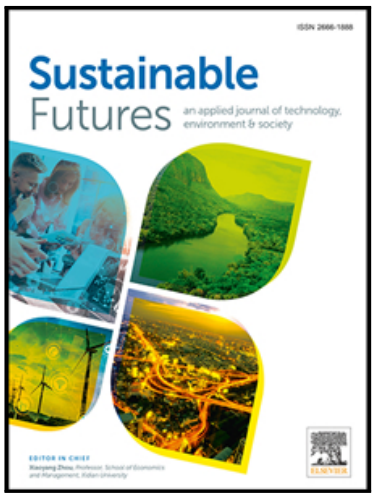

Corporate Social Responsibility and Firm Performance from Developing Markets: The Role of Audit Committee Expertise

Hariem Abdullah

PII: S2666-1888(24)00117-5
DOI: https://doi.org/10.1016/j.sftr.2024.100268
Reference: SFTR 100268

To appear in: *Sustainable Futures*

Received date: 12 September 2023
Revised date: 5 July 2024
Accepted date: 9 August 2024

Please cite this article as: Hariem Abdullah , Corporate Social Responsibility and Firm Performance from Developing Markets: The Role of Audit Committee Expertise, *Sustainable Futures* (2024), doi: https://doi.org/10.1016/j.sftr.2024.100268

Corporate Social Responsibility and Firm Performance from Developing Markets: The Role of Audit Committee Expertise

Hariem Abdullah

1. Accounting Department, University of Sulaimani, Sulaymaniyah, Iraq.
2. Business and Management Department, Tishk International University/ Sulaimani
hariem.abdullah@univsul.edu.iq

Hariem Abdullah obtained his MSc degree in Accounting and Finance from University of Leicester January 2014, England, UK. He obtained Ph.D. in Accounting, Near East University, August 2020, Nicosia, Cyprus. Currently, he is the head of Financial Accounting & Auditing Department, college of Commerce at University of Sulaimani.

Web of Science ResearcherID AAI-8896-2021
ORCID https://orcid.org/0000-0003-0333-6338

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

Abstract

This study investigates the complex relationship between CSR practices, firm financial performance, and the moderating role of audit committee expertise in the UAE, a high-speed developing market. Using a quantitative research design, we examine data from non-financial firms listed on the ADX over the period 2008–2022. We evaluate the effect of CSR on financial performance using a range of regression methods, and we look at the ways in which the experience of audit committee members strengthens or weakens this link. Our findings are consistent with the theory that CSR initiatives have a detrimental impact on UAE firms' financial performance. Moreover, empirical data points to the strengthening of the correlation between financial performance and CSR by audit committee expertise. When it

comes to coordinating CSR activities with long-term sustainability objectives, the audit committee is essential. This study employs secondary data and focuses exclusively on the United Arab Emirates, even though it advances knowledge about corporate social responsibility (CSR) and firm performance in developing markets. Future research should consider broader geographical contexts and longer periods to enhance the generalizability of findings. Our findings offer practical insights for firms operating in developing markets, highlighting the impact of CSR on performance and the importance of audit committee expertise in maximising its impact. We encourage companies to improve their level of measurement and reporting, with the goal of effectively communicating and realising the potential benefits of CSR. This research extends the literature on CSR and firm performance by examining a high-speed developing market and providing guidance to firms operating in similar contexts. It emphasises the crucial role of audit committee expertise in realising the financial benefits of CSR practices.

Keywords: CSR, Firm Performance, Audit Committee Expertise, Developing Markets, UAE.

1. INTRODUCTION

Corporate social responsibility (hereafter CSR) has been an important part of business strategy in recent times. Scholars and business professionals are paying increased attention to the relationship between CSR and financial success in emerging nations (Oware & Mallikarjunappa, 2022; Opoku Marfo, 2024). CSR is a business's commitment to conducting its operations in a socially and environmentally responsible way. This indicates that the business looks at its effects on various stakeholders and society in addition to just making a profit (Maheshwari et al., 2024). Scientists have studied the impact of CSR on business success in detail, with various conclusions. The relationship between CSR and financial performance varies according on the situation and industry. Empirical evidence and theoretical underpinnings suggest that CSR and financial outcomes in developing economies may positively correlate. However, it is imperative to recognise that the impact of CSR on financial performance is complex and may only sometimes be apparent or immediate (Luke, 2016). This is because it often involves intangible results and long-term strategic considerations.

Observational data from emerging economies has provided insight into the correlation between CSR and financial results. There have been conflicting claims about the results. Studies have identified a favourable correlation (Oeyono et al., 2011; Ma et al., 2023; Tawfik et al., 2021). Companies that allocate resources towards CSR endeavours, such as community development programmes or ecologically sustainable methods, achieve superior financial performance compared to their counterparts. Moreover, the implementation of CSR policies can assist companies operating in emerging markets reduce the potential hazards associated with environmental and social concerns. This, in turn, can enhance their financial stability and ability to withstand challenges, as stated by Frederiksen (2019). As per prior studies, firms with good CSR performance may have an advantage in obtaining capital and securing financing on more favorable terms. Investors have greater confidence in these companies because they are perceived as having lower risks (Cheng et al., 2014). Consumers in

developing markets are increasingly becoming conscious of social and environmental issues. Companies that align with these preferences through CSR initiatives may attract more customers, leading to increased sales and revenue (Le, 2022). In developing markets, regulatory authorities may incentivize or mandate CSR practices. Companies that comply with these regulations may enjoy certain benefits (Gatti et al., 2019), such as tax breaks or government contracts (Oware & Mallikarjunappa, 2022).

However, CSR could result in decreased financial performance for early implementers due to lack of robust system to measure and report the benefits of sustainability reporting and disclosure (Luke, 2016). Moreover, heavy investment in CSR activities may divert resources away from core business activities (Lopatta et al., 2022). Cavaco & Crifo (2014) argue that engaging in CSR activities which satisfy one group of stakeholders may alienate another group, potentially harming financial performance. Companies operating in developing markets may engage in CSR activities merely to conform to societal expectations and government regulations, rather than as a strategic business decision (Nair & Bhattacharyya, 2019). There is empirical evidence in the literature to support these arguments (Han et al., 2016; Hamdoun et al., 2022).

Moreover, there are factors to affect CSR-performance relationship. The audit committee is a significant factor that has received little attention. The audit committee is responsible for overseeing a company's financial reporting, internal controls, and risk management (Abdullah & Tursoy, 2023). Thus, for efficient corporate governance, the audit committee members' experience is crucial (Mohammadi et al., 2021). This study investigates the connection between CSR and firm financial performance in the fast-developing UAE market. Furthermore, it investigates how the experience of audit committee members modifies the association between corporate social responsibility and business performance in developing markets. The study specifically aims to ascertain if the experience of audit committee members moderates the association between CSR and corporate performance. The study uses data from UAE-based businesses and a quantitative research design. The sample comprises firms listed on the Abu Dhabi Securities Exchange (ADX). The study uses various kinds of regression analysis to evaluate the moderating effect of audit committee member expertise on the relationship between CSR and firm performance.

The findings of this study contribute to the existing literature on CSR and firm performance by focusing on developing markets, particularly within the distinctive context of regions such as the UAE. Although CSR's impact on business performance has been thoroughly examined in developed economies, our research closes a significant knowledge gap by examining how it affects developing markets. Understanding the relationship between CSR and company performance in these areas is crucial because they offer opportunities and difficulties for businesses looking to implement CSR practices. Moreover, our results have practical ramifications for businesses that operate in developing regions. We stress the value of having audit committee members who can navigate the complexity of CSR measurement and reporting and possess the necessary skills. Our research enables businesses to understand how CSR affects their bottom line, communicate CSR strategically, and reap the rewards of their efforts. The knowledge from our study can be used by policymakers to create laws

encouraging corporate social responsibility in emerging economies. Our research underscores the significance of appointing audit committee members with specialised knowledge, urging policymakers to consider such expertise as a critical factor in overseeing and promoting CSR practices within their regulatory frameworks.

Section 2 reviews the pertinent literature, Section 3 describes the research data, model specification, and methodology, Section 4 analyzes the empirical findings and their interpretations, and Section 5 concludes with discussions and recommendations.

2. LITERATURE REVIEW

CSR has become a critical factor in assessing a company's overall performance, particularly in developing markets (Ahmed et al., 2023; Hamad & Cek, 2023; Barauskaite & Streimikiene, 2021). As companies in these markets face unique challenges related to environmental, social, and governance issues (Karyawati et al., 2020), the role of the audit committee in overseeing CSR practices has gained prominence (Mohammadi et al., 2021). This literature review aims to explore existing empirical studies and ground theories around the relationship between CSR and firm performance in developing markets, with a specific focus on the influence of audit committee expertise (ACE).

The UAE Companies Law indeed places an emphasis on CSR, although it does not specify detailed CSR disclosure requirements. The law underlines the importance of engaging in socially responsible practices, which has led to a growing trend in CSR activities among UAE businesses. These activities include philanthropic giving, employee volunteerism, and initiatives focused on environmental sustainability (Middle East Legal, 2023). Firms listed on the Dubai Financial Market (DFM) and ADX are likely to follow the disclosure requirements set by these exchanges. These requirements may include reporting on ESG aspects. Companies in the UAE voluntarily adopt international standards, such as the Global Reporting Initiative (GRI), for CSR reporting. GRI provides guidelines for sustainability reporting, and companies can use these standards to enhance the transparency and comparability of their CSR disclosures.

