2.34 | 4.96 | 61.40 | 0.18 |
| **Board Independence Moderator** | | 338 | 0.49 | 0.50 | 1 | 0 |

The table above highlights several conclusions, the most important of which are:

- The results of the analysis showed significant variation in the financial performance variable (represented by earnings per share, return on assets, and return on equity) among companies. The maximum value for earnings per share was 61.44, while the minimum was -23.36, with a mean of 2.01 and a high standard deviation of 6.71, reflecting the variance in financial performance among the companies selected for the study sample.

- Regarding the disclosure of sustainability dimensions (ESG), the mean for environmental disclosure was 0.20 with a standard deviation of 0.30, indicating a low level of environmental disclosure in the sample. Social disclosure was relatively higher, with a mean of 0.29 and a standard deviation of 0.33, while governance disclosure recorded the highest disclosure rates, with a mean of 0.43 and a standard deviation of 0.38, suggesting that companies place more emphasis on the governance dimension than on the environmental and social dimensions.

- Concerning control variables, audit quality showed a mean of 0.55, indicating that more than half of the companies rely on highly experienced auditors. On the other hand, the trading ratio exhibited significant variation, ranging between 0.18 and 61.40, with a mean of 2.34 and a high standard deviation of 4.96, indicating differences in liquidity levels across companies.

• As for board independence, its average value was 0.49, reflecting a good level of independence among the listed companies.

### 3-7-2 Correlation Analysis of the Study Variables

Correlation analysis was used for the study variables to identify the relationships between all variables with each other. The table below illustrates the correlation relationships between the study variables, as follows:

**Table 5: Correlation between Study Variables**

| Variables | | Earnings per Share | Return on Assets | Return on Equity | Environmental Disclosure | Social Disclosure | Governance Disclosure | Audit Quality | Liquidity Ratio |
|---|---|---|---|---|---|---|---|---|---|
| Return on Equity | Correlation Coeff. | .456** | 1 | | | | | | |
| | Sig. (2-tailed) | 0.000 | | | | | | | |
| Return on Equity | Correlation Coeff. | .490** | .806** | 1 | | | | | |
| | Sig. (2-tailed) | 0.000 | 0.000 | | | | | | |
| Environmental Disclosure | Correlation Coeff. | -0.019 | .137* | .125* | 1 | | | | |
| | Sig. (2-tailed) | 0.731 | 0.011 | 0.022 | | | | | |
| Social Disclosure | Correlation Coeff. | 0.001 | .208** | .174** | .851** | 1 | | | |
| | Sig. (2-tailed) | 0.984 | 0.000 | 0.001 | 0.000 | | | | |
| Governance Disclosure | Correlation Coeff. | -0.074 | 0.079 | 0.085 | .590** | .692** | 1 | | |
| | Sig. (2-tailed) | 0.172 | 0.147 | 0.118 | 0.000 | 0.000 | | | |
| Audit Quality | Correlation Coeff. | .118* | .238** | .181** | .402** | .362** | .205** | 1 | |
| | Sig. (2-tailed) | 0.030 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | | |
| Liquidity Ratio | Correlation Coeff. | 0.009 | 0.048 | 0.024 | -0.087 | -.109* | 0.024 | -.144** | 1 |
| | Sig. (2-tailed) | 0.870 | 0.381 | 0.657 | 0.110 | 0.046 | 0.664 | 0.008 | |

** indicates statistical significance of the correlation coefficient at the 0.01 significance level.

** * indicates statistical significance of the correlation coefficient at the 0.05 significance level.

**Key Conclusions Derived from the Above Table**:

Pearson correlation tests were used to measure the strength and direction of the relationships between the study variables. The results showed the following:

- A strong positive correlation between return on assets and earnings per share ($r$=0.465, p<0.01), indicating the impact of return on assets on profitability.
- Environmental disclosure showed a weak positive correlation with return on assets ($r$=0.137, p<0.05), suggesting that environmental disclosure may not have a strong impact on financial performance.
- Social disclosure was positively correlated with return on assets ($r$=0.208, p<0.01), indicating a relatively positive impact of social disclosure on financial performance.

These results highlight the importance of integrating the elements of sustainability disclosure and their role in enhancing financial performance, while also emphasizing the significant differences between the various disclosure dimensions.

### 3-7-3 Multiple Linear Regression Analysis of the Study Variables

Multiple linear regression analysis was used to identify the effect of environmental, social, and governance (ESG) disclosure (as independent variables), board independence (as a moderating variable), and audit quality and trading ratio (as control variables) on the dependent variable (company financial performance). The tables below illustrate this effect as follows:

**Table 6: Results of the Multiple Linear Regression Analysis for Sustainability Dimensions and Study Variables**

| Independent, Moderator, and Control Variables | Return on Assets | | | Return on Equity | | | Earnings per Share | | |
|---|---|---|---|---|---|---|---|---|---|
| | B | T | Sig. | B | T | Sig. | B | T | Sig. |
| Constant | 1.882 | 1.985 | 0.048 | 0.121 | 0.042 | 0.966 | 2.275 | 2.879 | 0.004 |
| Environmental Disclosure | -7.294 | -2.571 | 0.011 | -12.982 | -1.519 | 0.130 | -3.430 | -1.451 | 0.148 |
| Social Disclosure | 11.420 | 4.029 | 0.000 | 22.768 | 2.667 | 0.008 | 3.624 | 1.534 | 0.126 |
| Governance | -3.189 | -1.989 | 0.048 | -4.869 | -1.008 | 0.314 | -2.700 | -2.020 | 0.044 |

| Independent, Moderator, and Control Variables | Return on Assets | | | Return on Equity | | | Earnings per Share | | |
|---|---|---|---|---|---|---|---|---|---|
| | B | T | Sig. | B | T | Sig. | B | T | Sig. |
| Disclosure | | | | | | | | | |
| Audit Quality | 3.668 | 3.821 | 0.000 | 7.631 | 2.639 | 0.009 | 1.969 | 2.461 | 0.014 |
| Liquidity Ratio | 0.198 | 2.207 | 0.028 | 0.353 | 1.309 | 0.191 | 0.062 | 0.828 | 0.408 |
| Board Independence | -2.288 | -2.577 | 0.010 | -2.976 | -1.113 | 0.269 | -1.413 | -1.910 | 0.057 |
| **Adjusted R²** | 10.5% | | | 4.4% | | | 2.4% | | |
| **R (Correlation Coefficient)** | 0.348 | | | 0.247 | | | 0.202 | | |
| **F Value** | 7.579 | | | 3.576 | | | 2.359 | | |

From Table (6), which illustrates the explanatory variables, including independent variables (environmental disclosure, social disclosure, governance disclosure), control variables (audit quality, liquidity ratio), and the dependent variable (financial performance), the following results can be observed:

For Return on Assets (ROA), the adjusted R-square value is 10.5%, indicating that the independent variables in the model—environmental, social, and governance disclosure, audit quality, liquidity ratio, and board independence—explain about 10.5% of the variation in ROA, while the remaining variation is unexplained due to other factors not included in the model. For the ANOVA analysis, the F-statistic was 7.579 and statistically significant at a level of less than 0.001, suggesting that the model as a whole is suitable and that the independent variables have a significant effect on ROA.

