

DO ATTAINMENT DISCREPANCY AND SLACKS MODERATE THE RELATIONSHIP BETWEEN BOARD CHARACTERISTICS AND LEVEL OF SUSTAINABILITY DISCLOSURE?

Dilini Dissanayake^{*}, Sulochana Dissanayake^{**}, Roshan Ajward^{***}

^{*} Corresponding author, NSBM Green University, Homagama, Sri Lanka
Contact details: NSBM Green University, Mahenwatta, Pitipana, Homagama, Sri Lanka
^{**} Rajarata University, Mihintale, Sri Lanka
^{***} University of Sri Jayewardenepura, Nugegoda, Sri Lanka



Abstract

How to cite this paper:

Dissanayake, D., Dissanayake, S., & Ajward, R. (2021). Do attainment discrepancy and slacks moderate the relationship between board characteristics and level of sustainability disclosure? *Corporate Governance and Sustainability Review*, 5(4), 28–44.
<https://doi.org/10.22495/cgsrv5i4p3>

Copyright © 2021 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).
<https://creativecommons.org/licenses/by/4.0/>

ISSN Online: 2519-898X
ISSN Print: 2519-8971

Received: 16.08.2021
Accepted: 04.11.2021

JEL Classification: G34, Q56
DOI: 10.22495/cgsrv5i4p3

Disclosure of sustainability practices has become vital for organizations to secure their image as legitimate corporate citizens in society (Panjaitan, 2017). It might be influenced by the board of directors subject to the performance and resource availability. The prime objective of the paper is to investigate the association between board characteristics and a level of sustainability disclosure with the moderating role of performance gap and resources. Secondary data was obtained from 174 non-finance firms representing 16 sectors of the Colombo Stock Exchange (CSE) over 2016–2020. The study used 13 board characteristics and 7 controlling variables. According to the results of ordered logistic regression, board size and audit committee size have a significant impact on the degree of sustainability disclosures. At the same time, female directors displayed a significant adverse effect on such disclosures. It was found that resource availability significantly impacts the relationship between board characteristics and sustainability reporting. The study contributes to the extant literature by filling an empirical gap in the area by encapsulating a more comprehensive sample, using a broader theoretical perspective and a wide measurement to capture sustainability disclosure. The study findings are predicted to have extensive managerial ramifications in strengthening corporate governance mechanisms to elevate sustainability disclosure.

Keywords: Board Characteristics, Corporate Governance, Sustainability Disclosure, Attainment Discrepancy, Slacks, GRI

Authors' individual contribution: Conceptualization — D.D.; Methodology — D.D.; Validation — R.A.; Formal Analysis — D.D.; Investigation — D.D.; Resources — D.D.; Data Curation — S.D.; Writing — Original Draft — D.D.; Writing — Review & Editing — S.D.; Supervision — R.A.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

Many organizations have been criticized for causing environmental issues such as pollution, depletion of natural resources, waste creation, etc. As a result, capital providers are pressuring businesses to

assume responsibility for their activities and decisions that directly influence the environment. Companies have been forced to become more accountable to environmental issues by stakeholders and by expanding environmental legislation and market-based emission trading programs (Braum,

Uit de Weerd, Hauck, & Huijbregts, 2016). These recent developments have influenced the corporations to report more on sustainable developments in their sustainability reports. They could make an effort to convince society that they are keen environmental performers and always have significant concerns about sustainable practices (KPMG, 2013).

Apart from mandatory disclosures, voluntary disclosures are becoming increasingly prevalent in the corporate sector because most stakeholders' interest and passion for this information grow (Al-Shammari & Al-Sultan, 2010). Disclosure in sustainability reporting is believed to boost public trust in organizations and elevate trustworthiness in managing resources such as human, financial, and other resources that directly impact the entity's profit (Panjaitan, 2017). According to the triple bottom line concept, sustainability reporting is one of the channels that companies utilize to disclose information on their engagements on social, economic, and environmental activities (Panjaitan, 2017). This practice expresses the company's commitment to all of its stakeholders regarding the organization's success in accomplishing long-term sustainable goals (Panjaitan, 2017).

In the separation of roles of owners and managers, it is board of directors' responsibility to represent the shareholders' interests (Janggu, Darus, Zain, & Sawani, 2014). Separation of these two parties gave birth to the agency theory which has become a dominant theory behind the corporate governance and the behavior of the board of directors. This theory proposes that the monitoring role of the board stimulus the firms to reveal information to reduce the agency cost and thereby information asymmetry (Brennan & Solomon, 2008). Hence, the board of directors is the controlling party who decides upon disclosures and this might be highly influenced by the characteristics of the board of directors (Brennan & Solomon, 2008). Meanwhile, Rouf (2011) believed that managers tend to believe their own interests and judgment on disclosures and as a result of judgment a disclosure level could not be achieved. Hence, it may be the board composition or the board characteristics that determine the disclosure level (Htay, Rashid, Adnan, & Meera, 2012).

On the other hand, a legitimacy theory paves the path to broaden the corporate governance activities and align firms' activities with a kindling interest of wider stakeholders (Shamil, Shaikh, Ho, & Krishnan, 2014). As per the legitimacy theory, corporate legitimacy is crucial for the company's survival. It could be achieved when corporations function within the boundary of socially accepted norms and values. Thus, entities use their voluntary disclosures, including sustainability reporting to showcase their legitimacy to society (Braam et al., 2016).

Performance gap and available resources or slacks can influence the level of activities and initiatives taken on sustainability in a company since the absence of sufficient performances and resources may hinder the enthusiasm on disclosure of sustainability (Arora & Dharwadkar, 2011). On the other hand, when a company has enough resources within the firm, and its performances are higher than expected, that company would not hesitate to report on sustainability. In contrast, a company without enough resources and weak

performance has a drawback in its investments and tends towards sustainability disclosures (Arora & Dharwadkar, 2011). Thus, it is problematic whether the strong board and corporate governance will influence sustainability reporting in the absence or insufficiency of desired performances and resources available (Arora & Dharwadkar, 2011).

According to George (2005), organizational slacks and positive attainment discrepancies make lenient the firm's internal controls and encourage projects where the outcome is uncertain. Excess resources always permit to invest in developing capabilities and thereby secure the survival of the firm. When the firm is equipped with enough resources and its desired performances, no barriers arise from shareholders to move towards several other aspects such as sustainability initiatives (Arora & Dharwadkar, 2011). Thus, sustainability might be affected by the firm's level of performance and resource availability and is worthy of investigation.

Due to the fact that sustainability reporting is not a mandatory requirement for listed companies in Sri Lanka, the board of directors may not give considerable weight to it (Dharmadasa, Gamage, & Herath, 2014). Since stakeholders are very much concerned with sustainability disclosure, an inadequate level of it might reduce public faith and negatively impact the company's image. Moreover, the absence of disclosure on sustainability generates an information asymmetry for stakeholders, which ultimately results in inefficient resource allocation, ultimately harming the economy (Mapparessa, Bakry, Totanan, Mile, & Arumsari, 2017). Furthermore, the researchers observed that there is a dearth of studies in the research area, and the findings of this study would fill the existing empirical gap, especially with the presence of attainment discrepancy and resources as moderators as the moderating impact of it on the association as mentioned earlier has not yet been tested in developing context. Thus, it is very timely and worthy of investigating the influence of the board of directors on sustainability disclosure in the presence of attainment and resources. The study contributes to the extant literature in several means. While many studies considered only the existence of sustainability reporting of corporations, this study comprehensively assessed how companies complied with the G3 Guidelines of the Global Reporting Initiative (GRI) framework when they reported on sustainability.

Furthermore, rather than being limited to a traditional agency theory, the use of multiple theories (behavioral theory of company and legitimacy theory) has brought a broad theoretical viewpoint to the study, enhancing its relevance and importance. Interestingly, the findings of the study would foster the decision-making process of policymakers concerning establishing a strong corporate governance mechanism and cultivating a sustainability reporting culture which is vital to attract capital providers to the corporations. Eventually, in the broader view, the study would facilitate proper resource allocation in the economy and dramatically contribute to the extant literature by filling the research gap observed.

Accordingly, the main research objectives of this study are to identify the levels of sustainability disclosure and governance board characteristics and

investigate the association between board characteristics and sustainability disclosure with the moderating role of attainment discrepancy and slacks.