2.1. CSR and financial performance

Studies have examined the relationship between CSR and firm performance in developing markets. One of the primitive studies in this field by Porter & Kramer (2006) argues that CSR can create shared value for both the company and society. They proposed that firms can improve their performance by adopting a CSR strategy that aligns with their business objectives. Moreover, Moon & Parc (2019) supports this argument by adding that CSR is the provision of opportunity than creating responsibilities for companies. They claim that firms should endeavor to be “smart corporation” instead of being good through their contribution to society based on appropriate strategy and eventually create value.

Other studies found that firms that engage in CSR activities tend to have a better reputation and higher levels of competitive advantage (see, for example, Nyuur et al., 2019; Hamdoun

et al., 2022; and Li et al., 2023). CSR also affects customer satisfaction and trust (Islam, et al., 2021; Xie et al., 2017). These can lead to increased sales and profits for the determined firms applying CSR appropriately. Similarly, García-Sánchez et al. (2019) found that firms that are socially responsible tend to have a better relationship with their stakeholders, which can help them to attract and retain talent and improve their access to financing. Moreover, García-Sánchez et al. (2021) argue that the wider the gap between CSR disclosure and CSR performance results in greater analysts' forecast errors, a larger cost of capital, and reduced access to finance. Overall, the effect of CSR implementation and disclosure are confirmed to be significantly positive on firm financial performance in the long term (Tang et al., 2012).

However, recent studies have provided evidence that CSR can have a positive impact on financial performance, even in the short term. For example, Bouslah et al. (2023) found evidence that diversified CSR structures positively affect the value of listed US firms before and during the financial crisis of 2008. In the case of Pakistan listed firms, a positive relationship exists between CSR activities and financial performance across 12 different industries during 2021-2022 (Ma, et al., 2023). Additionally, Tawfik et al. (2021) found a moderately positive effect from all considered dimensions of sustainability on the financial performance of commercial banks from Arab countries, namely, United Arab Emirates, Jordan, and Oman during 2007-2018. Shabbir & Wisdom (2020) found positive relationships of corporate social responsibility and environmental investments with financial performance for Nigerian manufacturing firms. Similarly, Han et al. (2016) claim that the governance responsibility performance score presents a positive relationship with financial performance for listed firms in Korea over the 2008-2014 period.

In addition to these positive effects, other studies have found different results (Coelho et al., 2023). For example, Han et al. (2016) argue that the environmental responsibility performance score presents a negative relationship with financial performance. Hamdoun et al. (2022) found a negative relationship between the social dimension of CSR and firm performance for a sample of 100 Tunisian firms. Other studies have found no relationship at all. For example, Aras, Aybars, & Kutlu (2010) failed to find any evidence for the relationship between corporate social responsibility and financial performance in the Istanbul Stock Exchange during 2005-2007.

2.2. Audit committee and CSR

The relationship between audit committee and CSR has received increasing attention in recent years (Santos-Jaén et al., 2024). Audit committees are responsible for overseeing a company's financial reporting and disclosure, and they play a key role in ensuring that the company complies with legal and regulatory requirements (Appuhami & Tashakor, 2017). As such, the expertise of the audit committee members is believed to be a principal factor in promoting sustainability practice and disclosure within the company (Buallay & Al-Ajmi, 2020). By providing oversight and guidance on social and environmental risks and opportunities, audit committee members with greater expertise can help to ensure that companies are managing their CSR activities effectively and responsibly (Pozzoli et al., 2022).

Studies have found a positive relationship between ACE and CSR. For example, a study by Mohammadi et al. (2021) found that audit committee financial expertise has a positive impact on CSR performance in Iranian firms during 2012-2018. The authors argued that audit committee members with greater expertise are better able to identify and monitor social and environmental risks and opportunities, which can lead to improved CSR performance. They also claim that other characteristics of audit committee such as size and independence can affect CSR. Similarly, a study by Dwekat et al. (2022) found that ACE has a positive impact on CSR disclosure for a sample of European firms listed on the STOXX 600 index during the 2012–2018 period. The authors suggested that audit committee members with greater expertise are better able to understand the importance of CSR disclosure and can work more effectively with management to ensure that the company discloses accurate and relevant information about its CSR activities. Conversely, Buallay & Al-Ajmi (2020) report a negative association between audit committee financial expertise and sustainability reporting within the banks of the Gulf Cooperation Council (GCC) countries between 2013-2017. This suggests that in the context of the GCC countries during that period, having a higher level of financial expertise within the audit committee might not have led to increased sustainability reporting by banks.

2.3. Hypotheses Development

Theories explain the relationship between CSR and firm performance. Agency theory provides a foundation for understanding the relationship between a company's management and its stakeholders including shareholders (Jensen & Meckling, 1979). In developing markets, the pronounced separation between ownership and management intensifies agency conflicts (Ali et al., 2023). According to agency theory, robust governance mechanisms including effective audit committees are pivotal. An effective audit committee with relevant expertise can function as a monitoring mechanism ensuring that management's CSR initiatives align with shareholder interests and do not deviate from the company's overall performance objectives (Raimo et al., 2021). However, in developing markets, these mechanisms may be less robust, potentially leading to a misalignment between CSR initiatives and shareholder interests (Kabir & Chowdhury, 2023). While agency theory suggests that CSR can align the interests of managers and shareholders, applying this principle in developing markets poses challenges. Ensuring that CSR activities result in long-term value creation and sustainability becomes complex given the unique economic and cultural contexts of these markets (O'Connell & Ward, 2020). CSR activities such as investing in research and development or engaging in philanthropy can create long-term value for the company, which can benefit both managers and shareholders.

Alternatively, *the stakeholder conflict* perspective in developing markets like the UAE highlights challenges in balancing the interests of diverse stakeholders. Engaging in CSR activities that satisfy one group of stakeholders may alienate another group, potentially harming financial performance (Cavaco & Crifo, 2014). Moreover, companies in these markets may encounter difficulties in allocating resources effectively, potentially diverting them away from core business activities in the pursuit of CSR (Lopatta et al., 2022), as per *the Resource Allocation Theory*. Such resource allocation challenges can adversely impact financial

performance. Rapidly developing countries exemplified by the UAE often face intense competition and market demands. Companies may prioritize short-term profitability and growth over long-term CSR initiatives to stay competitive (Devie et al., 2020). This short-term focus could impede the positive impact of CSR on financial performance. Moreover, Luke (2016) emphasizes that companies in developing countries including the UAE may lack robust systems to accurately measure and report the impact of CSR activities on financial performance. The concept of CSR itself is still in its embryonic stage with regards to its adoption by local companies in UAE (Pillai & Al-Malkawi 2018). This absence of proper measurement and reporting can create a perceived negative relationship when in fact the benefits of CSR are not effectively communicated. Harun et al. (2020) found a significant negative relationship between CSR disclosure and the firm value in the Gulf Cooperation Council, arguing that it adversely affects a firm's competitive advantage and creates more uncertainty for the investors.

Additionally, *institutional theory* suggests that the business environment in developing markets, like the UAE, may not be inherently conducive to CSR practices. Companies operating in these environments may engage in CSR activities primarily to conform to societal expectations and government regulations, rather than as a strategic business decision (Nair & Bhattacharyya, 2019). In such cases, CSR initiatives may lack integration into the company's core operations, potentially yielding limited financial benefits.

Despite these conflicting viewpoints, our directional hypotheses are grounded in specific theoretical frameworks and empirical observations pertinent to the UAE context. Agency theory implies that in the absence of robust governance mechanisms, CSR activities in developing markets might not align with shareholder interests, potentially leading to negative financial outcomes. Empirical studies (e.g., Harun et al., 2020) have observed negative impacts of CSR disclosure on firm value in similar contexts, supporting our directional hypothesis. Furthermore, the unique challenges in measuring and reporting CSR impacts in the UAE (Pillai & Al-Malkawi, 2018) provide a rationale for hypothesizing a negative relationship. Thus, we propose the following hypothesis:

H1: CSR practice negatively affects financial performance of firms in emerging markets.
H1a: Environmental disclosure negatively affects firm performance of firms in emerging markets.
H1b: Social disclosure negatively affects firm performance of firms in emerging markets.
H1c: Governance disclosure negatively affects firm performance of firms in emerging markets.

Drawing from *agency theory*, developing markets, including the UAE, may experience heightened conflicts of interest between shareholders and managers, who are hired to run the company on behalf of the owners. Agency theory suggests that managers may be motivated by their own self-interest, which may not always align with the interests of the owners (Raimo et al., 2021). In developing markets, managers might be tempted to engage in CSR practices that compromise the environment or society for short-term gains. In such circumstances, ACE becomes crucial in mitigating these conflicts by offering oversight and guidance on CSR issues (Harun et al., 2020). Therefore, audit committees can play a key role

in mitigating this risk by providing oversight and guidance on CSR issues, specifically in the case of developing markets.