Regarding regression coefficients, the constant value is 1.882 and statistically significant at the 0.048 level, meaning that ROA would be close to this value if all independent variables were zero. The results show that environmental disclosure has a negative and significant effect on ROA, with an unstandardized beta of -7.294, a standardized beta of -0.261, and a significance level of 0.011, suggesting that increased environmental disclosure may reduce ROA, possibly due to costs associated with environmental commitments. On the other hand, social disclosure has a positive and significant effect on ROA, with an unstandardized beta of 11.420, a standardized beta of 0.449, and a significance level of less than 0.001, reflecting its role in improving financial performance by enhancing the company's image and public trust. Governance disclosure showed a negative and significant effect on ROA, with an unstandardized beta of -3.189, a standardized beta of -0.144, and a significance level of 0.048, suggesting that governance disclosure focuses on internal challenges that may negatively affect financial performance.

Audit quality demonstrated a positive and significant effect on ROA, with an unstandardized beta of 3.668, a standardized beta of 0.217, and a significance level of less than 0.001, reflecting its role in boosting confidence in financial reports and improving financial performance. The liquidity ratio showed a positive and significant effect on ROA, with an unstandardized beta of 0.198, a standardized beta of 0.116, and a significance level of 0.028, indicating that companies with better liquidity achieve better financial performance. Board independence showed a negative and significant effect on ROA, with an unstandardized beta of -2.288, a standardized beta of -0.136, and a significance level of 0.010, suggesting that increased board independence might be associated with lower ROA, potentially due to strict governance affecting investment decisions.

For Return on Equity (ROE), the adjusted R-square value is 4.4%, indicating that the independent variables in the model—environmental, social, and governance disclosure, audit quality, liquidity ratio, and board independence—explain only about 4.4% of the variation in ROE, with 95.6% of the variation attributed to factors not included in the model. In the ANOVA analysis, the F-statistic was 3.576 and statistically significant at a level of less than 0.01 (Sig. = 0.002), indicating that the model is statistically significant and that the independent variables influence ROE.

Regarding regression coefficients, the constant value is 0.121 but not statistically significant (Sig. = 0.966), meaning it does not have a significant effect in the absence of independent variables. The results show that environmental disclosure has a negative but insignificant effect on ROE, with an unstandardized beta of -12.982, a standardized beta of -0.159, and a significance level of 0.0130, suggesting its effect may be weak or uncertain. On the other hand, social disclosure showed a positive and significant effect on ROE, with an unstandardized beta of 22.768, a standardized beta of 0.307, and a significance level of 0.008, indicating that social disclosure positively contributes to improving ROE. Governance disclosure showed a negative but insignificant effect on ROE (Beta = -0.076, Sig. = 0.314), suggesting no strong evidence that governance disclosure affects ROE.

Audit quality showed a positive and significant effect on ROE, with an unstandardized beta of 7.631, a standardized beta of 0.155, and a significance level of 0.009, reflecting its role in enhancing investor confidence and improving financial performance. The liquidity ratio showed a weak positive but insignificant effect on ROE (Beta = 0.309, Sig. = 0.191), indicating that liquidity's effect may not be strong in this sample. Board independence showed a negative and insignificant effect on ROE (Beta = -2.976, Sig. = 0.269), suggesting that board independence has no significant effect on ROE in this study.

For Earnings Per Share (EPS), the adjusted R-square value is 2.4%, indicating that the independent variables in the model—environmental, social, and governance disclosure, plus the audit quality, liquidity ratio, and board independence—explain only about 2.4% of the variation in EPS, while 97.6% of the variation is due to factors not included in the model. In the ANOVA analysis, the F-statistic was 2.359 and statistically significant at a level of less than 0.05 (Sig. = 0.030), suggesting that the model is statistically significant and that the independent variables have a significant effect on EPS.

Regarding regression coefficients, the constant value is 2.275 and statistically significant at the 0.004 level, meaning EPS would be close to this value if all independent variables were zero. The results show that environmental disclosure has a negative and insignificant effect on EPS, with an unstandardized beta of -

3.430, a standardized beta of -0.154, and a significance level of 0.148, suggesting that environmental disclosure does not have a statistically significant impact in this context. On the other hand, social disclosure showed a positive but insignificant effect on EPS, with an unstandardized beta of 3.624, a standardized beta of 0.179, and a significance level of 0.126, meaning that social disclosure may not have a strong effect on EPS.

For governance disclosure, the results showed a negative and significant effect on EPS, with an unstandardized beta of -2.700, a standardized beta of -0.153, and a significance level of 0.044, suggesting that governance disclosure may negatively affect EPS. Audit quality showed a positive and significant effect on EPS, with an unstandardized beta of 1.969, a standardized beta of 0.146, and a significance level of 0.014, reflecting the role of audit quality in improving corporate performance and increasing EPS. The liquidity ratio showed a positive effect on EPS but not statistically significant, with an unstandardized beta of 0.062, a standardized beta of 0.046, and a significance level of 0.408, indicating that liquidity does not play a significant role in improving EPS. Board independence showed a negative and insignificant effect on EPS, with an unstandardized beta of -1.413, a standardized beta of -0.105, and a significance level of 0.057, meaning its effect may be marginal.

**Table 7: Multiple Linear Regression Results for (ESG) and Study Variables**

| Independent, Moderator, and Control Variables | Return on Assets | | | Return on Equity | | | Earnings per Share | | |
|---|---|---|---|---|---|---|---|---|---|
| | B | T | Sig. | B | T | Sig. | B | T | Sig. |
| Constant | 1.594 | 1.733 | 0.084 | -0.369 | -0.135 | 0.893 | 2.050 | 2.718 | 0.007 |
| ESG | 1.874 | 1.196 | 0.232 | 6.666 | 1.432 | 0.153 | -2.227 | -1.734 | 0.084 |
| Audit Quality | 3.715 | 3.883 | 0.000 | 7.711 | 2.711 | 0.007 | 2.048 | 2.611 | 0.009 |
| Liquidity Ratio | 0.152 | 1.682 | 0.093 | 0.267 | 0.995 | 0.321 | 0.041 | 0.551 | 0.582 |
| Board Independence | -1.792 | -2.004 | 0.046 | -2.046 | -0.770 | 0.442 | -1.209 | -1.649 | 0.100 |
| **Adjusted $R^2$** | 7.0% | | | 3.2% | | | 1.8% | | |
| **R (Correlation Coefficient)** | 0.284 | | | 0.209 | | | 0.172 | | |
| **F Value** | 7.302 | | | 3.813 | | | 2.525 | | |

Table (7), which clarifies the explanatory variables, includes the independent variables (ESG), control variables (audit quality, liquidity ratio), and the dependent variable (financial performance), shows the following results:

The results for Return on Assets indicate that the adjusted R square value is 7.0%, meaning that the independent variables included in the model—ESG, audit quality, liquidity ratio, and board independence—explain approximately 7.0% of the variation in return on assets, while the remaining 93.0% of the variation is due to factors not included in the model. The correlation coefficient (R) is 0.284, reflecting a weak to moderate correlation between the independent variables and return on assets. Regarding the ANOVA analysis, the statistical F value is 7.302, which is significant at a level lower than 0.001 (Sig. = 0.000), indicating that the model as a whole is significant and that the independent variables have a significant effect on return on assets.