The remainder of the paper is structured as follows. Section 2 reviews the relevant literature available for the scope. Section 3 presents the methodology used for the study. Section 4 provides the findings followed by discussions in Section 5. Finally, Section 6 concludes the research outcome.

2. LITERATURE REVIEW

2.1. Sustainability reporting, board characteristics, and moderators

American Institute of Certified Public Accountants (2018) stated that “sustainability” is a term that has emerged over time from the “triple bottom line” consideration of 1) economic viability, 2) social responsibility, and 3) environmental responsibility. Although environmental concerns have been focused on frequently, sustainability is a broad concept which consists of three main pillars as mentioned above. Sustainability considers the economic and social setting of doing business, as well as the business processes, models, and behaviors required for a long-term value development, in addition to environmental preservation and natural resource stewardship (AICPA, 2018).

The World Commission on Environment and Development (1987) brings out another concept called sustainable development which has been introduced as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (p. 41). This concept facilitates “sustainability” to grow up and emerge as a strong base. Similarly, in the business perspective, sustainable development or sustainability can be elaborated as a concept as per which organizations should fulfill the needs of their stakeholders, without compromising the ability to meet the necessities of prospective stakeholders (Dyllick & Hockerts, 2002).

United Nations has paid considerable attention to sustainable development by introducing 17 Sustainable Development Goals (SDGs) to the world. In 2015, “Transforming Our World: The 2030 Agenda for Sustainable Development” has been adopted by members of the United Nations which carries these 17 SDGs and calls for immediate action with the ultimate purpose of a better world by the year 2030. Gender equality, no poverty, zero hunger, decent work and economic growth good health and well-being, quality education could be seen among them (United Nations, n.d.).

As we live in the sustainability era, the concept of socially responsible investment (SRI) has become popular among investors and corporations. It can be recognized as one of the benefits derived from the concept of sustainability. SRI is about investing in companies involved in environmental sustainability, social justice, and well-being rather than investing in firms that produce and sell harmful products to society (Hellsten & Mallin, 2006). With the awareness of sustainability, many investors are attracted to the companies which make

an impact on the environment and society by their sustainable strategies (Hellsten & Mallin, 2006).

The World Commission on Environment and Development (1987) considered sustainability reporting to be an investment strategy exploring best ways to accomplish and balance the needs of current and potential stakeholders. This involves achieving short-term competitive advantages and goals while protecting the natural and human resources for the future. Sustainability reporting forms a dialogue between the entity and the stakeholders as it implies the commitment of corporations towards society (Gray, Javad, Power, & Sinclair, 2001). This is one of the major ways of increasing the trustworthiness among capital providers, suppliers, consumers, etc. and thereby improving the positioning in the market (Panjaitan, 2017).

According to Jensen and Meckling (1976), directors play a major role in sustaining the relationship between management and shareholders in the midst of agency problems. Directors, on the other hand, are in charge of overseeing top management’s performance and spontaneously they become the central internal control mechanism for monitoring and supervising managers (Jensen & Meckling, 1976). The Committee on the Financial Aspects of Corporate Governance (1992) mentioned that, “Boards of directors are responsible for the governance of their companies” which implies that the boards of directors are the pilots of corporate governance mechanism (p. 14). Moreover, “The responsibilities of the board include setting the company’s strategic aims, providing the leadership to put them into effect, supervising the management of the business and reporting to shareholders on their stewardship” (The Committee on the Financial Aspects of Corporate Governance p. 14). On the other hand, they are the main governing body who is taking the responsibility for protecting the interests of different stakeholders in order to reduce conflicts among them through disseminating information in a responsible way (Richardson & Welker, 2001). Among responsibilities of directors, setting strategic aims, directing and leadership, supervising the management, and reporting to shareholders about the business are key elements (The Committee on the Financial Aspects of Corporate Governance, 1992). According to Oba and Fodio (2012), disclosing environmental information is a part of the corporate governance of an organization. The level of voluntary disclosure may be influenced by the board of directors since they offered the power of directing and taking decisions relevant to organizations on behalf of the shareholders. Hence, decisions to provide or not to provide information depend on the factors such as board characteristics (Htay et al., 2012). According to Gul and Leung (2004), corporate governance strongly affects the dissemination of information to stakeholders, and the board of directors is the main actor in it who is accountable for disclosures of organizations. Since the board of directors acts the main role in corporate governance and possesses considerable power on disclosures of the organization, it is worthy to research the relationship between characteristics of the board and the disclosure level of sustainability.

The performance of a company is important as a very basic necessity for the survival of the company. There are firms that perform less than their industry does as well as more than the industry averages. Firms that perform less than the industry average try to reach the industry average and firms that perform more than the industry averages try to enhance their past performances (Bromiley, 1991). This concept is developed and fine-tuned by Lant (1992), as “attainment discrepancy” where attainment denotes the performance achievement and the discrepancy denotes the gap.

When the actual performance level of a company is higher than the expected level, shareholders have great trust in the management’s actions and delegate more power to them for decision-making on the allocation of resources (Bromiley, 1991). On the other hand, when there is a negative attainment discrepancy: where the actual level of performance is less than the expected one, management’s power on decision-making will be limited (Bromiley, 1991). According to Arora and Dharwadkar (2011), management has higher discretion, in their decisions of allocation of resources on sustainability or corporate social activities when a company enjoys a positive attainment discrepancy than the company that suffers from negative attainment discrepancy. Moreover, insufficient performances compel managers to cut down resources for corporate social activities and pay more attention to performance improvements first (Arora & Dharwadkar, 2011). It is obvious to give first priority to increase performances than other activities in the case of poor performances.

Organizational slacks are defined as “potentially utilizable resources that can be diverted or redeployed for the achievement of organizational goals” (George, 2005, p. 661). In other words, slacks are basically the resource available in the corporation which can be employed to achieve organizational desired objectives. Absence of the adequate level of resources might hinder the accomplishments of goals in an expected manner. As per George (2005), these can be different in types (financial capital and social capital) and form (discretionary slacks or non-discretionary slacks). Resources act as stimulation for proactive strategic choices and are utilized to build capabilities for the organization. Most importantly, slacks act in the business as a buffer in periods of economic distresses on behalf of the organization (George, 2005). According to Cyert and March (1963), slacks give an opportunity for managers to appease their political coalitions and personal agendas. Singh (1986) separated slacks into two categories: 1) absorbed slack that is difficult to redeploy, and 2) unabsorbed slack that is easier to redeploy. Bromiley (1991) has categorized slacks into three forms in his study as available slack, recoverable slack, and potential slack. It is argued that high discretion slacks (uncommitted liquid resources) always provide high discretion to management in taking decisions on voluntary disclosures whereas low discretion slacks (absorbed cost) are hard to recover, thus, it does not have much influential power on management’s discretion (George, 2005).

2.2. Board characteristics and level of sustainability disclosure

According to Frias-Aceituno, Rodriguez-Ariza, and Garcia-Sanchez (2013), board size and activities are significantly correlated with the integrated corporate social reporting where it shows the significance of monitoring by the board of directors on corporate reporting. Allegrini and Greco (2013) contributed to the literature by finding that there is a significant positive relationship between the larger board and voluntary disclosures. This result indicated that large boards show greater transparency for outside shareholders (Allegrini & Greco, 2013). Al-Shaer and Zaman (2016) found that board size shows a significant positive relationship with sustainability disclosures and emphasized the evidence of large boards affecting the quality of sustainability reporting.

It is mentioned that non-executive directors restrict the opportunistic behavior of the CEO and control the board (Jensen & Meckling, 1976). Moreover, these directors will enhance the quality of information disclosing and minimizing the benefits gained from some information withheld (Jensen & Meckling, 1976). Ienciu, Popa, and Ienciu (2012) found that the impact of independent directors measured as a ratio compared to a total number of boards of directors on sustainability disclosure is considerable and their role enhances the transparency of environmental information and objectivity. Similarly, Herda, Taylor, and Winterbotham (2012) found a substantial positive association between independent directors and sustainability reporting among the largest 500 companies in the USA. Moreover, Celentano, Lepore, Pisano, D’Amore, and Alvino (2020), who performed a study using 119 Italian non-financial corporations brought the finding that board independence is an influential factor in determining the level of CSR. Fernandes, Bornia, and Nakamura (2019) ended up with similar results by finding out that board independence can administrate and encourage environmental disclosures in listed Brazilian corporations. However, the proposition of non-executive directors appears to be insignificant in explaining the impact of board characteristics on sustainability disclosure level in the study done by Al-Shammari and Al-Sultan (2010) using 170 public listed companies in Kuwait while Osemeke, Osemeke, and Okere (2020) reported a positive correlation between non-executive directors and the level of CSR whereas executive directors showcase a significant negative influence on CSR activities of the firms.