El Gammal et al. (2020) found that the audit committee has a significant positive impact on CSR initiatives in MENA countries. Members of the audit committee with greater expertise are better equipped to identify and monitor social and environmental risks and opportunities, which can help to ensure that the company is managing its CSR activities effectively and responsibly. In developing markets, there may be challenges related to the measurement and reporting of CSR impacts. Precisely, ACE serves as a valuable resource in overcoming these challenges, ensuring accurate reporting, and enhancing the credibility of CSR initiatives in the eyes of stakeholders.

In addition, the expertise of the audit committee can help to align the interests of the owners and managers around CSR in developing markets (Appuhami and Tashakor, 2017). Managers may be more inclined to engage in CSR activities when they are aware of the monitoring role of an expert audit committee. This alignment is crucial for ensuring that CSR initiatives are strategically integrated into the company's operations. Thus, we hypothesize that:

H2: The negative effect of CSR on financial performance is less pronounced for companies with a higher level of ACE.

H2a: The negative effect of environmental disclosure on firm performance is less pronounced for companies with a higher level of ACE.

H2b: The negative effect of social disclosure on firm performance is less pronounced for companies with a higher level of ACE.

H2c: The negative effect of governance disclosure on firm performance is less pronounced for companies with a higher level of ACE.

3. METHODOLOGY

3.1. Data and Sample

The population of this study are firms listed in UAE financial markets. UAE is selected as a fast-growing economy that noticeably attracts business and investment. This raises awareness of studying the sustainability disclosure by businesses and related issue in the country. This study selected ADX based on criterion such as substantial number of listed firms and market capitalization size. The initial sample of this study comprised all companies listed on ADX over the period 2008-2022. The year 2008 marked the onset of the global financial crisis. This crisis had profound effects on economies worldwide, including the UAE. The financial crisis led to increased scrutiny of corporate practices, including CSR, as stakeholders sought greater transparency and accountability from businesses. There are 70 companies listed on ADX in the selected sample period. We then select the sample using the following criteria. First, we excluded financial companies because of their unique financial and accounting features. Second, we excluded firms with no data disclosed for defined period. Our final sample includes 555 firm-year observations of 37 non-financial firms belonging to 12 industries over the period 2008 to 2022. The data is collected from DataStream.

3.2. Variable measurement

table 1 presents the variable definitions. Financial performance is the dependent variable, and it is measured as the market-to-book value ratio. MBV is a financial metric that compares a company's market value (the current market price per share * number of outstanding shares) to its equity book value (the value of its assets minus its liabilities). This ratio is used to assess the market's perception of a company's financial performance and the value of its assets relative to its accounting values (Sdiq & Abdullah, 2022).

In this study, we utilized DataStream's ESG ratings, which follow a comprehensive scoring model that integrates data points across environmental, social, and governance dimensions (Devie et al., 2020). These ratings are derived from a range of data points collected from company reports, regulatory filings, news sources, and other publicly available information. This ESG score is a composite index calculated based on three sub-scores: Environmental Score evaluates a company's environmental impact, including its carbon footprint, waste management, and resource usage. Social Score assesses aspects such as labor practices, community involvement, and human rights. Governance Score measures corporate governance practices, including board structure, shareholder rights, and transparency.

The choice of DataStream's ESG ratings was motivated by several factors: (1) it provides a broad and detailed assessment of ESG factors, ensuring a holistic evaluation of each company's performance, (2) it is widely recognized for its robust data collection and analysis methodologies, which are trusted by academics and practitioners alike, and (3) the standardized approach of DataStream's ESG ratings facilitates comparability across companies and sectors, which is crucial for the analysis in this study.

To further substantiate our approach, we referred to Dorfleitner et al. (2015), who provide a detailed comparison of different ESG rating methodologies. Their insights highlight the importance of understanding the underlying criteria and scoring methods of ESG ratings, which informed our decision to utilize DataStream's comprehensive and reliable ESG ratings for this study.

The financial expertise of an audit committee is measured considering quantitative data, the qualifications and experience of committee members in the field of finance and related subjects. We measure audit committee financial expertise as the percentage of members having finance expertise to the total number of members on the committee (Buallay & Al-Ajmi, 2020). This assessment is vital for ensuring the committee's effectiveness in fulfilling its responsibilities and maintaining the integrity of financial reporting within the organization (Dwekat et al., 2022).

In this study, we include ACE as a moderating variable to examine its impact on the relationship between CSR and financial performance. While the governance score within ESG ratings from DataStream incorporates various aspects of corporate governance, including board structure and shareholder rights, ACE specifically focuses on the expertise of the audit committee members, which is a more granular and targeted measure of governance quality. The inclusion of ACE as a moderating variable is justified because it captures a distinct aspect of governance that is not fully reflected in the general governance score of ESG ratings. While

the governance score provides an overall assessment of governance practices, ACE specifically measures the depth of expertise within the audit committee, which plays a critical role in overseeing financial reporting, risk management, and CSR activities. By incorporating ACE, we aim to highlight the importance of specialized expertise in enhancing the effectiveness of governance practices, particularly in the context of CSR. The unique contribution of ACE lies in its ability to provide focused oversight and strategic guidance, which is crucial for aligning CSR initiatives with long-term financial performance.

We control for several firm-level attributes. For board level attribute control, we use board gender diversity which is expected to affect financial performance since diverse boards, including gender diversity, are associated with increased innovation and creativity. A board with diverse perspectives, skills, and experiences is more likely to generate innovative ideas, which can positively impact a company's product development, efficiency, and market (Ullah, Fang, & Jebran, 2020). The rate of women members on the board is used to measure this control variable. While BGD is part of the overall governance score in ESG ratings, it captures a unique dimension of corporate governance—gender diversity on boards. This specific focus allows us to isolate and analyze the impact of gender diversity on firm performance, which might be obscured if only the aggregate governance score were considered. The rationale for controlling for BGD separately stems from its potential to enhance decision-making and innovation within the boardroom, thereby influencing corporate outcomes independently of other governance factors. Moreover, the inclusion of BGD as a control variable in our analysis aims to provide a more nuanced understanding of how specific governance practices interact with CSR activities to influence firm performance. While our hypothesis suggest that CSR activities can negatively impact financial performance, particularly in developing markets like the UAE where robust CSR measurement and integration are still evolving, the presence of gender-diverse boards could potentially mitigate these adverse effects. Diverse boards may enhance strategic oversight and risk management, aligning CSR efforts more closely with financial goals.

leverage ratio measures the level of debt to the total assets. It is expected to have positive impact on firm financial performance since managers are obliged to work harder to pay back the firm’s debts (Abdullah & Tursoy, 2021). Size and age are common variables considered in the literature influencing financial performance. Firms with longer experience in the market and larger size can have different performance in the market (Sdiq & Abdullah, 2022). liquidity is the measure of firm’s ability to control its short-term responsibilities in which it has potential effecting financial performance through the contribution to the firm's financial stability and ability (Abdullah et al., 2023).

Table 1: variable measurements

Variables	Label	Definition	Source

Market-to-Book value	MBV	Market-to-Book value ratio = Market capitalization / Total equity	Sdiq & Abdullah (2022) Abdullah et al. (2023)
Corporate Social Responsibility	ENV	Environmental pillar score of CSR	Devie et al. (2020)
	SOC	Social pillar score of CSR	
	GOV	Governance pillar score of CSR	
Audit Committee Expertise	ACE	The percentage of audit committee members with financial related expertise	Dwekat et al. (2022) Abdulrahman et al. (2022)
Board Gender Diversity	BGD	The percentage of women members on the board	Ullah et al. (2020)
Leverage Ratio	LEV	Debt to Assets = total debt / Total assets	Abdullah and Tursoy (2021)
Firm Size	FSZ	Firm size is the natural logarithm of total assets	Saeed et al. (2023)
Firm Age	AGE	Firm age = The observation year – Incorporation year	Para et al. (2022)
Liquidity	LIQ	Quick Ratio = (Current Assets - Inventory) / Current Liabilities	Abdullah & Tursoy (2021)

3.3. Method and Model

As suggested by Abdullah et al. (2023), the utilization of an explanatory research approach is deemed suitable for exploring relationships that encompass multiple variables. Additionally, they emphasize the utility of this approach in addressing issues that may lack precise definition. In terms of data collection, a longitudinal research design is employed. Concerning the methodology, the literature delves into the analysis of panel data estimation using various common estimation techniques, including pooled OLS, fixed effects (FE), and random effects (RE) approaches (see for example, Abdullah & Tursoy, 2021). In the context of the research framework, this study adheres to the model proposed by Simpson & Kohers (2002), which posits a linear relationship between CSR and firm performance.

$$MBV_{(t)j} = \beta_0 + \beta_1 ESG_{(t)j} + \beta_2 ACE_{(t)j} + \beta_3 BGD_{(t)j} + \beta_4 LEV_{(t)j} + \beta_5 FSZ_{(t)j} + \beta_6 AGE_{(t)j} + \beta_7 LIQ_{(t)j} + \varepsilon_{(t)j} \quad (1)$$

$$MBV_{(t)j} = \beta_0 + \beta_1 ESG_{(t)j} + \beta_2 ESG * ACE_{(t)j} + \beta_3 BGD_{(t)j} + \beta_4 LEV_{(t)j} + \beta_5 FSZ_{(t)j} + \beta_6 AGE_{(t)j} + \beta_7 LIQ_{(t)j} + \varepsilon_{(t)j} \quad (2)$$

Where;

$MBV_{(t)j}$ is the dependent variable which it measures the financial performance for firm *I* at time *t*; $ESG_{(t)j}$ is the explanatory variable measured using the three common pillar scores of CSR namely, environment, society and governance; $ACE_{(t)j}$ is audit committee financial expertise as a control variable; $ESG * ACE_{(t)j}$ is an interaction variable expected to measure the effect of ACE on the relationship between CSR and performance; the other explanatory variables are considered to control for some firm-level characteristics; and ε is the stochastic error term.