Regarding the regression coefficients, the constant term is 1.594, but it is not significant (Sig. = 0.084), meaning that return on assets is not affected by it in the absence of the independent variables. The results show that environmental and social governance disclosure has a weak and insignificant positive effect, with an unstandardized beta value of 1.874, a standardized beta coefficient of 0.068, and a significance level of 0.232, suggesting that its effect is not statistically significant in this context. On the other hand, audit quality shows a positive and statistically significant effect on return on assets, with an unstandardized beta value of 3.715, a standardized beta coefficient of 0.220, and a significance level less than 0.001, reflecting its role in enhancing the trust in financial reports and increasing financial performance efficiency.

Liquidity ratio shows a weak positive but insignificant effect, with an unstandardized beta value of 0.152, a standardized beta coefficient of 0.089, and a significance level of 0.093, indicating that liquidity does not play a decisive role in improving return on assets. Board independence shows a negative and significant effect on return on assets, with an unstandardized beta value of -1.792, a standardized beta coefficient of -0.107, and a significance level of 0.046, suggesting that board independence might negatively affect financial performance, possibly due to a shift towards stricter governance that could impose decision-making constraints.

For return on equity, the results show that the adjusted R square value is 3.2%, meaning that the independent variables included in the model—ESG disclosure, audit quality, liquidity ratio, and board independence—explain only 3.2% of the variation in return on equity, while the remaining 96.8% of the variation is due to factors not included in the model. The correlation coefficient (R) is 0.209, indicating a weak correlation between the independent variables and return on equity. Regarding the ANOVA analysis, the statistical F value is 3.813, which is significant at a level less than 0.01 (Sig. = 0.005), suggesting that the model as a whole is significant and that the independent variables have a significant effect on return on equity.

Regarding the regression coefficients, the constant term is -0.369 but is not statistically significant (Sig. = 0.893), meaning it does not have a significant effect in the absence of the independent variables. The results show that environmental and social governance disclosure has a weak positive but insignificant effect on return on equity, with an unstandardized beta value of 6.666, a standardized beta coefficient of 0.083, and a significance level of 0.153, suggesting that its effect is not statistically significant. However, audit quality has a positive and statistically significant effect on return on equity, with an unstandardized beta value of 7.711, a standardized beta coefficient of 0.157, and a significance level of 0.007, reflecting its positive role in enhancing investor confidence and improving financial performance.

Liquidity ratio shows a weak positive but insignificant effect, with an unstandardized beta value of 0.267, a standardized beta coefficient of 0.054, and a significance level of 0.321, meaning liquidity does not play a significant role in improving return on equity. Board independence shows a weak negative but insignificant effect on return on equity, with an unstandardized beta value of -2.046, a standardized beta coefficient of -0.042, and a significance level of 0.442, indicating that board independence does not have a clear significant effect in this model.

For earnings per share, the results show that the adjusted R square value is 1.8%, meaning that the independent variables included in the model—environmental and social governance disclosure, audit quality, liquidity ratio, and board independence—explain only 1.8% of the variation in earnings per share, while the remaining 98.2% of the variation is due to factors not included in the model. The correlation coefficient (R) is 0.172, reflecting a very weak correlation between the independent variables and earnings per share. Regarding the ANOVA analysis, the statistical F value is 2.524, which is significant at a level lower than 0.05 (Sig. = 0.041), indicating that the model as a whole is significant and that the independent variables have a significant effect on earnings per share.

Regarding the regression coefficients, the constant term is 2.050 and is statistically significant at the 0.007 level, meaning earnings per share would be close to this value in the absence of the independent variables. The results show that environmental and social governance disclosure has a negative but insignificant effect on earnings per share, with an unstandardized beta value of -2.227, a standardized beta coefficient of -0.101, and a significance level of 0.084, indicating that its effect is not statistically significant in this context. Audit quality shows a positive and statistically significant effect on earnings per share, with an unstandardized beta value of 2.048, a standardized beta coefficient of 0.152, and a significance level of 0.009, reflecting its positive role in enhancing financial performance.

Liquidity ratio shows a weak positive but insignificant effect, with an unstandardized beta value of 0.041, a standardized beta coefficient of 0.030, and a significance level of 0.582, indicating that liquidity does not play a significant role in improving earnings per share. Board independence shows a negative but insignificant effect on earnings per share, with an unstandardized beta value of -1.209, a standardized beta coefficient of -0.090, and a significance level of 0.100, suggesting that its effect might be uncertain.

## Table 8: Results of the Multiple Linear Regression Analysis for the Interactive Role of Board Independence and the Study Variables

| Independent, Moderator, and Control Variables | Return on Assets | | | Return on Equity | | | Earnings per Share | | |
|---|---|---|---|---|---|---|---|---|---|
| | B | T | Sig. | B | T | Sig. | B | T | Sig. |
| Constant | 1.467 | 1.302 | 0.194 | -4.453 | -1.321 | 0.188 | 2.078 | 2.204 | 0.028 |
| Environmental Disclosure | -13.098 | -3.259 | 0.001 | -36.308 | -3.018 | 0.003 | -6.645 | -1.975 | 0.049 |
| Social Disclosure | 17.613 | 4.303 | 0.000 | 42.753 | 3.489 | 0.001 | 6.389 | 1.865 | 0.063 |
| Governance Disclosure | -3.576 | -1.702 | 0.090 | 1.668 | 0.265 | 0.791 | -2.572 | -1.463 | 0.145 |
| Audit Quality | 3.832 | 3.936 | 0.000 | 8.814 | 3.045 | 0.003 | 2.061 | 2.546 | 0.011 |
| Liquidity Ratio | 0.185 | 2.010 | 0.045 | 0.433 | 1.568 | 0.118 | 0.063 | 0.811 | 0.418 |
| Board Independence | -1.837 | -1.374 | 0.170 | 3.671 | 0.917 | 0.360 | -1.266 | -1.132 | 0.259 |
| Environmental Disclosure * Board Independence | 11.584 | 1.969 | 0.050 | 39.163 | 2.223 | 0.027 | 6.942 | 1.409 | 0.160 |
| Social Disclosure * Board Independence | -12.143 | -2.096 | 0.037 | -31.495 | -1.816 | 0.070 | -5.402 | -1.114 | 0.266 |
| Governance Disclosure * Board Independence | 1.858 | 0.559 | 0.577 | -12.713 | -1.277 | 0.202 | 0.170 | 0.061 | 0.951 |
| **Adjusted $R^2$** | 11% | | | 6.1% | | | 2.1% | | |
| **R (Correlation Coefficient)** | 0.365 | | | 0.293 | | | 0.216 | | |
| **F Value** | 5.608 | | | 3.422 | | | 1.789 | | |