There are two viewpoints on a number of board meetings. One is that a more frequent number of board meetings may create more power to board members, and it affects adversely on performances (Vafeas, 1999) and on the other hand, a more frequent number of meetings would support more strong internal control systems (Lipton & Lorsch, 1992). Al-Shaer and Zaman (2016) found a positive and significant relationship between the number of board meetings held and the level of sustainability disclosure. The same findings were confirmed by Laksmana (2008) by finding a positive relationship between the number of board meetings and the level of voluntary discourse.

In dual leadership, one individual acts as both the chairman and the CEO that creates unified leadership (Al-Shammari & Al-Sultan, 2010) and threatens the control of the board and this may lead to management entrenchment. Moreover, a combination of these functions may adversely affect the effectiveness of the board in terms of control (Fathi, 2013). Al-Shammari and Al-Sultan (2010), Chau and Grey (2010) found a positive relationship between a dual role and voluntary disclosure where as Haniffa and Cooke (2002) found no relationship. Ho and Wong (2001) and Gul and Leung (2004) found that there is a significant relationship between the level of voluntary disclosures and the separation of roles of the CEO and the chairman.

Bear, Rahman, and Post (2010) have expressed that gender diversity is precious to a board of any company since it always enables understanding of issues encountered and dealing with them effectively and especially motivating others for more CSR activities. It is said that women are more capable of integrating the interest of different stakeholders and women leaders are more stakeholder-focused than men, even at the expense of short-term profits (Brammer Millington, & Pavelin, 2007). Bear et al. (2010) and Zhang (2012) found a positive association with women on board and the level of sustainability reporting in their studies. Glass, Cook, and Ingersoll, (2016) found a slight positive correlation between women on board and the environmental initiatives taken by companies. Oba and Fodio (2012) found a neutral association for the presence of female directors in the Nigerian context.

Empirical findings of Madi, Ishak, and Manaf (2014) discovered that the size of the audit committee has a positive and noteworthy impact on the level of voluntary disclosures in Malaysia, and it was found to be an important factor in enhancing voluntary disclosures and reducing information asymmetry. This finding is further supported by Appuhami and Tashkor (2017) who found a positive relationship between the size of the audit committee and environmental disclosures. However, Ramadhan (2014) found a negative correlation between audit committee size and voluntary disclosures among listed companies in Bahrain.

Karamanou and Vafeas (2005) found that the occurrence of audit committee meetings is positively associated with the earnings forecast of companies. Providing contrast results, De Silva, Manawaduge, and Ajward (2017) stated that there is no significant impact from audit committee activities in terms of the number of meetings. Allegrini and Greco (2013) stated that independent directors in audit committees have a more influential power to reduce the management's withheld of information from shareholders due to the fact that they are free from an economic or personal relationship with the company and more objective in terms of taking decisions. Madi, Ishak, and Manaf (2014) found that there is a positive impact from independent directors in audit committee towards voluntary disclosure level among 146 Malaysian listed firms for the year 2009. Mangena and Tauringana (2007) found that audit committee independence is positively associated with voluntary disclosure while McMullen and Raghunandan (1996) also concluded with similar results.

It is commonly argued that long-tenured CEOs do not pay enough attention to strategic changes or new waves in the industry while newly joined CEOs are more vibrant and willing to do experiments and also open-minded. Lewis, Walls, and Dowell (2014) and Gabarro (1987) have presented interesting findings in their study that most of the CEOs take major decisions in their first two and half years after the appointment but not after that. According to Ruigrok, Peck, and Tacheva (2007) board diversity in terms of characteristics, qualifications and affiliations would lead to high interactions with board memberships and always try to find useful board management. Senanayake and Ajward (2017) operationalized the skill base of the board of directors as the number of directors with MBA or higher education and professional qualifications linked to Business, Accounting, and Finance as a fraction of the total number of members on the board for the firm and authors found that there is a significant positive relationship between skills of the board of directors and financial performances (Senanayake & Ajward, 2017).

The existence of a nomination committee could affect the directors' independence by selecting a few "grey" directors (Vafeas, 1999) which may affect to a voluntary disclosure level of the company. According to Allegrini and Greco (2013), the existence of a nomination committee always acts as a monitoring device and thereby increases the board's effectiveness. The compensation or remuneration committee contributes to the governance of the company and control of the top management, thereby can influence the motivation of the voluntary disclosure level (Allegrini & Greco, 2013). Accordingly, above mentioned 13 board characteristics are expected to affect the level of sustainability disclosure individually and thus it is hypothesized that:

H1: Board size is positively related to the level of sustainability disclosure.

H2: Board independence is positively related to the level of sustainability disclosure.

H3: Board meetings are positively related to the level of sustainability disclosure.

H4: Dual leadership is positively related to the level of sustainability disclosure.

H5: Women on board are positively related to the level of sustainability disclosure.

H6: The existence of the audit committee is positively related to the level of sustainability disclosure.

H7: Audit committee size is positively related to the level of sustainability disclosures.

H8: The frequency of audit committee meetings are positively related to the level of sustainability disclosure.

H9: There is a positive relationship between independence of audit committee and sustainability disclosures.

H10: Short CEO tenure is positively related to the level of sustainability disclosure.

H11: The total skill base of directors is positively related to the level of sustainability disclosure.

H12: The existence of a nomination committee is positively related to the level of sustainability disclosure.

H13: The existence of a remuneration committee is positively related to the level of sustainability disclosure.

2.3. Moderating effect of attainment and slacks over board characteristics and sustainability reporting

Ho and Taylor (2007) stated that more liquid companies tend to report more on sustainability to meet their short-term financial obligations. On the other hand, it may be an expression of confidence in solvency and possible prospects (Oyelere, Laswad, & Fisher, 2003). No significant impact of cash resources has been identified on sustainability reporting according to the study done by Lourenço, Callen, Branco, and Curto (2013) which has taken place with Brazilian companies. According to Uyar and Kuzev (2014), free cash flow (measured by free cash flow per share) is not statistically significant. In other words, they do not influence the adoption of sustainability reporting practices. According to Yang, Xu, and Lu (2012), listed companies' unabsorbed slacks or resources are positively connected with corporate social performance while absorbed slacks are negatively associated with corporate social performance among Chinese companies. This finding is important since it provides some hints and directions for a relationship between organizational slacks and sustainability disclosures. Although, there are various categories of slacks available and defined in various studies as stated previously, potential slacks and available slacks as a proxy for slack used in the study. This selection is in line with the studies of Amato and Amato (2007), Graves and Waddock (1994), and Arora and Dharwadkar (2011) who have used interesting dimensions for organizational slacks as potential slacks and available slacks where potential slacks refer to firm's capacity in quickly raising cash which is measured by debt-to-equity ratio. Most importantly, the authors have discovered that slacks impose a positive and significant moderating effect on the relationship between corporate governance and CSR.

When a firm increases with its economic performance, the company gets less pressure from

its financial providers and hence it paves the path to pay more attention to investment in social well-being activities. This argument can be applied to attainment discrepancy as well. When the expected performance level is not achieved, any company would not tend to sustainability activities ignoring achieving the expected performance level first. Arora and Dharwadkar (2011) have provided more insights into attainment discrepancy as a gap of actual and desired performances of a company. In their study, they used ROA as an accounting measure of performance and the market-to-book value ratio as the market-based measurement for performance (Arora & Dharwadkar, 2011). Finally, the same ratios are calculated for each industry in which the company is currently operating in order to obtain industry averages and calculate the difference between organization's performance and industry averages. Arora and Dharwadkar (2011) have found that there is a positive and significant moderating effect on the association between corporate governance and sustainability disclosures. Thus, the following hypotheses have been derived for moderating variables.

H14: The interaction effect of attainment discrepancy on board characteristics is associated with the level of sustainability disclosure.