4. DATA ANALYSIS

4.1. Descriptive statistics and correlation

The descriptive statistics of the dataset, in table 2, reveal valuable insights into the characteristics of various variables. The mean, representing the average value of each variable, spans a range from 0.78 to 50.65. Notably, the variable market-to-book value demonstrates significant variability with a mean of about 1.17 and a high standard deviation of approximately 1.49. This pronounced spread is mirrored in the positive skewness (5.02) and the elevated kurtosis (39.24) values for MBV, indicating a distribution skewed to the right with heavy tails. Such findings emphasize the presence of extreme values and a departure from normality.

Table 2: Descriptive Statistics

	MBV	ENV	SOC	GOV	ACE	BGD	LEV	FSZ	AGE	LIQ
Mean	1.17	25.77	30.22	50.65	39.16	5.90	0.78	19.56	24.68	1.92
Median	0.82	25.45	25.56	50.02	39.11	4.50	0.30	20.51	22.00	1.25
Maximum	15.49	85.21	89.90	93.30	75.92	28.57	26.42	24.85	72.00	24.25
Minimum	0.00	0.00	0.73	3.37	3.14	0.00	0.00	0.00	1.00	0.07
Std. Dev.	1.49	18.85	20.88	20.43	33.83	7.71	2.43	5.23	14.49	2.417
Obs.	555	102	102	102	102	100	520	555	555	497

Moreover, examination of central tendency reveals that board gender diversity displays a bimodal distribution, as evidenced by its mean of 5.89 and the median of 4.5. The leverage variable measured as debt-to-equity highlights a notably low median (0.30), implying potential data clustering at lower values, which is further underscored by its high positive skewness (7.24). Additionally, the AGE variable presents a symmetrical distribution, as the mean (24.68) closely aligns with the median (22.00). Furthermore, the "Skewness" values of the environmental (0.72) and social (0.92) variables suggest minor deviations from symmetry. The calculated Jarque-Bera statistics for all variables are elevated, indicating non-normality in their distributions. Overall, these descriptive statistics collectively unveil patterns of

variability, central tendency, and distributional characteristics within the dataset, shaping the foundation for further inferential analyses.

The descriptive statistics for the ENV, SOC, and GOV pillar scores provide insights into the distribution and characteristics of these sustainability-related variables. The mean Environmental pillar score is approximately 25.77, indicating the average performance disclosure of companies in environmental aspects. Notably, the social pillar score exhibits a similar mean of about 30.22, suggesting companies' balanced engagement with social considerations. In contrast, the Governance pillar score, with a mean of 50.65, demonstrates a stronger emphasis on governance-related practices. The variability within each pillar is captured by the standard deviations of approximately 18.85 for ENV, 20.88 for SOC, and 20.43 for GOV, highlighting the extent to which companies' performances deviate from their respective means. Additionally, skewness values of 0.72 for ENV, 0.92 for SOC, and -0.07 for GOV highlight the distributional tendencies, with ENV and SOC scores showing positive skewness, implying more observations towards higher scores, and GOV scores demonstrating slight negative skewness. These results collectively underscore the varying degrees of engagement and dispersion across the three sustainability pillars—ESG—providing a comprehensive snapshot of companies' practices in these critical domains.

Table 3: Correlation Matrix

Prob.	MBV	ENV	SOC	GOV	ACE	BGD	LEV	FSZ	AGE	LIQ
MBV	**1.00**									

ENV	0.28	**1.00**								
	0.009	---								
SOC	0.28	0.83	**1.00**							
	0.008	*0.000*	---							
GOV	0.15	0.41	0.54	**1.00**						
	0.166	*0.000*	*0.000*	---						
ACE	0.29	0.16	0.19	0.24	**1.00**					
	0.007	*0.132*	*0.077*	*0.022*	---					
BGD	0.18	0.16	0.29	0.33	0.12	**1.00**				
	0.104	*0.143*	*0.007*	*0.002*	*0.271*	---				
LEV	0.36	0.01	-0.02	0.18	0.07	-0.02	**1.00**			
	0.001	*0.893*	*0.856*	*0.104*	*0.516*	*0.839*	---			
FSZ	0.22	0.34	0.26	0.05	0.23	0.08	-0.15	**1.00**		
	0.043	*0.001*	*0.016*	*0.619*	*0.034*	*0.459*	*0.152*	---		
AGE	0.21	-0.16	-0.19	-0.13	-0.28	-0.04	0.23	-0.20	**1.00**	
	0.053	*0.128*	*0.071*	*0.223*	*0.009*	*0.709*	*0.031*	*0.065*	---	
LIQ	-0.11	-0.04	0.01	-0.08	-0.14	0.06	-0.19	-0.20	-0.19	**1.00**
	0.321	*0.695*	*0.926*	*0.453*	*0.207*	*0.553*	*0.084*	*0.062*	*0.078*	---

P-values are in *Italic*.

The correlation matrix (table 3) provides a comprehensive understanding of the interrelationships among the variables investigated in this study. Notable patterns emerge from the analysis. First, a moderate positive correlation (0.279) is observed between the MBV ratio and ENV, indicating that companies with higher MBV tend to exhibit a stronger environmental performance. This alignment underscores the potential integration of financial and environmental considerations. Additionally, a substantial positive correlation (0.828) between ENV and SOC pillar scores signifies that companies excelling in environmental sustainability also exhibit strong social performance, underscoring the interconnectedness of these sustainability dimensions. Furthermore, SOC is moderately correlated (0.537) with GOV, indicating that entities focusing on social sustainability are also more likely to engage in robust governance practices.

Moreover, an intriguing association between financial metrics and corporate practices becomes evident. Specifically, a positive correlation (0.287) between the MBV and audit committee expertise suggests that firms with higher ACE are inclined to demonstrate greater MBV. This finding reflects a constructive collaboration between market valuation and operational efficiency. Furthermore, a moderate positive correlation (0.343) between firm size and age highlights that larger companies tend to be more established, a trend often observed in the business landscape. Conversely, negative correlations are observed between the quick ratio of liquidity and other variables, notably indicating that liquidity decreases when firms may have higher market-to-book ratios, larger audit committee expertise, and greater board gender diversity.

Moreover, the correlation coefficient matrix reveals a potential multicollinearity concern within the dataset, as evidenced by the substantial correlations observed between certain pairs of independent variables. Multicollinearity arises when independent variables in a regression model display strong correlations with each other (Abdulla, 2020). In the context of the provided results, high positive correlations, such as those between ENV and SOC (0.83), or between SOC and GOV (0.54), suggest a level of interdependence between these sustainability dimensions. This phenomenon could potentially lead to challenges in accurately interpreting the individual effects of these correlated variables, impacting the stability of coefficient estimates and hindering the precision of statistical inference.

Table 4: Cointegration Test

Kao Residual Test			**t-Statistic**	**Prob.**
ADF			2.168	0.015
Residual variance			0.237	
HAC variance			0.201	
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(RESID)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
RESID(-1)	-1.249	0.300	-4.160	0.000

D(RESID(-1))	0.339	0.161	2.099	0.044

Series: MBV ENV SOC GOV ACE BGD LEV FSZ AGE LIQ

The Kao Residual Cointegration Test is performed (see results in table 4) to examine the presence of cointegration among the variables under consideration, to pursue if there exists a long-term relationship between variables that move together over time. The null hypothesis of this test is that there is no cointegration among the variables. The trend assumption is that there is no deterministic trend influencing the cointegration test. The specified lag length for the test is 1. The test statistic, which is 2.168, is compared against critical values to determine the statistical significance. The associated p-value (0.015) indicates the probability of observing such a test statistic under the assumption that the null hypothesis is true. With a p-value below the common significance threshold of 0.05, the null hypothesis of no cointegration is rejected at the 5% significance level.

The Augmented Dickey-Fuller (ADF) Test Equation is used to further investigate the cointegration relationship. The equation's dependent variable is the first difference of the residuals, indicating an integration order of 1. The negative coefficient of RESID(-1) (-1.249) suggests that there is a tendency for the residuals to correct themselves in the short term if they deviate from their long-term relationship. The positive coefficient of D(RESID(-1)) (0.339) indicates a feedback mechanism, suggesting that deviations from the long-term relationship are corrected in subsequent periods. The small p-values (0.000 and 0.044) show the probability of observing these t-statistics if the corresponding coefficient is zero in the population. The coefficient of D(RESID(-1)) is statistically significant at the 5% level (p = 0.044), suggesting that deviations from the long-term relationship are indeed corrected in subsequent periods.