The results in Table 8 for return on assets indicate that the adjusted R square value is 11.0%, meaning that the independent variables—environmental disclosure, social disclosure, governance disclosure, audit quality, liquidity ratio, and the interaction of environmental, social, and governance disclosures with board independence—explain approximately 11.0% of the variation in return on assets, while the remaining 89.0% of the variation is attributed to factors not included in the model. The correlation coefficient (R) is 0.365, reflecting a moderate correlation between the independent variables and return on assets. Regarding the ANOVA analysis, the statistical value (F) was 5.608, which was significant at a level of less than 0.001 (Sig. = 0.000), indicating that the model as a whole is significant and that the independent variables significantly affect return on assets.

Regarding the regression coefficients, the constant value is 1.467 but is not statistically significant (Sig. = 0.194), meaning it does not have a significant impact in the absence of the independent variables. The results show that environmental disclosure has a negative and significant impact on return on assets, with an unstandardized beta coefficient of -13.098 and a standardized beta coefficient of -0.468, and a significance level of 0.001, suggesting that environmental obligations may increase costs and thus reduce return on assets. On the other hand, social disclosure showed a strong positive and significant impact on return on assets, with an unstandardized beta coefficient of 17.613 and a standardized beta coefficient of 0.693, and a significance level of less than 0.001, indicating the role of social disclosure in improving financial performance.

Governance disclosure showed a negative but insignificant impact, with an unstandardized beta coefficient of -3.576 and a standardized beta coefficient of -0.162, and a significance level of 0.090, meaning its effect is not statistically significant in this context. Audit quality showed a positive and significant impact on return on assets, with an unstandardized beta coefficient of 3.832 and a standardized beta coefficient of 0.227, and a significance level of less than 0.001, reflecting its positive role in enhancing the credibility of financial reports and improving financial performance. The liquidity ratio showed a positive and significant impact on return on assets, with an unstandardized beta coefficient of 0.185 and a standardized beta coefficient of 0.109, and a significance level of 0.045, indicating that liquidity plays a role in improving return on assets.

Regarding the interaction of environmental disclosure with board independence, the results showed a positive and significant impact, with an unstandardized beta coefficient of 11.587 and a standardized beta coefficient of 0.249, and a significance level of 0.050, indicating that board independence enhances the effect of environmental disclosure on return on assets. As for the interaction of social disclosure with board independence, the results showed a negative and significant impact, with an unstandardized beta coefficient of -12.143 and a standardized beta coefficient of -0.362, and a significance level of 0.037, indicating that board independence may reduce the positive effect of social disclosure. For the interaction of governance disclosure with board independence, the results showed a weak and insignificant effect, with an unstandardized beta coefficient of 1.858 and a standardized beta coefficient of 0.069, and a significance level of 0.577, meaning that its effect is not statistically significant.

For return on equity, the adjusted R square value is 6.1%, meaning that the independent variables—environmental disclosure, social disclosure, governance disclosure, audit quality, liquidity ratio, and the interaction of environmental, social, and governance disclosures with board independence—explain approximately 6.1% of the variation in return on equity, while the remaining 93.9% of the variation is attributed to factors not included in the model. The correlation coefficient (R) is 0.293, reflecting a weak to moderate correlation between the independent variables and return on equity. Regarding the ANOVA analysis, the statistical value (F) was 3.422, which was significant at a level of less than 0.001 (Sig. = 0.000), indicating that the model as a whole is significant and that the independent variables significantly affect return on equity.

For the regression coefficients, the constant value is -4.453 but is not statistically significant (Sig. = 0.188), meaning it does not have a significant impact in the absence of the independent variables. The results show that environmental disclosure has a negative and significant impact on return on equity, with an unstandardized beta coefficient of -36.308 and a standardized beta coefficient of -0.445, and a significance level of 0.003, suggesting that environmental obligations associated with disclosure may lead to a reduction in return on equity. On the other hand, social disclosure showed a strong positive and significant impact on return on equity, with an unstandardized beta coefficient of 42.753 and a standardized beta coefficient of 0.577, and a significance level of 0.001, indicating the role of social disclosure in improving corporate financial performance.

Governance disclosure showed a weak positive but insignificant impact, with an unstandardized beta coefficient of 1.668 and a standardized beta coefficient of 0.026, and a significance level of 0.791, meaning its effect is not statistically significant in this context. Audit quality showed a positive and significant impact on return on equity, with an unstandardized beta coefficient of 8.814 and a standardized beta coefficient of 0.179, and a significance level of 0.003, reflecting its role in enhancing the credibility of financial reports and improving financial performance.

The liquidity ratio showed a weak positive but insignificant impact on return on equity, with an unstandardized beta coefficient of 0.433 and a standardized beta coefficient of 0.088, and a significance level of 0.118, meaning that liquidity does not play a significant role in improving return on equity. Board independence showed a weak positive but insignificant impact, with an unstandardized beta coefficient of 3.671 and a standardized beta coefficient of 0.075, and a significance level of 0.360, suggesting that its effect is not statistically significant.

For the interaction of environmental disclosure with board independence, the results showed a positive and significant impact, with an unstandardized beta coefficient of 39.163 and a standardized beta coefficient of 0.289, and a significance level of 0.027, indicating that board independence enhances the effect of environmental disclosure. As for the interaction of social disclosure with board independence, the results showed a negative but insignificant impact, with an unstandardized beta coefficient of -31.495 and a standardized beta coefficient of -0.322, and a significance level of 0.070. For the interaction of governance disclosure with board independence, the results showed a negative, weak, and insignificant effect, with an unstandardized beta coefficient of -12.713 and a standardized beta coefficient of -0.163, and a significance level of 0.202.

For earnings per share, the results indicate that the adjusted R square value is 2.1%, meaning that the independent variables—environmental disclosure, social disclosure, governance disclosure, audit quality, liquidity ratio, and the interaction of environmental, social, and governance disclosures with board independence—explain only 2.1% of the variation in earnings per share, while the remaining 97.9% of the variation is attributed to factors not included in the model. The correlation coefficient (R) is 0.216, reflecting a very weak correlation between the independent variables and earnings per share. Regarding the ANOVA analysis, the statistical value (F) was 1.789, which was not significant (Sig. = 0.069), indicating that the model as a whole is not significant, and the independent variables do not significantly explain the variation in earnings per share.