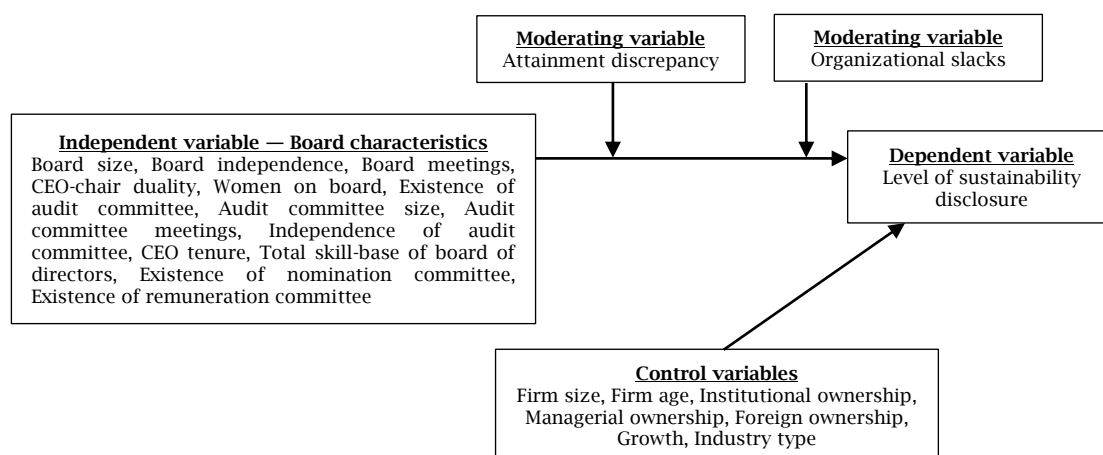
H15: The interaction effect of organizational slack on board characteristics is associated with the level of sustainability disclosure.

3. METHODOLOGY

3.1. Conceptual framework

After a rigorous literature survey, 13 main board characteristics (independent variables) and 7 control variables were identified. Hypothetical relationships between the above-mentioned variables are drafted in the conceptual framework and are depicted in Figure 1 below.

Figure 1. Conceptual diagram



Source: Authors' elaboration.

3.2. Research approach

Even though few researchers adopted a qualitative approach in conducting similar studies, the quantitative methodology is the most popular

among the majority of the research community who have conducted studies in corporate governance (Haniffa & Cooke, 2005; Allegrini & Greco, 2013). In order to meet the study's key research objectives, it was chosen to employ a quantitative approach over a qualitative approach for the study since

the study primarily focuses on investigating the relationship between board-related corporate governance tools and sustainability disclosures (Bear et al., 2010; Al-Shammari & Al-Sultan, 2010; Wiseman, 1982; Oba & Fodio, 2012).

3.3. Source of data collection

Data was obtained from secondary sources. Audited annual reports were employed as the data source since they are a more structured and credible way of presenting information to users (Fathi, 2013).

3.4. Population and sample

The study's population consists of all listed non-financial firms that were registered as of March 31, 2020, and represent 16 industries. Due to their highly regulated nature of businesses and differences in financial reporting, banks, finance,

insurance companies, and investment trusts were excluded from the sample. Further, upon mismatched financial periods (i.e., entities that do not conclude their financial year in March) and data unavailability, 48 companies were eliminated from the sample, resulting in a final sample of 174 companies for the 2016–2020 timeframe. As a result, for data analysis, the study secured 696 (174x4) firm-year observations.

3.5. Operationalization

Thirteen (13) board characteristics as independent variables, two (2) moderating variables, and seven (7) control variables act as predictor variables for the dependent variable (*level of sustainability disclosure*). This section provides the way of measuring these variables selected in the study and presents their measurements in detail in Table 1.

Table 1. Operationalization

Variable	Abbreviation	Nature	Measure techniques
Sustainability disclosure level	($SD_{i,t}$)	Dependent	Sustainability disclosure index
Board size	($BSIZE_{i,t}$)	Independent	A number of directors on the board for the firm <i>i</i> and period <i>t</i> .
Board independence	($BODIND_{i,t}$)	Independent	The proportion of independent non-executive directors on the board for firm <i>i</i> and period <i>t</i> .
Board activities	($BODMEETING_{i,t}$)	Independent	A number of board meetings held per year for firm <i>i</i> and period <i>t</i> .
Ceo duality	($DUAL_{i,t}$)	Independent	Coded as '1', if CEO and chairman roles are separated, and '0' otherwise, for firm <i>i</i> and period <i>t</i> .
Women on board	($WOMEN_{i,t}$)	Independent	The proportion of female directors on board for firm <i>i</i> and period <i>t</i> .
Existence of audit committee	($ACEXST_{i,t}$)	Independent	Coded as '1', if audit committee exists and '0' otherwise, for firm <i>i</i> and period <i>t</i> .
Audit committee size	($ACSIZE_{i,t}$)	Independent	A total number of audit committee members for the firm <i>i</i> and period <i>t</i> .
Audit committee activities	($ACMEET_{i,t}$)	Independent	A number of audit committee meetings held per year for the firm <i>i</i> and period <i>t</i> .
Independence of audit committee	($ACIND_{i,t}$)	Independent	The proportion of independent directors on the audit committee to the total audit members for firm <i>i</i> and period <i>t</i> .
Short CEO tenure	($TENURE_{i,t}$)	Independent	A new CEO as '1' if the CEO had been in the firm for less than three years and '0' otherwise.
Total skill base of the board of directors	($EXPERTISE_{i,t}$)	Independent	A number of directors with MBA or higher qualifications and professional qualifications related to Business, Accounting and Finance on the board for the firm <i>i</i> and period <i>t</i> .
Existence of nomination committee	($NOMIN_{i,t}$)	Independent	Coded as '1', if nomination committee exists and '0' otherwise, for firm <i>i</i> and period <i>t</i> .
Existence of remuneration committee	($REMUNR_{i,t}$)	Independent	Coded as '1', if remuneration committee exists and '0' otherwise, for firm <i>i</i> and period <i>t</i> .
Attainment discrepancy — operational performance	($ADROA_{i,t}$)	Moderator	ROA of the firm - Average ROA of industry <i>i</i> for the period <i>t</i> .
Financial performance	($ADMBR_{i,t}$)	Moderator	MBR of the firm - Average MBR of industry <i>i</i> for the period <i>t</i> .
Organizational slacks — available slacks	($SLACKTRCASH_{i,t}$)	Moderator	Log transform of cash and trade accounts receivables of firm <i>i</i> for the period <i>t</i> .
Potential slacks	($SLACKDE_{i,t}$)	Moderator	$\frac{\text{Total debt}}{\text{Total equity}}$
Firm size	($FIRMSIZE_{i,t}$)	Control variable	Natural logarithm of total assets for the firm <i>i</i> at the end of the period <i>t</i> .
Firm age	($AGE_{i,t}$)	Control variable	A number of years from incorporation for the firm <i>i</i> and until the end of the period <i>t</i> .
Institutional ownership	($INSTOWNR_{i,t}$)	Control variable	Percentage of shares held by institutional shareholders for the firm <i>i</i> at the end of the period <i>t</i> .
Managerial ownership	($MANAGEOWNR_{i,t}$)	Control variable	Percentage of shares held by institutional shareholders for the firm <i>i</i> at the end of the period <i>t</i> .
Foreign ownership	($FRNGOWNR_{i,t}$)	Control variable	Percentage of shares owned by foreigners to the total number of shares issued for the firm <i>i</i> at the end of the period <i>t</i> .
Growth	($GROWTH_{i,t}$)	Control variable	$\frac{\text{Sales}_{i,t} - \text{Sales}_{i,t-1}}{\text{Sales}_{i,t-1}}$
Industry	Dummy variable	Control variable	Al-Shaer and Zaman (2016)

Source: Authors' elaboration.

It was determined to employ the content analysis approach using the GRI framework as the basis after reviewing prior research on the operationalization of the dependent variable, i.e., sustainability disclosure (denoted as $SD_{i,t}$). It is said that this GRI framework is the one of most detailed and successful frameworks that prevails among other similar indexes which cover a considerable area of sustainability by its indicators (Ortiz & Martin, 2014). According to them, the GRI framework provides a global harmonized model for sustainability reporting, and organizations that adopted these guidelines can reap advantage better comparing their results each year. With insights of literature, few researches like Ortiz and Martin (2014), Bhatia and Tuli (2017), Ho and Taylor (2017), Michelon and Parbonetti (2012) have used measurements based on the GRI framework for their studies due to its reliability and uniformity. Taking the above facts into consideration, the universally accepted GRI framework is used in the study as the measuring index.