4.2. Pooled OLS regression

The regression analysis explores the relationship between the market-to-book value and independent variables. The panel least squares method is employed in three models (see table 5) aiming to catch the impacts of the CSR dimensions separately of firm performance and to overcome the possibility of existing multicollinearity issue.

Table 5: Panel least squares model

Variable	Model 1	Model 2	Model 3
ENV	0.027**		
	(0.013)		
SOC		0.028**	
		(0.012)	
GOV			0.007
			(0.013)
ACE	0.331**	0.322**	0.345**

	(0.029)	*(0.029*	*(0.029)*
BGD	0.044	0.032	0.047
	(0.030)	*(0.030)*	*(0.033)*
LEV	1.311***	1.334***	1.344***
	(0.359)	*(0.354)*	*(0.374)*
FSZ	0.357**	0.380**	0.455***
	(0.153)	*(0.147)*	*(0.148)*
AGE	0.039**	0.041**	0.036**
	(0.017)	*(0.017)*	*(0.018)*
LIQ	0.051	0.048	0.058
	(0.099)	*(0.098)*	*(0.102)*
C	-8.688**	-9.389***	-10.445***
	(3.472)	*(3.390)*	*(3.558)*
R-squared	0.307	0.318	0.273
F-statistic	5.91***	6.21***	5.01***

*, ** & *** show level of significance at 0.01, 0.05 & 0.1, values in bracket show standard error.

Regarding the results of model 1, The goodness-of-fit measures provide additional insights into the model's performance. The R-squared value of 0.307 indicates that around 30.7% of the variation in the market-to-book ratio is explained by the independent variables. The adjusted R-squared (0.255) adjusts for the number of variables in the model. The root mean squared error (2.078) indicates the average distance between observed and predicted values. The F-statistic (5.91) evaluates the overall significance of the regression model, and the associated p-value (0.000) suggests that the model is statistically significant.

The coefficient of ENV (0.027) suggests that a one-unit increase in the environmental score is associated with a 0.027 unit increase in the market-to-book ratio. This relationship is statistically significant at the 5% significance level (p = 0.04), indicating that environmental performance has a positive impact on market-to-book ratio. The coefficients of ACE are statistically significant and positive, showing that ACE posit positive impact on financial performance. The coefficient of board gender diversity (0.044) implies that a one-unit increase in board gender diversity corresponds to a 0.044 unit increase in the market-to-book ratio. However, this relationship does not reach statistical significance (p = 0.153) at the conventional significance levels. The coefficient of debt to equity (1.311) suggests that for each unit increase in leverage, the market-to-book ratio increases by 1.311 units. This relationship is statistically significant at an elevated level of significance (p = 0.000), indicating a positive association between leverage and market-to-book ratio. The coefficient of firm size (0.357) and firm age (0.039) implies that a one-unit increase in firm size and firm age separately leads to a 0.357 or 0.039 unit increase in the market-to-book ratio. These relationships are statistically significant at the 5% significance level (p = 0.021 & 0.028), suggesting that larger and more mature firm tend to have higher market-to-book ratios. The

constant term of -8.69 represents the expected value of the market-to-book ratio when all independent variables are zero.

The results of model 2 show that the R-squared value of 0.32 signifies that approximately 31.8% of the variation in the market-to-book ratio is explained by the independent variables. The coefficient of Social Pillar Score (0.028) reveals that a unit increase in the SOC corresponds to a 0.028 unit rise in the market-to-book ratio. This association attains statistical significance at the 5% level (p = 0.021), underscoring the constructive impact of social performance on market valuation. LEV coefficient (1.334) implies that for each unit increase in leverage, the MBV ratio experiences an increase of 1.334 units. This connection is statistically significant at a prominent level of significance (p = 0.000), signifying a positive correlation between leverage and market-to-book ratio. The coefficients of size (0.38) and age (0.041) signify that an augmentation of one unit in firm size or age separately is associated with a 0.38 or 0.04 unit increase in the market-to-book ratio, respectively. These relationships are statistically significant at the 5% level (p = 0.011), suggesting links between firm size/ age and market valuation. The effects of both BGD and LIQ do not reach statistical significance (p = 0.302 & p = 0.624) at conventional significance levels.

Regarding model 3, the R-squared value of 0.273 underscores that approximately 27.3% of the variation in the market-to-book ratio can be accounted for by the included independent variables. The F-statistic (5.01) evaluates the overall relevance of the regression model, with the associated p-value (0.000) signaling statistical significance. Governance Pillar Score's coefficient (0.007) reveals a nuanced relationship. This coefficient signifies that a unit increase in the GOV is associated with a mere 0.007-unit augmentation in the market-to-book ratio. This relationship lacks statistical significance (p = 0.619) at the customary threshold, indicating that governance performance may not exert a substantial influence on market valuation. Moreover, the marginal impacts of BGD and LIQ are not statistically significant at level 0.05. However, the coefficients values of LEV, FSZ and AGE is statistically significant. The coefficient of LEV (1.34) portrays a significant relationship. This value suggests that for every unit increase in leverage, the market-to-book ratio experiences a corresponding increase of 1.34 units. The coefficient of firm size (0.455) reveals a notable link. An augmentation of one unit in firm size corresponds to a 0.455 unit increase in the market-to-book ratio. Age coefficient (0.036) intimates that a unit increase in the age of the firm corresponds to a 0.036 unit rise in the market-to-book ratio.

Conclusively, the results intimate that environmental pillar score and social pillar score hold significance in shaping the market-to-book ratio. Nevertheless, governance pillar score does not seem to wield substantial influence within this context. The models demonstrate the potential to elucidate a substantial portion of the market-to-book ratio's variability.

4.3. Model selection

Table 6 presents the results of Lagrange Multiplier Tests for Random Effects in the context of panel data analysis. These tests are employed to assess the appropriateness of random effects assumptions in a panel regression model. The null hypothesis for these tests is the

absence of effects, which means that there are no individual-specific or time-specific effects present. The table outlines different Lagrange Multiplier tests with respect to various hypotheses, including Breusch-Pagan, Honda. The test hypotheses are divided into three categories: cross-section, time, and both (cross-section and time).

Table 6: Lagrange Multiplier Tests for Random Effects

		Breusch-Pagan		Honda	
		Stat.	Prob.	Stat.	Prob.
Model 1	Cross-section	28.26	0.000	5.32	0.000
	Time	1.73	-0.189	-1.31	-0.906
	Both	29.99	0.000	2.83	-0.002
Model 2	Cross-section	25.80	0.000	5.08	0.000
	Time	1.82	-0.178	-1.35	-0.911
	Both	27.62	0.000	2.64	-0.004
Model 3	Cross-section	30.03	0.000	5.48	0.000
	Time	1.78	-0.183	-1.33	-0.909
	Both	31.81	0.000	2.93	-0.002

Breusch-Pagan test examines whether the variance of the residuals is constant across cross-sectional units. The test statistic is 28.26, 25.8 and 30.03 for the three models respectively, and their associated p-values (0.000) are smaller than any conventional significance level, indicating convincing evidence to reject the null hypothesis. This suggests the presence of heteroscedasticity in the data for all three regression models. Additionally, The Honda test evaluates whether the residuals are serially uncorrelated over time. The test statistic is 5.32, 5.08 and 5.48 for model 1, 2 and 3 respectively, and their associated p-values (0.000) are highly significant. This provides evidence to reject the null hypothesis, indicating the presence of serial correlation in the residuals. In summary, the results suggest the presence of heteroscedasticity and serial correlation in the panel regression models. These findings should be considered in the model interpretation and may warrant further investigation or model specification adjustments.

4.4. FE and RE regression

Table 7 presents the results of a Panel EGLS (Cross-section random effects and fixed effects) regression analysis, which aims to explore the relationship between market-to-book ratio and the independent variables. The analysis accounts for potential cross-sectional clustering in standard errors using the White correction.