For the regression coefficients, the constant value is 2.078, and it is statistically significant at a level of 0.028, meaning that earnings per share will be close to this value in the absence of the independent variables. The results show that environmental disclosure has a negative and significant impact on earnings per share, with an unstandardized beta coefficient of -6.645 and a standardized beta coefficient of -0.297, and a significance level of 0.049, indicating that environmental obligations associated with disclosure may lead to a reduction in earnings per share. Social disclosure showed a weak positive but insignificant impact, with an unstandardized beta coefficient of 6.389 and a standardized beta coefficient of 0.315, and a significance level of 0.063.

Governance disclosure showed a weak negative but insignificant impact, with an unstandardized beta coefficient of -2.572 and a standardized beta coefficient of -0.146, and a significance level of 0.145. Audit quality showed a positive and significant impact on earnings per share, with an unstandardized beta coefficient of 2.061 and a standardized beta coefficient of 0.153, and a significance level of 0.011, reflecting its positive role in improving financial performance.

The liquidity ratio showed a weak positive but insignificant impact, with an unstandardized beta coefficient of 0.063 and a standardized beta coefficient of 0.046, and a significance level of 0.418, suggesting that liquidity does not play a significant role in improving earnings per share. Board independence showed a weak negative but insignificant impact, with an unstandardized beta coefficient of -1.266 and a standardized beta coefficient of -0.094, and a significance level of 0.259.

For the interaction of environmental disclosure with board independence, the results showed a positive but insignificant impact, with an unstandardized beta coefficient of 6.942 and a standardized beta coefficient of 0.187, and a significance level of 0.160. For the interaction of social disclosure with board independence, the results showed a negative but insignificant impact, with an unstandardized beta coefficient of -5.402 and a standardized beta coefficient of -0.202, and a significance level of 0.266. For the interaction of governance disclosure with board independence, the results showed a weak, insignificant effect, with an unstandardized beta coefficient of 0.170 and a standardized beta coefficient of 0.008, and a significance level of 0.951.

Multiple linear regression analysis was used to identify the impact of environmental, social, and governance (ESG) disclosures (as independent variables), board independence (as a moderating variable), audit quality, and liquidity ratio (as control variables) on the dependent variable (financial performance). The following table illustrates this impact as shown below:

The results presented in Table No. (9) regarding Return on Assets (ROA) indicate that the adjusted coefficient of determination (Adjusted R Square) reached 6.8%. This means that the independent variables governance-related ESG disclosure, audit quality, liquidity ratio, board independence, and the interaction between ESG disclosure and board independence explain approximately 6.8% of the variation in ROA, while the remaining 93.2% is attributed to other factors not included in the model. The correlation coefficient (R) is 0.285, reflecting a weak relationship between the independent variables and ROA. As for the ANOVA analysis, the results showed that the F-statistic reached 5.890 and was significant at a level less than 0.001 (Sig. = 0.000), indicating that the overall model is statistically significant and that the independent variables significantly affect ROA.

### Table 9: Results of Multiple Linear Regression Analysis for the Interactive Role of Board Independence and ESG Disclosure with Study Variables

| Independent, Moderator, and Control Variables | Return on Assets | | | Return on Equity | | | Earnings per Share | | |
|---|---|---|---|---|---|---|---|---|---|
| | B | T | Sig. | B | T | Sig. | B | T | Sig. |
| Constant | 1.829 | 1.803 | 0.072 | -1.412 | -0.469 | 0.640 | 2.211 | 2.658 | 0.008 |
| Governance Disclosure (ESG) | 1.248 | 0.644 | 0.520 | 9.450 | 1.642 | 0.101 | -2.658 | -1.673 | 0.095 |
| Audit Quality | 3.692 | 3.852 | 0.000 | 7.812 | 2.743 | 0.006 | 2.032 | 2.585 | 0.010 |
| Liquidity Ratio | 0.151 | 1.669 | 0.096 | 0.271 | 1.010 | 0.313 | 0.040 | 0.542 | 0.589 |
| Board Independence | -2.285 | -1.806 | 0.072 | 0.144 | 0.038 | 0.969 | -1.547 | -1.491 | 0.137 |
| Disclosure of (ESG)*Board Independence | 1.670 | 0.551 | 0.582 | -7.423 | -0.824 | 0.410 | 1.147 | 0.461 | 0.645 |
| **Adjusted $R^2$** | 6.8% | | | 3.1% | | | 1.5% | | |
| **R (Correlation Coefficient)** | 0.285 | | | 0.214 | | | 0.173 | | |
| **F Value** | 5.890 | | | 3.184 | | | 2.057 | | |

Regarding the regression coefficients, the constant (intercept) appeared with a value of 1.829 but was not statistically significant (Sig. = 0.072), meaning it does not have a significant effect in the absence of the independent variables. The results showed that ESG disclosure has a weak and insignificant positive effect on ROA, with an unstandardized beta coefficient of 1.248, standardized beta of 0.045, and a significance level of 0.520.

Audit quality, on the other hand, showed a positive and significant effect on ROA, with an unstandardized beta of 3.692, standardized beta of 0.219, and a significance level of less than 0.001, reflecting its positive role in enhancing financial performance. The liquidity ratio showed a weak but insignificant positive effect, with an unstandardized beta of 0.151, standardized beta of 0.089, and a significance level of 0.096, indicating that its effect is not strong in this sample.

Board independence showed a negative and insignificant effect on ROA, with an unstandardized beta of -2.285, standardized beta of -0.136, and a significance level of 0.072, suggesting a limited or statistically insignificant influence. The interaction between ESG disclosure and board independence showed a weak and insignificant positive effect, with an unstandardized beta of 1.670, standardized beta of 0.045, and a significance level of 0.582.

Regarding Return on Equity (ROE), the results indicate that the adjusted R Square was 3.1%, meaning that the independent variables—ESG disclosure, audit quality, liquidity ratio, board independence, and the interaction between ESG disclosure and board independence—explain only 3.1% of the variation in ROE, while the remaining 96.9% is due to other unaccounted factors. The correlation coefficient (R) was 0.214, indicating a very weak relationship between the independent variables and ROE. As for the ANOVA analysis, the results showed that the F-statistic reached 3.184 and was significant at a level less than 0.01 (Sig. = 0.008), indicating that the model as a whole is significant and the independent variables contribute meaningfully to explaining the variation in ROE.

Regarding the regression coefficients, the constant appeared with a value of -1.412 but was not statistically significant (Sig. = 0.640), meaning its effect on ROE is statistically insignificant in the absence of the independent variables. The results showed that ESG disclosure has a positive but insignificant effect on ROE, with an unstandardized beta of 9.450, standardized beta of 0.117, and a significance level of 0.101.

Audit quality showed a positive and significant effect on ROE, with an unstandardized beta of 7.812, standardized beta of 0.159, and a significance level of 0.006, highlighting the importance of audit quality in enhancing companies' financial performance.