The level of sustainability is measured based on a content analysis performed using the GRI framework. Altogether, 79 performance indicators classified under Economic, Environment, and Social dimensions presented in the G3 Guidelines of the GRI framework were used to measure the level

of sustainability disclosure. The scale is adopted from Al-Tuwaijri, Christensen, and Hughes (2004) and used in the content scoring; a maximum of 3 points was given for detailed quantitative disclosures related to indicators, a score of 2 was assigned for non-quantitative but specific information related to indicators, and the lowest value of 1 was given for general qualitative disclosures, and finally, a score of 0 was assigned for firms which have not disclosed any information related to the relevant indicators. Each company was assessed over 4 years using 79 indicators of the G3 Guidelines of the GRI framework individually and was awarded a score.

4. DATA ANALYSIS AND PRESENTATION

To begin, the data was cleaned and screened to eliminate missing values and outliers. Summary statistics for all of the variables in the study were calculated after multiple diagnostic tests. Bivariate correlation and multivariate regression analysis were used to investigate the relationship between board features and the extent of sustainability disclosure.

Assuming that all hypothetical relationships are linear, the estimated model to be tested is specified below:

$$SD_{i,t} = \alpha + \beta_1 IndependentVar_{i,t} + \beta_2 ModeratingVar_{i,t} + \beta_3 (IndependentVar_{i,t} \times ModeratingVar_{i,t}) + \beta_4 ControlVar_{i,t} + \varepsilon_{i,t} \quad (1)$$

4.1. Descriptive statistics

Summary statistics act as the main analytical strategy to achieve the objective of measuring the level of sustainability reporting, board

characteristics, and moderating variables. Thus, Table 2 presents summary statistics of the dependent variable, independent variables, moderating variables, and control variables.

Table 2. Summary statistics

Variable*	N**	Mean	Median	Std. Dev.	Skewness	Kurtosis	Min	Max
Dependent variable								
$SD_{i,t}$	696	0.352	0.071	0.443	1.214	0.093	0.025	1.329
Independent variables								
$BSize_{i,t}$	696	8.207	8	2.184	0.343	0.090	3	15
$BODIND_{i,t}$	696	0.668	0.667	.196	-0.242	-0.216	0.222	1
$BODMEETING_{i,t}$	696	5.066	4	2.691	1.829	3.717	2	14
$DUAL_{i,t}$	696	0.455	0	0.814	6.691	67.574	0	1
$WOMEN_{i,t}$	696	0.069	0	0.105	1.988	5.213	0	0.556
$ACEXST_{i,t}$	696	0.993	1	0.085	-11.69	135.185	1	1
$ACSIZE_{i,t}$	696	3.139	3	0.797	0.104	1.860	1	5
$ACMEET_{i,t}$	696	4.062	4	1.627	2.116	11.028	1	12
$ACIND_{i,t}$	696	0.814	0.75	0.182	-0.362	-0.428	0.333	1
$TENURE_{i,t}$	696	0.023	0.00	0.15	6.380	38.810	0	1
$EXPERTISE_{i,t}$	696	4.058	4	2.411	0.515	-0.552	0	10
$NOMIN_{i,t}$	696	0.577	1	0.494	-0.311	-1.909	0	1
$REMUNR_{i,t}$	696	0.987	1	0.113	-8.615	72.433	0	1
Moderating variables								
$ADROA_{i,t}$	696	0.009	0.0049	0.054	0.320	0.970	-0.068	0.104
$ADMBR_{i,t}$	696	-2.07	-1.07	3.158	-1.103	-0.172	-8.461	1.274
$SLACKTRCASH_{i,t}$	696	18.54	18.716	1.84	-0.471	-0.690	15.085	21.118
$SLACKDE_{i,t}$	696	0.629	0.446	0.57	0.830	-0.548	0.029	1.78
Control variables								
$FIRMSIZE_{i,t}$	696	21.69	21.78	1.16	-0.262	-0.960	19.662	23.388
$AGE_{i,t}$	696	45.61	35	29.36	1.055	-0.203	16	106
$INSTOWNR_{i,t}$	696	0.692	0.8189	0.285	-1.286	-1.243	0.158	0.947
$MANAGEOWNR_{i,t}$	696	0.049	0.0019	0.087	2.719	1.397	0	0.265
$FRNGOWNR_{i,t}$	696	0.068	0.0053	0.121	1.758	1.490	0	0.37
$GROWTH_{i,t}$	696	0.063	0.0522	0.177	0.111	-0.557	-0.24	0.382

Notes: * Definitions of these variables are indicated in Table 1. ** For the sample of 174 firms.

Sustainability reporting level is obtained on an average basis over a total basis. The average sustainability score ($SD_{i,t}$) of public listed corporations based on the GRI framework is only 0.352 and the median is 7.1%. This indicates that as an average, the sustainability reporting level among listed corporations is at a low level among listed non-finance companies in Sri Lanka. The sustainability reporting level varies from 0 to 1.329, which indicates a vast variation in reporting the level among listed companies. (Standard deviation = 0.443). According to statistics, some companies received 0 scores for sustainability in terms of the GRI framework in Sri Lanka.

Approximately 99% of listed companies in Sri Lanka have a remuneration committee as a subcommittee of the board. Based on the fact that the audit committee and remuneration committee exist in almost all the companies (average equals 100% and 99% respectively), these two board characteristics would not be representative for findings to be obtained in the research. Thus, those two variables are not used for further analysis.

The level of sustainability reporting has been analyzed and compared in different ways as further

analysis. First, average values for sustainability reporting over the sample period are presented in Table 3.

Table 3. Level of sustainability reporting by year

Year	Mean	Median	Skewness	Kurtosis
2016-2017	0.332	0.063	1.314	3.37
2017-2018	0.342	0.057	1.267	3.275
2018-2019	0.361	0.089	1.166	2.974
2019-2020	0.371	0.095	1.11	2.798
Overall	0.352	0.071	1.212	3.089

Source: Authors' elaboration.

Although the average value is small, there is an upward and positive trend in reporting on sustainability. Starting from 0.063 in 2016, the average value has decreased to 0.056 in the following year. However afterward it increases up to 0.094. With the considerable improvement achieved, it can be concluded that Sri Lanka is in a positive direction of paying attention to non-voluntary disclosures such as sustainability reporting.

Apart from that, the mean value for selected 16 industries has been summarized in Table 4.

Table 4. Level of sustainability reporting by industry

No.	Sector	Mean	Median
1	Diversified Holdings	0.352	0.196
2	Footwear and Textile	0.468	0.050
3	Construction	0.740	0.803
4	Healthcare	0.673	0.518
5	Power and Energy	0.740	0.924
6	Chemical and Pharmaceuticals	0.109	0.044
7	Food and Beverage	0.484	0.544
8	Manufacturing	0.462	0.512
9	Hotels and Travels	0.209	0.0379
10	Land and Property	0.055	0.253
11	Plantations	0.443	0.240
12	Trading	0.342	0.088
13	Services	0.217	0.0379
14	Motors	0.273	0.0379
15	Oil Palms	0.294	0.0379
16	Stores and Services	0.056	0.0379

Source: Authors' elaboration.

In the selected sample, the highest level of sustainability reporting is recorded by Power and Energy sector and it is 0.924. The second highest value is obtained by the Construction sector which recorded an average of 0.803. Compared to other industries, these two are the most environmentally sensitive industries in Sri Lanka. In terms of the level of sustainability reporting, the third-highest place has been obtained by the Food and Beverage industry which is 0.544.

4.2. Correlation analysis

A correlation matrix was used to test the direction and magnitude of the relationship between variables. Correlation analysis is considered a bivariate analysis where the association of two variables is tested.