Table 7: FE and RE regression results

Variable	Model 1	Model 2	Model 3

	RE	FE	RE	FE	RE	FE
ENV	-0.004*	-0.008*				
	(0.002)	*(0.004)*				
SOC			-0.007**	-0.014*		
			(0.003)	*(0.008)*		
GOV					-0.004	0.007
					(0.004)	*(0.004)*
ACE	0.329**	0.332*	0.322**	0.341	0.325**	0.338*
	(0.017)	*(0.042)*	*(0.018)*	*(0.041)*	*(0.029)*	*(0.039)*
BGD	0.040***	0.044	0.044***	0.050	0.041***	0.047***
	(0.012)	*(0.030)*	*(0.013)*	*(0.032)*	*(0.012)*	(0.014)
LEV	0.964***	0.825*	0.979***	0.811*	0.985***	1.344***
	(0.173)	*(0.402)*	*(0.176)*	*(0.734)*	*(0.146)*	(0.409)
FSZ	0.432**	0.873	0.454***	1.024	0.441**	0.454***
	(0.152)	*(0.789)*	*(0.140)*	*(0.824)*	*(0.168)*	(0.045)
AGE	0.030**	0.028	0.033**	0.047	0.031**	0.036***
	(0.014)	*(0.090)*	*(0.011)*	*(0.088)*	*(0.013)*	(0.007)
LIQ	-0.026*	-0.060*	-0.019	-0.050	-0.037**	0.058
	(0.014)	*(0.030)*	*(0.012)*	*0.032)*	*(0.014)*	(0.043)
C	-8.939*	-18.282	-9.452***	-21.954	-9.057**	-10.445***
	(3.369)	*(17.147)*	*(3.012)*	*(18.025)*	*(3.646)*	(1.364)
R-squared	0.269	0.952	0.276	0.954	0.272	0.273
F-statistic	4.92***	23.97***	5.08***	25.19***	4.977***	5.005***
Hausman Test:						
Chi-Sq. Stat.	6.97		9.55		1.57	
Prob.	0.324		0.145		0.955	

*, ** & *** show level of significance at 0.01, 0.05 & 0.1, values in bracket show standard error.

The Chi-Square statistic for the test of cross-section random effects is calculated as 6.97, 9.55 and 1.57 for the three models respectively, with 6 degrees of freedom, resulting in a p-value of p>0.1. This suggests that the test fails to reject the null hypothesis of cross-section random effects. Consequently, the decision is not to reject the presence of random effects, implying that a random effects models might be more suitable for the data.

The results of RE for model 1 show that the effect of ENV is only statistically significant at the conventional 10% significance level (p = 0.066). The coefficient of environmental pillar score (-0.004) suggests a potential negative impact on the market-to-book ratio with an increase in the environmental pillar score. The coefficients of ACE show that one-unit increase in audit committee financial expertise would result in increase in MBV by around 0.32 unit. The coefficient of BGD (0.040) indicates a statistically significant positive association between board gender diversity and the market-to-book ratio (p = 0.006). Moreover, leverage has a

significant positive relationship (0.964) with the market-to-book ratio. This means an increase in leverage is associated with a higher market-to-book ratio (p = 0.000). Both firm size and firm age tend to positively affect market-to-book ratio. One-unit separate increase in size or age results in rise in MBV value by (0.013) or (0.030) respectively. These results are statistically significant at the 0.05 level. However, the coefficient of Liquidity (-0.03) suggests a potential negative impact of liquidity on the MBV, but this effect is not statistically significant. The constant term of -8.94 represents the expected value of the market-to-book ratio when all independent variables assume zero values. This constant term is statistically significant at the 5% level (p = 0.019).

The results of RE in model 2 present that social pillar score coefficient is -0.007, revealing a potentially negative correlation between SOC and the market-to-book ratio. Notably, a unit increase in the SOC score is associated with a decrease in the market-to-book ratio. This finding attains statistical significance at the p = 0.039 level. BGD coefficient is 0.044, implying that elevated BGD relates to heightened market-to-book ratios. This connection is statistically significant, with p = 0.004. LEV coefficient registers at 0.979, elucidating a positive nexus between LEV and MBV. A rise in leverage corresponds to an increase in market-to-book ratios. FSZ coefficient at 0.454 suggests larger firms tend to exhibit higher market-to-book ratios. The coefficient of LEV and FSZ are remarkably statistically significant at p = 0.000. Moreover, AGE coefficient, denoted as 0.033, signifies a positive linkage between a firm's age and its market-to-book ratio. Consequently, older firms are more likely to possess elevated market-to-book ratios.

The outcomes of RE in model 3 illustrate that governance pillar score coefficient is -0.004 but it is not statistically significant at the 0.1 level. BGD coefficient is 0.041, suggesting that raised BGD relates to heightened MBV value. This connection is statistically significant, with p = 0.012. Moreover, the coefficients of LEV, FSZ and AGE register at 0.985, 0.441 and 0.031 respectively, elucidating positive effects on market-to-book value ratio. A rise in these three independent variables separately corresponds to an increase in market-to-book ratio. The coefficient of LEV and FSZ are remarkably statistically significant at p = 0.000. Nevertheless, the coefficient of Liquidity (-0.037) suggests a potential negative impact of liquidity on the market-to-book value at the 0.05 level of significance.

In conclusion, this analysis uncovers significant associations between environment pillar score and market-to-book value, and social pillar score with market-to-book value. However, it founds the relationship between governance pillar score and market-to-book value is not statistically significant. The impact of CSR is negative on firm performance. The results highlight the importance of considering the control factors when interpreting firm valuation within the framework of these model.

4.5. Moderating effect of ACE

The regression results in table 8 offer insights into the relationship between the MBV and ESG with considering the moderating effect of audit committee expertise. The analysis employs

the Panel estimated generalized least square (EGLS) method with Cross-section random effects.

Table 8: FE regression with ACE moderating effect

Variable	Model 1	Model 2	Model 3
	RE	RE	RE
ENV	-0.010*** *(0.002)*		
SOC		-0.012*** *(0.002)*	
GOV			-0.008** *(0.004)*
ACE	0.320* *(0.017)*	0.328* *(0.017)*	0.319* *(0.018)*
ENV*ACE	0.0002* *(0.0001)*		
SOC*ACE		0.0002* *(0.000)*	
GOV*ACE			0.0001** *(0.000)*
BGD	0.045*** *(0.010)*	0.048*** *(0.011)*	0.043*** *(0.011)*
LEV	0.940*** *(0.172)*	0.856*** *(0.174)*	0.873*** *(0.146)*
FSZ	0.379*** *(0.114)*	0.419*** *(0.122)*	0.410** *(0.155)*
AGE	0.026** *(0.012)*	0.030*** *(0.011)*	0.030** *(0.013)*
LIQ	-0.020 *(0.013)*	-0.015 *(0.012)*	-0.035** *(0.014)*
C	-7.757*** *(2.599)*	-8.672*** *(2.702)*	-8.367** *(3.407)*
R-squared	0.307	0.320	0.308
F-statistic	4.99***	5.30***	5.02***
Hausman Test:			
Chi-Sq. Stat.	10.23	9.57	3.43
Prob.	0.176	0.214	0.842

*, ** & *** show level of significance at 0.01, 0.05 & 0.1, values in bracket show standard error.

The coefficients of ENV, SOC and GOV (-0.01, -0.012 & -0.008) demonstrate negative effects with small p-values below 0.05, indicating that the three employed ESG components have statistically significant negative impacts on MBV. The coefficients of ACE show that one-unit increase in audit committee financial expertise would result in increase in MBV by around 0.32 unit. Additionally, the interaction term ENV*ACE has a coefficient of 0.0002 with a t-statistic of 1.917, suggesting a potential moderating effect of ACE on the relationship between environmental pillar score and MBV. Thus, ACE has a positive moderating effect by (0.0001) on reducing the negative relationship between ENV and MBV. Moreover, the interaction term SOC*ACE suggests that the impact of SOC on MBV may vary based on the presence of ACE. The presence ACE has a positive impact (0.0002) on the identified negative relationship between SOC and MBV. However, this coefficient is only statistically significant at the 0.1 level. Similarly, the coefficient of GOV*ACE interaction term (0.0001) shows that ACE has a moderating effect on the relationship between GOV and MBV value ratio. To sum up, ESG components have negative impacts on financial performance of listed firms in UAE and ACE seems to have power weakening the negative relationship between ESG and financial performance. This implies that ACE has the potential to impact the relationship between ESG and MBV, and it weakens the negative observed association and to drive it towards positivity.

5. DISCUSSION AND CONCLUSION

CSR is important in contemporary business strategies, particularly in developing markets. This study investigates the relationship between CSR and financial performance and the potential benefits of CSR practices in high-speed developing market, particularly UAE. Furthermore, the study's focus on examining the moderating effect of ACE on the CSR-firm performance relationship in the UAE. The study uses an explanatory research design on quantitative data collected for a sample of 555 firm-year observation of non-financial firms listed on ADX over 2008-2022. The study developed hypotheses based on various theoretical frameworks, including stakeholder conflict, resource allocation theory, institutional theory, and agency theory, to investigate the relationship between CSR, ACE, and firm financial performance. These theories provided a solid foundation for understanding the complex dynamics at play in developing markets like the UAE.

Hypothesis 1 posited that CSR practices negatively effects financial performance in emerging markets. The findings of the study align with this hypothesis, as the analysis indicated a negative association between CSR and firm financial performance in the UAE. This result is consistent with prior research conducted in both developed and developing markets (Han, Kim, & Yu, 2016; Hamdoun et al., 2022; Lopatta, Canitz, & Tideman, 2022). Companies that invest heavily in CSR activities may divert resources away from core business activities. Moreover, companies in developing countries may not have robust systems in place to measure and report the impact of CSR activities on financial performance accurately. This have caused the perception of the negative relationship in the case of UAE.

Hypothesis 2 proposed that the effect of CSR on financial performance is less pronounced in companies with a higher level of audit committee expertise. The study's findings provide empirical evidence to reject this hypothesis, suggesting that ACE indeed strengthens the relationship between CSR and financial performance. This observation underscores the vital role of the audit committee in overseeing and enhancing CSR activities. ACE appears to function as a catalyst for aligning managerial interests with shareholder interests, ensuring that CSR initiatives are consistent with long-term sustainability goals.