The liquidity ratio showed a weak and insignificant positive effect on ROE, with an unstandardized beta of 0.271, standardized beta of 0.055, and a significance level of 0.313. Board independence showed a very weak and insignificant positive effect, with an unstandardized beta of 0.144, standardized beta of 0.003, and a significance level of 0.969, indicating no statistically significant impact. The interaction between ESG disclosure and board independence showed a negative but insignificant effect, with an unstandardized beta of -7.423, standardized beta of -0.069, and a significance level of 0.410, indicating that the interaction does not have a statistically significant effect on ROE.

As for Earnings Per Share (EPS), the results show that the adjusted R Square was 1.5%, meaning that the independent variables—ESG disclosure, audit quality, liquidity ratio, board independence, and the interaction between ESG disclosure and board independence—explain only 1.5% of the variation in EPS, while 98.5% of the variation is attributed to other factors not included in the model. The correlation coefficient (R) was 0.173, indicating a weak relationship between the independent variables and EPS.

In terms of ANOVA analysis, the results showed that the F-statistic was 2.057, but it was not significant at the 0.05 level (Sig. = 0.070), indicating that the model as a whole is not significant and that the independent variables do not significantly explain the variation in EPS.

Regarding the regression coefficients, the constant appeared with a value of 2.211 and was statistically significant (Sig. = 0.008), indicating an effect on EPS in the absence of independent variables. The results showed that ESG disclosure has a negative but insignificant effect, with an unstandardized beta of -2.658, standardized beta of -0.120, and a significance level of 0.095.

Audit quality showed a positive and significant effect on EPS, with an unstandardized beta of 2.032, standardized beta of 0.151, and a significance level of 0.010, highlighting its positive role in improving financial performance. As for the liquidity ratio, it showed a weak and insignificant positive effect, with an unstandardized beta of 0.040, standardized beta of 0.030, and a significance level of 0.589.

Board independence showed a negative but insignificant effect, with an unstandardized beta of -1.547, standardized beta of -0.115, and a significance level of 0.137. The interaction between ESG disclosure and board independence showed a positive but insignificant effect, with an unstandardized beta of 1.147, standardized beta of 0.039, and a significance level of 0.645.

To determine the effect of ESG disclosure (as independent variables), trading volume and audit quality (as control variables), and board independence (as a moderating variable), the hypotheses were tested in the form of alternative hypotheses that assess the impact of each independent, control, and moderating variable on the dependent variable, as follows:

- Referring to Table No. (7), the regression coefficient β for ESG disclosure is (1.874), and the T-value is (1.196), which is not statistically significant at the 0.05 level.

Therefore, it is concluded that ESG disclosure has a positive but insignificant effect on the financial performance of non-financial companies listed on the Saudi stock exchange, and thus the main hypothesis H1 is rejected:

**H1**: **ESG disclosure has a positive and significant effect on the financial performance of non-financial companies listed on the Saudi stock exchange**.

- Referring to Table No. (6), the regression coefficient β for environmental disclosure is (-7.294), and the T-value is (-2.571), which is statistically significant at the 0.05 level.

Therefore, it is concluded that environmental disclosure has a negative and significant effect on the financial performance of non-financial companies listed on the Saudi stock exchange, and thus the sub-hypothesis H11 is rejected:

**H11**: **Environmental disclosure has a positive and significant effect on the financial performance of non-financial companies listed on the Saudi stock exchange**.

- Referring to Table No. (6), the regression coefficient β for social disclosure is (11.420), and the T-value is (4.029), which is statistically significant at the 0.05 level.

Therefore, it is concluded that social disclosure has a positive and significant effect on the financial performance of non-financial companies listed on the Saudi stock exchange, and thus the sub-hypothesis H12 is accepted:

**H12**: **Social disclosure has a positive and significant effect on the financial performance of non-financial companies listed on the Saudi stock exchange**.

- Referring to Table No. (6), the regression coefficient β for governance disclosure is (-3.189), and the T-value is (1.989), which is statistically significant at the 0.05 level.

Therefore, it is concluded that governance disclosure has a negative but significant effect on the financial performance of non-financial companies listed on the Saudi stock exchange, and thus the sub-hypothesis H13 is rejected:

**H13**: **Governance disclosure has a positive and significant effect on the financial performance of non-financial companies listed on the Saudi stock exchange**.

- Referring to Table No. (6), the regression coefficient β for board independence is (-2.228), and the T-value is (-2.577), which is statistically significant at the 0.05 level.

Therefore, it is concluded that board independence does not act as a moderating factor in the relationship between ESG disclosure and the financial performance of non-financial companies listed on the Saudi stock exchange, and thus the main hypothesis H2 is rejected:

**H2**: **Board independence strengthens the positive effect of the relationship between ESG disclosure and the financial performance of non-financial companies listed on the Saudi stock exchange**.

## 4- Study Results

The results revealed that social disclosure had the most significant impact on financial performance compared to environmental and governance disclosures. This can be explained by the fact that corporate social responsibility enhances a company's reputation in the market, which in turn increases investor confidence and improves financial performance. Contrary to expectations, governance disclosure did not show a strong significant effect, which may suggest that companies engage in governance disclosure as a formal procedure without genuine implementation of governance principles. Board independence did not have a moderating effect on the relationship between environmental, social, and governance (ESG) disclosures and financial performance, which calls for further research to understand the reasons. One possible explanation is that independent board members in some companies may lack sufficient influence to affect disclosure and sustainability strategies, thereby limiting their role in improving financial performance.

## 5- Recommendations

Based on the study's findings, the researchers recommend the importance of ESG disclosure by encouraging companies to pay attention to all three ESG dimensions—environmental, social, and governance—and to adopt international standards such as SASB and GRI to ensure transparency. The researchers also recommend enhancing the independence of boards of directors by increasing the proportion of independent members and offering targeted training programs to support sustainability and improve governance quality.

Moreover, the researchers suggest developing regulatory frameworks through financial incentives and privileges for companies and urging them to integrate sustainability into their strategies, while also mandating sustainability disclosure in annual reports and implementing environmental and social initiatives that serve the community.

The researchers also emphasize the importance of raising awareness of ESG disclosure among investors by organizing workshops for executive managers. They stressed the need for periodic evaluation of board performance using appropriate measurement tools to assess the success of strategies and their impact on financial performance.

## 6- Scientific Contribution of the Study

1. **Enriching Scientific Literature**: This study makes a significant contribution to the field of governance and sustainability by analyzing the relationship between environmental, social, and governance (ESG) disclosures and the financial performance of non-financial companies in the Saudi market—a field that has not received sufficient attention in the local context. The study also introduced a new dimension by exploring the role of board independence as a moderating factor in this relationship, which expands understanding of the mutual influences between governance and sustainability.

2. **Linking Theory to Practice**: The study was grounded in governance theories, such as Agency Theory and Stakeholder Theory, and presented practical analysis that highlights the application of these theories in the context of Saudi companies, offering researchers and practitioners deeper insight into these theories in an emerging market.