Before running Pearson's correlation, basic assumptions were tested and there it is observed that the dependent variable is not normal, and variables are not linearly related in the study. Since basic assumptions for Pearson's correlation are violated, the study focuses on a non-parametric test of Spearman's rank correlation where the fulfillment of aforesaid assumptions is unnecessary. Spearman's correlation coefficient measures the strength of a monotonic relationship between paired data. If the coefficient is closer to +1 (above 0.8), it can be concluded that a stronger monotonic relationship exists while a below 0.2 correlation expresses a weak monotonic relationship (Hair, Black, Babin, & Anderson, 2014). The results obtained for the bivariate analysis are shown in Table 5.

Table 5. Correlation analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1. $SD_{i,t}$	1.000																						
2. $BSIZE_{i,t}$	0.231**	1.000																					
3. $BODIND_{i,t}$	-0.014	-0.001	1.000																				
4. $BODMEETING_{i,t}$	0.208**	0.192**	0.075*	1.000																			
5. $DUAL_{i,t}$	0.061	0.094**	-0.041	-0.073*	1.000																		
6. $WOMEN_{i,t}$	-0.117**	-0.108**	-0.231**	-0.025	-0.003	1.000																	
7. $ACSIZE_{i,t}$	0.190**	0.267**	0.104**	0.168**	0.094**	-0.070*	1.000																
8. $ACMEET_{i,t}$	0.197**	0.191**	0.127**	0.308**	-0.028	-0.096**	0.162**	1.000															
9. $ACIND_{i,t}$	-0.028	0.126**	-0.035	0.051	-0.028	-0.043	-0.200**	0.119**	1.000														
10. $TENURE_{i,t}$	-0.049	0.017	0.111**	0.028	-0.011	0.023	0.086*	-0.047	0.002	1.000													
11. $EXPERTISE_{i,t}$	0.178**	0.318**	0.340**	0.290**	-0.166**	-0.227*	0.160*	0.343**	0.266**	-0.056	1.000												
12. $NOMIN_{i,t}$	0.224**	0.122**	0.105**	0.300**	-0.142**	-0.076*	0.155**	0.132**	0.266**	0.015	0.612**	1.000											
13. $ADROA_{i,t}$	0.156**	0.089**	0.038	0.058	-0.020	-0.046	0.103**	0.021	0.020	0.002	0.036	0.133**	1.000										
14. $ADMBR_{i,t}$	0.105**	-0.024	0.058	0.145**	-0.027	-0.203**	0.046	0.040	0.006	-0.162**	0.270**	0.201**	0.182**	1.000									
15. $SLACKTRCASH_{i,t}$	0.350**	0.218**	-0.022	0.284**	-0.038	-0.010	0.110**	0.116**	0.019	-0.042	0.203**	0.347**	0.226**	0.013	1.000								
16. $SLACKDE_{i,t}$	0.134**	0.043	0.058	0.231**	0.039	-0.176**	0.145**	0.169**	-0.016	-0.006	0.111**	0.036	-0.138**	0.188**	0.215**	1.000							
17. $FIRMSIZE_{i,t}$	0.478**	0.252**	-0.097**	0.214**	0.015	-0.002	0.190**	0.117**	0.025	-0.082*	0.172**	0.251**	0.128**	0.018	0.529**	0.118**	1.000						
18. $AGE_{i,t}$	-0.051	0.039	-0.028	-0.056	-0.064*	0.046	0.019	-0.039	0.042	-0.021	0.039	-0.003	0.039	0.038	-0.030	-0.149**	0.111**	1.000					
19. $INSTOWNR_{i,t}$	0.082*	0.033	0.040	-0.113**	-0.104**	-0.192*	0.065*	-0.095**	-0.051	0.069*	-0.043	0.061	0.122**	-0.026	-0.019	-0.157**	0.236**	0.018	1.000				
20. $MANAGEOWNR_{i,t}$	-0.045	0.023	-0.196**	0.058	0.031	0.054	-0.098**	0.021	0.158**	0.014	0.057	0.025	-0.049	0.059	-0.047	0.056	-0.139**	0.024	-0.361**	1.000			
21. $FRNGOWNR_{i,t}$	0.308**	0.123**	-0.137**	0.025	0.013	-0.030	0.217**	0.112**	-0.041	-0.029	0.142**	0.259**	0.047	0.180**	0.186**	-0.096**	0.402**	0.043	0.074*	-0.032	1.000		
22. $GROWTH_{i,t}$	0.017	0.035	0.045	0.077*	-0.003	0.013	0.066*	0.036	0.035	0.010	0.068*	0.109**	0.175**	-0.013	0.141**	0.111**	-0.022	-0.050	-0.050	0.095**	0.022	1.000	

Notes: * The definitions of the variables given in Table 1. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

According to Spearman correlation analysis, board size and level of sustainability reporting have a weak positive but significant association (coefficient: 0.231), while board meetings have a substantial relationship with sustainability disclosures (coefficient: 0.208). Surprisingly, considerable negative relation was observed between the proportion of female directors and the level of sustainability disclosure (coefficient: -0.117). The size of the audit committee and its number of meetings have significant positive but weak relationships. Short CEO tenure and the level of sustainability reporting showcase an insignificant relationship while expertise knowledge on business, accounting, and finance presents a weak but significant positive correlation. The presence of a nomination committee showcases a significant positive relationship with sustainability reporting (0.224) in the correlation analysis. Accordingly, *H1*, *H3*, *H5*, *H7*, *H8*, and *H10* (refer to Section 2 for hypotheses developed) are supported by correlation analysis while all the other hypotheses (*H2*, *H4*, *H6*, *H9*, *H11*, *H12*, and *H13*) are unsupported. All the moderating variables show significant but weak associations with the dependent variable. The coefficient of correlation which is similar or more than 0.8 is not recorded between any variable in the analysis. Therefore, it is visible that the issue of multicollinearity does not exist among the given variables.

4.3. Multivariate regression analysis

Apart from correlation analysis, the other analytical tool used to evaluate the association between board

characteristics and sustainability reporting is a multivariate regression analysis. Since the data set was not suitable for linear regression (it does not show a normal pattern in data that suffers from heteroscedasticity), dependent variable ($SD_{i,t}$) transformed to an ordinal variable and then make it suitable to run an ordered logistic regression where it examines the causal effect of independent variables, control variables together with interaction effects of moderating variables on the dependent variable. Further, as an additional test, panel regression was performed and results were obtained for both tests presented in Table 6.

Findings of the ordered logistic regression analysis depict that board size ($p < 0.1$) has a strong influence on the level of sustainability disclosures, whereas women representation ($p < 0.01$) has an unexpectedly negative relationship with the degree of sustainability discourse. Another board attribute that has a substantial impact on sustainability reporting is the size of the audit committee ($p < 0.01$). Thereby, *H1*: Board size is positively related with the level of sustainability disclosure; *H7*: Audit committee size is positively related with the level of sustainability disclosures are supported with obtained results while *H5*: Women on board is positively related with the level of sustainability disclosure is not supported as it has a negatively significant impact on the dependent variable. Moreover, all the other hypotheses (*H2*, *H3*, *H4*, *H8*, *H9*, *H10*, *H11*, *H12*, and *H13*) are not supported by the results of both regression models.

Table 6. Multivariate regression analysis (Part 1)

Dependent variable: $SD_{i,t}^a$	Ordered logistic regression			Panel regression analysis		
	Coefficient	Std. Err.	VIF	Coefficient	Std. Err.	VIF
Constant — 1	24.465	2.354		-1.196	1.376	
2	25.080	2.362				
3	25.275	2.365				
4	25.883	2.376				
5	26.667	2.389				
6	27.237	2.397				
Independent variables						
$B_{SIZE}_{i,t}$	0.078*	0.042	1.655			1.655
$B_{ODIND}_{i,t}$	-0.370	0.512	1.792			1.792
$B_{ODMEETING}_{i,t}$	0.007	0.033	1.521			1.521
$DUAL_{i,t}$	0.159	0.113	1.281			1.281
$WOMEN_{i,t}$	-2.829***	0.953	1.629			1.457
$ACSIZ_{i,t}$	0.428***	0.124	1.457			1.468
$ACMEET_{i,t}$	0.065	0.051	1.468			1.526
$ACIND_{i,t}$	-0.139	0.540	1.526			1.144
$TENURE_{i,t}$	0.042	0.513	1.144			4.239
$EXPERTISE_{i,t}$	0.035	0.061	4.239			3.391
$NOMIN_{i,t}$	-0.019	0.300	3.391			2.341
Moderating variables						
$ADROA_{i,t}$	1.209	5.020	1.529	0.075	0.260	1.529
$ADMBR_{i,t}$	0.073	0.025	8.183	0.002	0.013	8.183
$SLACKTRCASH_{i,t}$	0.099*	0.048	2.193	0.021	0.014	2.193
$SLACKDE_{i,t}$	-0.428*	0.079	1.688	-0.044	0.046	1.688
Moderating effect of slack cash						
$DUAL \times SLACKTRCASH$				0.055***	0.014	
$ACIND \times SLACKTRCASH$				0.037***	0.010	
$TENURE \times SLACKTRCASH$				-0.011**	0.005	