The research makes significant contributions to the existing literature on CSR and firm performance, particularly in the context of developing markets. First, it addresses the gap in research regarding the impact of CSR in developing economies like the UAE. By examining this relationship, the study provides valuable insights into the opportunities and challenges faced by firms in implementing CSR practices in such markets. Second, the study sheds light on the crucial role of ACE in enhancing the relationship between CSR and firm performance. This finding underscores the importance of having audit committee members with relevant expertise to oversee CSR practices effectively. The audit committee's expertise not only improves CSR implementation but also ensures alignment with overall performance objectives.

The findings offer practical implications for firms operating in developing markets. It emphasizes the importance of affectively communicating and realizing the benefits of CSR practices, including enhanced financial performance. Moreover, the study highlights the significance of selecting and retaining audit committee members with expertise in finance-related subjects. Boards should prioritize the appointment of individuals with a deep understanding of SCR measurement and reporting, as their expertise can moderate the impact of CSR on financial performance.

While this study provides valuable insights, it is essential to acknowledge its limitations. The research focused on a specific developing market, the UAE, and may not be fully representative of other developing economies. Additionally, the study relies on secondary data, in which limited companies disclose their sustainability reports. Future research avenues include extending this analysis to other developing markets to assess the generalizability of the findings. Moreover, examining the relationship between CSR, ACE, and firm performance over more extended periods may reveal additional insights into the long-term effects of CSR initiatives.

REFERENCES

Abdullah, H., & Tursoy, T. (2021). Capital structure and firm performance: evidence of Germany under IFRS adoption. *Review of Managerial Science, 15*, 379-398. doi:https://doi.org/10.1007/s11846-019-00344-5

Abdullah, H., & Tursoy, T. (2023). The Effect of Corporate Governance on Financial Performance: Evidence From a Shareholder-Oriented System. *Iranian Journal of Management Studies, 16*(1), 79-95. doi:http://www.doi.org/10.22059/IJMS.2022.321510.674798

Abdullah, H., Isiksal, A., & Rasul, R. (2023). Dividend policy and firm value: evidence of financial firms from Borsa Istanbul under the IFRS adoption. *Journal of Financial Reporting and Accounting.* doi:https://doi.org/10.1108/JFRA-04-2022-0147

Abdulrahman, R., Abdalla, S., Abdullah, H., Najm, B., & Khzer. (2022). The Impact of Audit Committee on the reliability of the financial statements under the corporate governance. *Journal of University of Garmian 9*(4), 750-764. https://doi.org/10.24271/garmian.20229451

Ahmad, W., Battisti, E., Akhtar, N., Ahmad, M. I., & Rehman, R. U. (2023). Global retailers' CSR initiatives during COVID-19 crisis: a cross-cultural examination. *International Marketing Review, 40*(5), 1054-1070 https://doi.org/10.1108/IMR-12-2021-0362

Ali, M., Khan, S. M., Puah, C. H., Mubarik, M. S., & Ashfaq, M. (2023). Does stakeholder pressure matter in Islamic banks' corporate social responsibility and financial performance?. *International Journal of Ethics and Systems, 39*(2), 236-263. https://doi.org/10.1108/IJOES-10-2021-0183

Appuhami, R., & Tashakor, S. (2017). The Impact of Audit Committee Characteristics on CSR Disclosure: An Analysis of Australian Firms. *Australian Accounting Review, 27*(4), 400-420. doi:https://doi.org/10.1111/auar.12170

Aras, G., Aybars, A., & Kutlu, O. (2010). Managing corporate performance: Investigating the relationship between corporate social responsibility and financial performance in emerging markets. *International Journal of Productivity and Performance Management, 59*(3), 229-254. doi:https://doi.org/10.1108/17410401011023573

Barauskaite, G., & Streimikiene, D. (2021). Corporate social responsibility and financial performance of companies: The puzzle of concepts, definitions and assessment methods. *Corporate Social Responsibility and Environmental Management, 28*(1), 278-287. doi:https://doi.org/10.1002/csr.2048

Bouslah, K., Hmaittane, A., Kryzanowski, L., & M'Zali , B. (2023). CSR Structures: Evidence, Drivers, and Firm Value Implications. *Journal of Business Ethics, 185*, 115-145. doi:https://doi.org/10.1007/s10551-022-05219-6

Buallay, A., & Al-Ajmi, J. (2020). The role of audit committee attributes in corporate sustainability reporting: Evidence from banks in the Gulf Cooperation Council. *Journal of Applied Accounting Research, 21*(2), 249-264. https://doi.org/10.1108/JAAR-06-2018-0085

Carlini, J., Grace, D., France, C., & Iacono, J. (2019). The corporate social responsibility (CSR) employer brand process: integrative review and comprehensive model. *Journal of Marketing Management, 35*(1), 182-205. doi:https://doi.org/10.1080/0267257X.2019.1569549

Cavaco, S., & Crifo, P. (2014). CSR and financial performance: complementarity between environmental, social and business behaviours. *Applied Economics, 46*(27), 3323-3338. doi:https://doi.org/10.1080/00036846.2014.927572

Chaudhuri, A., Subramanian, N., & Dora, M. (2022). Circular economy and digital capabilities of SMEs for providing value to customers: Combined resource-based view and ambidexterity perspective. *Journal of Business Research, 142*, 32-44. doi:https://doi.org/10.1016/j.jbusres.2021.12.039

Cheng, B., Ioannou, L., & Serafeim, G. (2014). George. *Strategic Management Journal, 35*(1), 1-23. doi:https://doi.org/10.1002/smj.2131

Coelho, R., Jayantilal, S., & Ferreira, J. J. (2023). The impact of social responsibility on corporate financial performance: A systematic literature review. *Corporate Social Responsibility and Environmental Management 30*(4), 1535-1560. https://doi.org/10.1002/csr.2446

Devie, D., Liman, L., Tarigan, J., & Jie, F. (2020). Corporate social responsibility, financial performance and risk in Indonesian natural resources industry. *Social Responsibility Journal, 16*(1), 73-90. doi:https://doi.org/10.1108/SRJ-06-2018-0155

Dorfleitner, G., Halbritter, G., & Nguyen, M. (2015). Measuring the level and risk of corporate responsibility–An empirical comparison of different ESG rating approaches. *Journal of Asset Management, 16*, 450-466.

Dwekat, A., Meqbel, R., Seguí-Mas, E., & Tormo-Carbó, G. (2022). The role of the audit committee in enhancing the credibility of CSR disclosure: Evidence from STOXX Europe 600 members. *Business Ethics, the Environment & Responsibility, 31*(3), 718-740. doi:https://doi.org/10.1111/beer.12439

El Gammal, W., Yassine, N., Fakih, K., & El-Kassar, A. N. (2020). The relationship between CSR and corporate governance moderated by performance and board of directors' characteristics. *Journal of Management and Governance*, *24*, 411-430. https://doi.org/10.1007/s10997-018-9417-9

Frederiksen, T. (2019). Political settlements, the mining industry and corporate social responsibility in developing countries. *The Extractive Industries and Society, 6*(1), 162-170. doi:https://doi.org/10.1016/j.exis.2018.07.007

Freeman, R., & Dmytriyev, S. (2017). Corporate Social Responsibility and Stakeholder Theory: Learning From Each Other. Symphonya. *Emerging Issues in Management, 1*, 7-15. doi:https://doi.org/10.4468/2017.1.02freeman.dmytriyev

García-Sánchez, I.-M., Hussain , N., Khan, S.-A., & Martínez-Ferrero, J. (2021). Do Markets Punish or Reward Corporate Social Responsibility Decoupling? *Business & Society, 60*(6), 1431-1467. doi:https://doi.org/10.1177/0007650319898883

García-Sánchez, I.-M., Hussain, N., Martínez-Ferrero, J., & Ruiz-Barbadillo, E. (2019). Impact of disclosure and assurance quality of corporate sustainability reports on access to finance. *Corporate Social Responsibility and Environmental Management, 26*(4), 832-848. doi:https://doi.org/10.1002/csr.1724

Gatti, L., Vishwanath, B., Seele, P., & Cottier , B. (2019). Are We Moving Beyond Voluntary CSR? Exploring Theoretical and Managerial Implications of Mandatory CSR Resulting from the New Indian Companies Act. *Journal of Business Ethics, 160*, 961-972. doi:https://doi.org/10.1007/s10551-018-3783-8

Hamad, H., & Cek, K. (2023). The Moderating Effects of Corporate Social Responsibility on Corporate Financial Performance: Evidence from OECD Countries. *Sustainability, 15*(11), 8901. doi:https://doi.org/10.3390/su15118901

Hamdoun, M., Achabou, M., & Dekhili, S. (2022). Could CSR improve the financial performance of developing countries' firms? Analyses of mediating effect of intangible resources. *European Business Review, 34*(1), 41-61. doi:https://doi.org/10.1108/EBR-09-2019-0236