3. **Development of a Measurement Model**: The study proposed a model for measuring the impact of ESG disclosures on financial performance, including the use of control indicators and the role of board independence, allowing other researchers to utilize this model in similar studies.

4. **Highlighting the Saudi Context**: The study focused on the Saudi market as a sample of emerging markets, providing academic insights that contribute to improving governance and sustainability practices in a context characterized by distinct regulatory and cultural challenges.

# 7- Study Implications

1. **Supporting Saudi Vision 2030 Goals**: The study highlights the importance of enhancing sustainability practices as a tool to achieve balanced economic, social, and environmental development, supporting the strategic directions of Vision 2030.

2. **Enhancing Investor Confidence**: The study confirmed that sustainability disclosure—particularly in the governance and social dimensions—enhances investor confidence, which positively impacts the attraction of foreign and domestic investments to the Saudi market.

3. **Providing Practical Recommendations for Decision-Makers**: The study aids regulatory bodies such as the Capital Market Authority of Saudi Arabia in developing regulations that encourage companies to adopt and disclose sustainability practices.

4. **Enhancing Corporate International Competitiveness**: By improving sustainability and governance practices, the study contributes to strengthening the ability of Saudi companies to compete in international markets, thereby enhancing the global standing of the Saudi economy.

5. **Supporting Sustainable Development**: The study emphasizes the importance of companies adopting a strategic approach to sustainability, achieving a balance between profitability and social and environmental responsibility, which positively reflects on society as a whole.

# 8- Future Research Directions

The results of this study open broad avenues for future research that could deepen the understanding of the relationship between sustainability disclosure and corporate performance in various contexts. The researchers propose the following suggestions for future studies:

1. **The Impact of Sustainability Disclosure on Non-Financial Performance**: Future studies could examine the effect of environmental, social, and governance disclosures on non-financial outcomes such as corporate reputation, customer satisfaction, and community engagement.
2. **The Role of Other Board Characteristics**: Studies could investigate the impact of additional board attributes such as gender or expertise diversity, board size, and their relation to the link between sustainability disclosure and financial performance.
3. **Sectoral Comparisons**: Comparative studies could be conducted across different sectors in the Saudi stock market to explore how the effect of sustainability disclosure varies between industrial and service sectors.
4. **Impact of Digital Transformation Technologies**: Future research could explore the role of digital transformation and artificial intelligence in enhancing sustainability disclosure practices and supporting management decisions related to them.
5. **Study of International and Local Regulatory Frameworks**: Research could assess the impact of adopting global disclosure standards such as GRI and SASB on the financial performance of Saudi companies and examine the market's readiness to adopt these standards.

# References

Abdul Hadi, A. (2023). *The impact of disclosure levels of sustainability activities on the financial performance of companies: An applied study*, Accounting Research Journal, Faculty of Commerce, Tanta University, pp. 528- 564. (in Arabic)

Abu Zaqiya, A. M., Ba'you, A. O., and Abu Qurein, A. A. (2022). *The impact of board of directors' characteristics and audit committee on the financial performance of companies*, Journal of Academic Research, Humanities, Issue 21, pp. 61- 77. (in Arabic)

Aernan, J. E., Emengini, S. E., & Okonkwo, B. S. (2023). *Board Characteristics & Financial Performance of DMBs: Evidence from Nigeria*, East African Journal of Business and Economics, 6(1), pp 47- 58.

Al-Amoudi, M. A., and Al-Mutairi, S. A. (2024). *The impact of board of directors' characteristics and audit committee on financial performance: An applied study on publicly traded cement companies in Saudi Arabia*, International Journal for Publishing Scientific Studies, 3(1), pp. 60- 102. (in Arabic)

Al-Jard, R. B. (2020). *The impact of social responsibility disclosure on the company's financial performance: An applied study on companies listed in the Damascus Securities Exchange*, Damascus University Journal for Economic and Legal Sciences, Sham University, Faculty of Sharia and Law - Department of Economics, 36(1), pp. 51- 98. (in Arabic)

Al-Kenani, M. K. G. (2023). *Capital structure and its impact on stock market value: Within the frameworks of the pecking order and market timing theories*, University of Karbala, College of Administration and Economics, Department of Business Administration, Republic of Iraq, pp. 1- 222. (in Arabic)

Al-Khudairi, M. A. (2020). *Corporate Governance*, Arab Republic of Egypt: Nile Group for Publishing, pp 1- 231. (in Arabic)

Al-Matarnah, A. J. (2019). *The impact of sustainability indicators disclosure on the financial performance of Jordanian public shareholding mining and extractive industries companies*, Al-Quds Open University Journal for Administrative and Economic Research, 4(11), pp. 1-18. (in Arabic)

Almeyda, R., & Dermansyah, A. (2019). *The Influence of Environmental, Social & Governance (ESG) Disclosure on Firm Financial Performance*, IPTEK Journal of proceedings, No. 5, pp. 278- 290.

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(4), pp. 2-17.

Ayyad, A. A. N. (2024). *The effect of board independence on the relationship between managerial ability and cash holding level: An applied study*, Accounting Thought Journal, Faculty of Commerce, Ain Shams University, 28(1), pp. 59- 110 (in Arabic)

Badawi, H. A. S. (2017). *The impact of audit quality on the quality of financial reports measured by the extent to which accounting information meets the characteristics of relevance and faithful representation: An applied study on companies listed on the Egyptian Stock Exchange*, Accounting Thought Journal, Faculty of Commerce, Ain Shams University, 5(21), pp. 161-212. (in Arabic)

Bakhit, M. B. M., Amer, M., and Al-Kayyal, I. M. T. (2021). *The impact of the Egyptian Sustainable Development Index components on the financial performance of companies listed in the S&P EGX ESG Index*, Alexandria Journal for Accounting Research, Department of Accounting and Auditing, 5(1), pp. 1-33. (in Arabic)

Blasi, S., Caporin, M., & Fontini, F. (2018). *A Multidimensional Analysis of the Relationship Between Corporate Social Responsibility and Firms Economic Performance*, Ecological Economics, pp. 1- 24.

Chouaibi, S., Rossi, M., Siggia, D., & Chouaibi, J. (2022). *Exploring the Moderating Role of Social and Ethics Practices in the Relationship between Environmental Disclosure and Financial Performance: Evidence from ESG Companies*. MDPI, 14(1), pp. 1- 17.

Deswanto, R. B., & Siregar, S. V. (2018). *The associations between environmental disclosures with financial performance, environmental performance, and firm value*, Social Responsibility Journal, 14, pp. 180-193.

Firmansyah, E. A., Umar, U. H., & Jibril, R. S. (2023). *Investigating the effect of ESG disclosure on firm performance: The case of Saudi Arabian listed firms*, Cogent economics and finance. pp. 1-21.