Table 6. Multivariate regression analysis (Part 2)

Control variables	Ordered logistic regression			Panel regression analysis		
	Coefficient	Std. Err.	VIF	Coefficient	Std. Err.	VIF
FIRMSIZE _{i,t}	0.969***	0.114	2.8	-0.169	-2.39	2.8
AGE _{i,t}	-0.005	0.004	1.857	0.054***	5.94	1.857
INSTOWNR _{i,t}	-0.368	0.345	1.732	0.455	-4.05	1.732
MANAGEOWNR _{i,t}	-0.494	1.030	1.46	0.509	-0.39	1.46
FRNGOWNR _{i,t}	0.537	0.787	1.75	0.244	0.24	1.75
GROWTH _{i,t}	0.062	0.446	1.127	0.050	-1.08	1.127
Industry dummies						
Footwear	0.817	0.647	1.349			
Construction	1.114*	0.596	1.442			
Healthcare	1.393***	0.503	1.515			
Power and Energy	2.173***	0.512	2.002			
Chemical	-0.045	0.544	1.819			
Food and Beverage	2.137***	0.397	2.221			
Manufacturing	1.643***	0.384	3.666			
Hotels and Travels	1.355**	0.623	10.037			
Land and Property	-0.178	0.636	3.162			
Plantation	1.733***	0.528	3.052			
Trading	2.363***	0.592	2.412			
Services	3.015***	0.566	2.379			
Motors	0.697	0.593	1.823			
Oil Palms	0.819	0.670	2.32			
Stores and Supplies	2.536***	0.656	1.675			
R ²		-			17.5%	
Pseudo R ²		14.5%			-	
F-test		-			4.981	
Chi ²		343.024			-	
Prob > F		-			0.000	
Prob > Chi ²		0.000			-	
N ^b		686			686	

Notes: ^a The definitions of the variables is given in Table 1. ^b For the sample 174 firms. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

The interaction effect of available slack and CEO duality shows a positive significant impact on the dependent variable. Moreover, the interaction effect of available slack with audit committee independence, CEO tenure, and nomination committee is significant at different levels ($p < 0.01$ and $p < 0.05$, respectively). Thereby it can be stated that *H15: The interaction effect of organizational slack on board characteristics is associated with the level of sustainability disclosure* is supported with the obtained results. However, it is apparent that *H14: The interaction effect of attainment discrepancy on board characteristics is associated with the level of sustainability disclosure* is not supported by the outcome of the multivariate regression. Among control variables, only firm size (under ordered logistic regression) and firm age become positively significant (under panel regression). Under ordered logistic regression analysis many industries show a considerable and significant impact on the level of sustainability reporting.

5. DISCUSSION

5.1. Discussions on descriptive statistics

The average level of sustainability reporting is only 0.352 with a maximum value of 1.329 and a standard deviation of 0.443. As per statistics, the overall median was recorded as only 7%. Especially, sustainability reporting according to GRI is not at a satisfactory level among listed companies in Sri Lanka. According to Mahmood, Kouser, Ali, Ahmad, and Salman (2018), only 33% of listed companies issued sustainability reports par with the GRI framework in Pakistan while the total level of sustainability disclosures is only 32.71% in 2015. In Bangladesh, this is only 22.3% among 116 listed

companies (Muttakin, Khan, & Subramaniam, 2015). Thus, it is apparent that Sri Lanka maintains a lightly higher degree of sustainability reporting compared to Pakistan and Bangladesh (level of sustainability reporting of Sri Lanka is recorded as 34.2% in 2018 and it has been increased up to 37% in 2020). Wijesinghe (2012), who has done a longitudinal study across five years in the area of sustainability reporting in the Sri Lankan context, reported that there is a positive trend in disclosures of sustainability reporting. This is consistent with research findings where it shows a gradual rise in the level of sustainability reporting from 2016 to 2020. Since sustainability reporting is non-mandatory in the given context, the majority of companies might not pay considerable attention to it (Shamil et al., 2014).

5.2. Discussions on correlation analysis, ordered logistic and panel regression

As per the results obtained from the ordered logistic regression analysis, the degree of sustainability reporting increases as board sizes ($B_{SIZE}_{i,t}$) grow larger, indicating a favorable impact on it. Besides, the size of the board has a strong correlation with the level of sustainability. Jangu et al. (2014), Allegrini and Greco (2013), and Al-Shaer and Zaman (2016) discovered the same by revealing a significant positive influence of board size on its sustainability reporting. According to the literature, large boards of directors have a high degree of integrity for their shareholders. Another reason for this observation could be that when corporations have larger boards, there is more space for directors with diversified experience and skills who understand and admire the necessity of sustainability reporting (Allegrini &

Greco, 2013). Contrary, the result is inconsistent with Kassinis and Vafeas (2002) and Fuente, García-Sánchez, and Lozano (2017), who found a negative impact on sustainability level from board size. They argue on the point that small board sizes are more effective in decision-making and a large number of members hinder the communication between each member of the board. Similarly, Velte (2019) has concluded that the explanatory power of board size is very limited in explaining the reporting level of corporate social responsibility. Mealttime, results of Shamil et al. (2014) concluded that the board size of listed companies in Sri Lanka is positively significant in explaining the sustainability disclosures. Consistent empirical results arising from the same context (Sri Lanka) provide a strong basis to argue that board size matters in taking decisions/initiatives on sustainability reporting and it always has a positive impact on it. Furthermore, unexpectedly, the results of the ordered logistic regression depict that female representation ($WOMEN_{i,t}$) on boards has a negative impact on sustainability reporting. Glass et al. (2016) bear the idea that women are leaders for socialization and they focus on satisfying communities through enhancing environmental initiatives. The negative impact of female directors on sustainability reporting is inconsistent with Bear et al. (2010), Zhang (2012), Al-Shaer and Zaman (2016), and Arayssi, Dah, and Jizi, (2016) who found a positive association between female directors and environmental reporting. However, the study's findings are consistent with Agyemang et al. (2020) who reported the same finding that female representation on board is negatively correlated with environmental disclosures in listed mining firms in China. Similarly, Muttakin et al. (2015) found a negative relationship between female directors and sustainability reporting when they evaluated the relationship between corporate governance factors and the degree of CSR reporting using 116 listed non-finance entities in Bangladesh. According to those researchers, one of the key reasons for this conclusion is that the majority of female directors are selected from family ties who may lack the necessary capacity, skill, and understanding of corporate voluntary disclosures. Furthermore, due to cultural influences, female directors may have a less influential capacity to influence board decisions on sustainability reporting, which is exacerbated by the glass ceiling that can be commonly observed in the Asian context (Wardhani & Cahyonowati, 2011). The positive impact of audit committee size ($ACSIZE_{i,t}$) on sustainability reporting becomes one of the significant findings in the research since that finding is justified by many other pieces of research. Madi et al. (2014), Appuhami and Tashkor (2017), and Bedard and Gendron (2010) found that there is a significant positive association with the level of sustainability disclosures in different contexts such as Malaysia, Australia, etc. According to Bedard and Gendron (2010), the size of the audit committee is quite a vital factor because it provides the required strength, diversity of knowledge, and perspectives to ensure appropriate monitoring, which leads to sustainability disclosure.