Han, J.-J., Kim, H., & Yu , J. (2016). Empirical study on relationship between corporate social responsibility and financial performance in Korea. *Asian Journal of Sustainability and Social Responsibility, 1*, 61-76. doi:https://doi.org/10.1186/s41180-016-0002-3

Harun, M. S., Hussainey, K., Mohd Kharuddin, K. A., & Farooque, O. A. (2020). CSR disclosure, corporate governance and firm value: a study on GCC Islamic banks. *International Journal of Accounting & Information Management*, *28*(4), 607-638. https://doi.org/10.1108/IJAIM-08-2019-0103

Islam, T., Islam, R., Pitafi, A., Xiaobei, L., Rehmani, M., Irfan, M., & Mubarak, M. (2021). The impact of corporate social responsibility on customer loyalty: The mediating role of corporate reputation, customer satisfaction, and trust. *Sustainable Production and Consumption, 25*, 123-135. doi:https://doi.org/10.1016/j.spc.2020.07.019

Jensen, M., & Meckling, W. (1979). Rights and Production Functions: An Application to Labor-Managed Firms and Codetermination. *The Journal of Business, 52*(4), 469-506. Retrieved from https://www.jstor.org/stable/2352442

Kabir, M. A., & Chowdhury, S. S. (2023). Empirical analysis of the corporate social responsibility and financial performance causal nexus: Evidence from the banking sector of Bangladesh. *Asia Pacific Management Review, 28*(1), 1-12. https://doi.org/10.1016/j.apmrv.2022.01.003

Karyawati, G., Subroto, B., Sutrisno, T., & Saraswati, E. (2020). Explaining the complexity relationship of CSR and financial performance using neo-institutional theory. *Journal of Asian Business and Economic Studies, 27*(3), 227-244. doi:https://doi.org/10.1108/JABES-10-2019-0106

Le, T. (2022). Corporate social responsibility and SMEs' performance: mediating role of corporate image, corporate reputation and customer loyalty. *International Journal of Emerging Markets*, Vol. ahead-of-print No. ahead-of-print. doi:https://doi.org/10.1108/IJOEM-07-2021-1164

Li, J., Fu, T., Han, S., & Liang, R. (2023). Exploring the Impact of Corporate Social Responsibility on Financial Performance: The Moderating Role of Media Attention. *Sustainability, 15*(6), 5023. https://doi.org/10.3390/su15065023

Luke, B. (2016). Measuring and Reporting on Social Performance: From Numbers and Narratives to a Useful Reporting Framework for Social Enterprises. *Social and Environmental Accountability Journal, 36*(2), 103-123. doi:https://doi.org/10.1080/0969160X.2015.1103298

Ma, C., Chishti, M., Durrani, M., Bashir, R., Safdar, S., & Hussain, R. (2023). The Corporate Social Responsibility and Its Impact on Financial Performance: A Case of Developing Countries. *Sustainability, 15*(4), 3724. doi:https://doi.org/10.3390/su15043724

Maheshwari, M., Gupta, A. K., Gaur, P., Tiwari, N., & Goyal, S. (2024). *Corporate Social Responsibility in the Global Business World: A Conceptual, Regulatory, and Illustrative Framework*. CRC Press.

Middle East Legal. (2023). Corporate Social Responsibility (CSR) in the UAE Legal Obligations. Available at: https://middleastlegal.com/corporate-social-responsibility-csr-in-the-uae-legal-obligations/

Mohammadi, S., Saeidi, H., & Naghshbandi, N. (2021). The impact of board and audit committee characteristics on corporate social responsibility: evidence from the Iranian stock exchange. *International Journal of Productivity and Performance Management, 70*(8), 2207-2236. doi:https://doi.org/10.1108/IJPPM-10-2019-0506

Moon, H.-C., & Parc, J. (2019). Shifting corporate social responsibility to corporate social opportunity through creating shared value. *Strategic Change, 28*(2), 115-122. doi:https://doi.org/10.1002/jsc.2252

Nair, A., & Bhattacharyya, S. (2019). Mandatory corporate social responsibility in India and its effect on corporate financial performance: Perspectives from institutional theory and resource-based view. *Business Strategy & Development, 2*(2), 106-116. doi:https://doi.org/10.1002/bsd2.46

Nyuur, R., Ofori, D., & Amponsah, M. (2019). Corporate social responsibility and competitive advantage: A developing country perspective. *Thunderbird International Business Review, 61*(4), 551-564. doi:https://doi.org/10.1002/tie.22065

O'Connell, M., & Ward, A. (2020). Shareholder Theory/Shareholder Value*. Encyclopedia of Sustainable Management.* Springer. doi:https://doi.org/10.1007/978-3-030-02006-4_49-1

Oeyono, J., Samy, M., & Bampton, R. (2011). An examination of corporate social responsibility and financial performance: A study of the top 50 Indonesian listed corporations. *Journal of Global Responsibility, 2*(1), 100-112. doi:https://doi.org/10.1108/20412561111128555

Opoku Marfo, E. (2024). Mechanisms and initiatives of corporate social responsibility behaviours in Ghana: a co-integration approach. *Cogent Business & Management*, *11*(1), 2312580. https://doi.org/10.1080/23311975.2024.2312580

Oware, K., & Mallikarjunappa, T. (2022). CSR expenditure, mandatory CSR reporting and financial performance of listed firms in India: an institutional theory perspective. *Meditari Accountancy Research, 30*(1), 1-21. doi:https://doi.org/10.1108/MEDAR-05-2020-0896

Para, I., Bala, H., Khatoon, G., Karaye, A., & Abdullah, H. (2022). IFRS adoption and value relevance of accounting information of listed industrial goods firms in Nigeria. *Humanities Journal of University of Zakho, 10*(2), 564-571. https://doi.org/10.26436/hjuoz.2022.10.2.776

Pillai, R., & Al-Malkawi, H. A. N. (2018). On the relationship between corporate governance and firm performance: Evidence from GCC countries. *Research in International Business and Finance*, *44*, 394-410. https://doi.org/10.1016/j.ribaf.2017.07.110

Porter, M., & Kramer, M. (2006). The link between competitive advantage and corporate social responsibility. *Harvard Business Review, 84*(12), 78-92.

Pozzoli, M., Pagani, A., & Paolone, F. (2022). The impact of audit committee characteristics on ESG performance in the European Union member states: Empirical evidence before and during the COVID-19 pandemic. *Journal of Cleaner Production, 371*, 133411. doi:https://doi.org/10.1016/j.jclepro.2022.133411

Raimo, N., Vitolla, F., Marrone, A., & Rubino, M. (2021). Do audit committee attributes influence integrated reporting quality? An agency theory viewpoint. *Business Strategy and the Environment, 30*(1), 522-534. doi:https://doi.org/10.1002/bse.2635

Saeed, P., Abdullah, H., & Abdulrahman, R. (2023). The effect of green accounting in enhancing financial performance: evidence from audit committee role. *Humanities Journal of University of Zakho 11*(3), 625-642. https://doi.org/10.26436/hjuoz.2023.11.3.1156

Santos-Jaén, J. M., *Palacios*-Manzano, M., Gras-Gil, E., & León-Gómez, A. (2024). The Effect of Audit Committee Characteristics on Corporate Social Responsibility Practices. Evidence from Spain.

In *Environmentally Sustainable Production: Research for Sustainable Development* (pp. 277-296). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-52656-5_14

Sdiq, S., & Abdullah, T. (2022). Examining the effect of agency cost on capital structure-financial performance nexus: empirical evidence for emerging market. *Cogent Economics & Finance, 10*(1), 2148364. doi:https://doi.org/10.1080/23322039.2022.2148364

Shabbir, M., & Wisdom, O. (2020). The relationship between corporate social responsibility,. *Environmental Science and Pollution Research, 27*, 39946-39957. doi:https://doi.org/10.1007/s11356-020-10217-0

Simpson, W., & Kohers, T. (2002). The Link Between Corporate Social and Financial Performance: Evidence from the Banking Industry. *Journal of Business Ethics, 35*, 97-109. doi:https://doi.org/10.1023/A:1013082525900

Tang, Z., Hull, C. E., & Rothenberg, S. (2012). How corporate social responsibility engagement strategy moderates the CSR–financial performance relationship. *Journal of management Studies, 49*(7), 1274-1303. https://doi.org/10.1111/j.1467-6486.2012.01068.x

Tawfik, O., Kamar, S., & Bilal, Z. (2021). The Effect of Sustainable Dimensions on the Financial Performance of. *Journal of Asian Finance, Economics and Business, 8*(3), 1121–1133. doi:htpp://www.doi.org/10.13106/jafeb

Ullah, I., Fang, H., & Jebran, K. (2020). Do gender diversity and CEO gender enhance firm's value? Evidence from an emerging economy. *Corporate Governance, 20*(1), 44-66. doi:https://doi.org/10.1108/CG-03-2019-0085

Xie, X., Jia, Y., & Meng, X. (2017). Corporate social responsibility, customer satisfaction, and financial performance: The moderating effect of the institutional environment in two transition economies. *Journal of Cleaner Production, 150*, 26-39. doi:https://doi.org/10.1016/j.jclepro.2017.02.192