Gatehi, G. T., & Nasieku, T. (2022). Effect of Board characteristics on Financial Performance of non-financial Listed at the Nairobi Securities Exchange, Advanced Journal of Social Science, 11(1), pp. 1-12.

Giannopoulos, G., Fagernes, R. V. K., Elmarzouky M., & Hossain, K. A. M A. (2022). *The ESG Disclosure and the Financial Performance of Norwegian Listed Firms*, Journal of Risk and Financial Management, pp. 1- 16.

Habbash, M. S., & Al-Malki, A. M. (2018). *Accounting disclosure of social responsibility in Saudi banks*, King Khalid University Journal for Humanities Sciences, 5(1), pp. 175- 212. (in Arabic)

Hamdan, A. M. M. (2016). *The relationship between board independence and company performance*, Jordanian Journal of Business Administration, 12(3), pp. 505- 518. (in Arabic)

Hashad, T. M. O. (2023). *The impact of board of directors' characteristics on sustainability performance disclosure and its reflection on company value: An applied study on companies listed in the Egyptian Sustainability Index,* Alexandria Journal for Accounting Research, 7(2), pp. 125- 221. (in Arabic)

Jabbar, N. S., and Malik, D. A. (2023). *The impact of accounting disclosure of environmental information in financial reports: An applied study*, Al-Ghari

Journal for Economic and Administrative Sciences, 19(3), pp. 533- 552. (in Arabic)

Jitaree, W. (2015). *Corporate Social Responsibility Disclosure and Financial Performance: Evidence from Thailand, Unpublished doctoral Dissertation in Accounting*, University of Wollongong, pp. 1- 377.

Khalifa H., Abdul Fattah M. G., Natoli R., & Zuhair S. (2020). *The Impact of Board and Audit Characteristics on the Financial Performance of UAE Listed Firms*, International Journal of Accounting and Financial Reporting, 10(2), pp. 60- 80.

Koundori, P., Pittis, N., & Plataniotis, A. (2022). *The Impact of ESG Performance on the Financial Performance of European Area Companies: An Empirical Examination*, MDPI, environmental science proceedings, pp. 1-11.

Kwan, Jing Hui & Lau, Wee Yeap. (2020). Corporate Governance & Cash holdings in Hospitality Firms: Do Board Characteristics Matter, Asian Economics & Financial Review, pp. 816- 832.

MD, Maniruzzman, & Hussain, S. Z. (2019). *Board Independence and Firm Financial Performance: Context of Publicly Traded Manufacturing Companies in Bangladesh*, European Journal of Business and Management, 11(33), pp. 97- 104.

Mohammed, A. A. H. (2021). *The impact of board of directors' characteristics on financial performance: An applied study on Jordanian commercial banks listed on the Amman Stock Exchange*, Middle East University, Faculty of Business, Department of Financial and Accounting Sciences. pp. 2- 124. (in Arabic)

Muafa, Abdul Latif. (2024). *The impact of liquidity, profitability, and financial leverage ratios on company market value: Evidence from Saudi Arabia*, Alexandria Journal for Accounting Research, 8(2), pp. 73- 115. (in Arabic)

Muller, Victor. (2014). *The impact of board Composition on the financial performance of FTSE100 constituents*, Babes- Bolyai University, Cluj Napoca, Romania, pp. 969- 975.

Nguyen, V. C., & T. N. T (2023). *Characteristics of the Board of Directors and Corporate Financial Performance*. MDPI Journals, Economies, 11(2), pp. 1- 15.

Omar, B. F., Al-Sha'ar, I. M., and Zaloom, N. O. (2014). *The impact of social responsibility accounting disclosure on the financial performance of Jordanian public shareholding industrial companies*, University of Jordan, Deanship of Scientific Research, 41(2), pp. 240- 258. (in Arabic)

Othman, M. A. A. (2016). *An exploratory study of the relationship between sustainability reports, financial and economic performance of Egyptian joint-stock companies from the perspective of the diversity of board member characteristics and ownership structure*, Journal of Commerce and Finance, Faculty of Commerce, Beni Suef University, 1(3), pp. 269- 333. (in Arabic)

Pasko, O., Chen, F. & Wang, J. A. E. A. (2020). *Does Board Composition Matter? The Relationship Between Board Characteristics and Financial performance: Evidence Chinese Listed Agricultural Companies*, Research in World Economy, 12(1), pp. 177- 187.

Reverte, C. (2009). *Determinants of Corporate Social Responsibility Disclosure Ratings by Spanish Listed Firms*, Journal of Business Ethics, pp. 1-16.

Sanda, U. A., Garba, T., & Mikailu, A. S. (2011). *Board Independence and Firm Financial Performance: Evidence from Nigeria,* African Economic Research Consortium, AERC Research Paper No. 213, pp. 1- 35.

Tamrabet, Z., & Meshri, H. (2021). *The impact of intellectual capital efficiency on the financial performance of pharmaceutical companies listed in the Algerian Stock Exchange*, Journal of Investment and Sustainable Development, 6(1), pp. 284-304. (in Arabic)

Triyani, A., Setyahuni, S. W., & Afiliation, K. (2020). *The Effect Of Environmental, Social and Governance (ESG) Disclosure on Firm Performance: The Role of CEO Tenure*, Journal Reviu Akuntansi dan Keuangan, 10(2), pp 261- 270.

Warsa, T. M. & Ganda, F. (2019). *The Relationship between Corporate Sustainability Disclosure and Firm Financial Performance in Johannsburg Stock Exchange (JSE) Listed Mining Companies*, Africa center for Sustainability Accounting and Management, School for Accouncy, University of Limpopo, Polokwane, South Africa, pp. 1- 23.

Widyasari, O. G., & Adi, S. W. (2023). *The Effect of Activity Ratio, Investment Ratio, Profitability Ratio, Liquidity Ratio, Leverage, and Managerial Ownership on Price to Book Value*, International Journal of Business Management and Technology, 7(1), pp. 808- 817.

Yahya, H. A., Al-Ali, S. S., & Saleh, A. H. (2021). *The mediating effect of earnings per share between influencing factors and financial performance*, Leadership Journal for Finance and Business, 2(2), pp. 108- 119. (in Arabic)

Younis, N. M. M. (2021). *The impact of the level and quality of sustainability report disclosure on companies' financial performance: An applied study on industrial companies listed in the Saudi capital market*, Journal of Financial and Commercial Research, 22(1), pp. 361- 413. (in Arabic)

Zainon, S., Ismail, R. F., Nawi, Sofwah MD., Shafi, R. M., Misman, F. N., & Zakaria, Nor B. (2020). *Environmental, Social and Governance Disclosure on Financial Performance of Bublic listed Companies in Malaysia*, University Technology MARA Cawangan Johor, Malaysia, pp. 88- 107.

## Websites

- Argaam website: www.argaam.com
- Saudi Stock Exchange website: www.tadawal.com
- Mubasher website: www.mubasher.info
- Capital Market Authority website: www.cma.org.sa