5.3. Discussion on findings of moderating variables

The finding of available slacks shows a positive impact on the sustainability ratio, which is consistent with Arora and Dharwadkar (2011) and Yang et al. (2012). They found a positive relationship between available slack measured by cash and trade receivable balance and level of CSR reporting. According to Arora and Dharwadkar (2011), when a company is equipped with sufficient slacks or resources, it might concentrate more on sustainability with great confidence. On the other hand, their discretionary power in making decisions on sustainability will be high upon the less influence from shareholders (Bromiley, 1991). Potential slacks ($SLACKDE_{i,t}$) bear a negative impact on the level of disclosures. Debt-to-equity measures the firm's ability to raise quick cash resources. With the result, it is clear that when Sri Lankan companies have more debt, they would utilize them in other operational projects than for sustainability initiatives. On the other hand, companies that have a higher debt-to-equity ratio might concentrate more on short-term goals than long-term (Bhatia & Tuli, 2017). This situation might be aggravated with debt holders' perception of voluntary disclosures. They may be interested in organizations' economic viability than voluntary disclosures in securing their investments. Artiach, Lee, Nelson, and Walker (2010), Lourenço et al. (2013), Shamil et al. (2014), Nazari, Herremans, and Warsame (2015), and Sierra, Zorio, and García-Benau (2013) emphasized a negative relationship between debt-to-equity and sustainability disclosures whereas Michelon and Parbonetti (2012) reported no significant impact from debt-to-equity to the level of sustainability disclosures. However, Arora and Dharwadkar (2011) also found no significant relationship between potential slacks and positive CSR levels.

The interaction effect of separation of CEO duality on available slacks positively moderates the relationship between board characteristics and the level of sustainability. This finding implies that companies that possess two personnel as the CEO and the chairman along with enough financial resources tend to enhance the level of sustainability in corporation. Separation of CEO duality always promotes a transparent decision-making system in the board and thereby tends to enhance voluntary disclosures to fulfill the information need for stakeholders (Ho & Wong, 2001; Gul & Leung, 2004). This condition is aggravated with the presence of enough resources in the hand of the company.

The interaction effect of independence of audit committee on available slacks positively moderates the relationship between board characteristic and the level of sustainability. Many researchers found positive associations between the independence of audit committees and sustainability reporting (Mangena & Taurigana, 2007; McMullen & Raghunandan, 1996; Appuhami & Tashakor, 2016). According to Forker (1992), independent directors contribute to enhancing the monitoring of information disclosures and minimizing benefits gained by management from withheld certain information. Therefore, it is apparent that independent directors are keener on disseminating information to shareholders to reduce agency costs and secure the legitimacy of the corporation. This behavior is more strengthened with the availability of sufficient resources in the company. When

sufficient resources are available in the company, independent directors are in a convenient position to advice management in enhancing sustainability reporting.

The interaction effect of separation of short CEO tenure on available slacks negatively moderates the association between board characteristics and the degree of sustainability reporting. This indicates that when CEO is new to the organization, they are not paying enough attention to sustainability reporting even with the availability of resources. The longer the CEO tenure, the higher the experience and understanding of the CEO and the power accumulated by him or her (Finkelstein & D'Aveni, 1994). When this experience, regarding understanding and power of long-tenured CEO, is mixed with sufficient resources of the company, sustainability reporting would reach better standards than a company that may have long-tenured CEO but with insufficient slacks.

6. CONCLUSION

The main intent of the study was to see how board members' traits affected the extent of sustainability disclosure with the moderating role of the performance gap and resources of a company. The research sample consisted of all the listed companies representing 16 sectors except finance, banks, insurance, and investment funds at the Colombo Stock Exchange amounting to 174 over four years (2016–2020). Through the results of the ordered logistic regression analysis, it was evident that board size and size audit committee have a positive influence on the degree of sustainability reporting. As per the findings, most interestingly, women's representation has a strong negative relationship with sustainability disclosure. The interaction effect of CEO duality and audit committee independence on available slacks positively moderate the association between board characteristics and sustainability while the interaction effect of short CEO tenure and slacks shows a negative moderating impact on the relationship. The study has many important implications. It contributes to the existing literature by providing useful empirical findings on the relationship between a number of board characteristics and the level of sustainability reporting in a developing country context, and the outcomes are more resounding since the study used a considerably large sample than other studies covering all the non-financial companies listed in CSE. In addition, the findings of the study fill the empirical gap by testing attainment discrepancies and slacks as moderators for the aforementioned relationship in the developing economy context. As an emerging economy, Sri Lanka is a country where voluntary disclosures are not mandatory and sustainability reporting has not been reached the desired level. In a context where the immature and low level of sustainability disclosures exists, the findings of the study about the influence of corporate governance on sustainability reporting with the presence of performances and resources would immensely support extant literature. Furthermore, the adoption of behavioral theory of firms and legitimacy theory reduces the constrained usage of traditional agency theory which is usually used in extant studies and

provides a substantial theoretical contribution towards extant literature.

Findings show that the level of sustainability reporting is still at a low level in Sri Lanka although it shows a gradual improvement over the past four years. The image of potential and existing local investors on Sri Lanka as an investment destination would be impaired with the unsatisfactory level of voluntary disclosures and would be less attractive to foreign investors who are keen on voluntary disclosures. Thus, policymakers have a tremendous responsibility on their shoulders in motivating corporations to report on sustainability by implementing necessary policies and monitoring systems. On the other hand, the management of firms should evaluate the obstacles and challenges that exist for sustainability reporting because only by identifying such issues the firm can enable conditions for a high degree of sustainability disclosure. Furthermore, it is suggested to establish and maintain a nomination committee in every organization to enhance the transparency of recruitment procedure and ensure that entities recruit suitably qualified directors who possess the right knowledge and the experience on voluntary disclosures in order to maintain a good level of sustainability reporting. Precisely, a well-diversified director board perceives the value of sustainability reporting and works to archive the goals of the organization by implementing appropriate strategies. Moreover, the independence of the audit committee needs to be strengthened by relevant parties as it showcases a positive influence over sustainability disclosures. As per the findings, available slacks significantly moderate the relationship between the board of directors and sustainability reporting. When entities appear to be equipped with an adequate level of resources, the board of directors seems to have more discretion power in determining and upgrading its sustainability reporting. In the situation where the firm is rich in its slacks, shareholders tend to provide more autonomy for managers in deciding the projects related to sustainability and make string disclosures on it. Thus, it is important to maintain a higher level of resources always in the company to enhance the level of sustainability disclosure.

Even though the study has generated many implications and contributions, it is not free from certain limitations and constraints. The current study is confined to listed firms in Sri Lanka due to the convenience of accessing reliable information, and therefore in future studies, the scope could be broadened to non-listed companies. Further, only annual reports have been used to collect data for all the variables and did not consider any report or source of information available. The results would be much useful if the study could be incorporated non-listed firms including SMEs in the selected context. In addition, the findings would be more convincing if the study could adopt mix methodology and confirm the results of quantitative analysis by qualitative findings. These limitations act as indications for future research avenues and one such possibility is that future researchers could extend the empirical boundaries of their studies by not being restricted to one market but making more sensible comparisons between developed and developing economies. Meanwhile, the data collecting sources for sustainability reporting can be expanded to standalone reports as well as corporate websites.

REFERENCES

1. Agyemang, A. O., Yusheng, K., Ayamba, E. C., Twum, A. K., Chengpeng, Z., & Shaibu, A. (2020). Impact of board characteristics on environmental disclosures for listed mining companies in China. *Environmental Science and Pollution Research*, 27(17), 21188–21201. <https://doi.org/10.1007/s11356-020-08599-2>
2. Allegrini, M., & Greco, G. (2013). Corporate boards, audit committees and voluntary disclosure: Evidence from Italian listed companies. *Journal of Management and Governance*, 17(3), 187–216. <https://doi.org/10.1007/s10997-011-9168-3>
3. Al-Rassas, A. H., & Kamardin, H. (2015). Internal and external audit attributes, audit committee characteristics, ownership concentration and earnings quality: Evidence from Malaysia. *Mediterranean Journal of Social Sciences*, 6(3), 458–470. <https://doi.org/10.5901/mjss.2015.v6n3p458>
4. Al-Shaer, H., & Zaman, M. (2016). Board gender diversity and sustainability reporting quality. *Journal of Contemporary Accounting & Economics*, 12(3), 210–222. <https://doi.org/10.1016/j.jcae.2016.09.001>
5. Al-Shammari, B., & Al-Sultan, W. (2010). Corporate governance and voluntary disclosure in Kuwait. *International Journal of Disclosure and Governance*, 7(3), 262–280. <https://doi.org/10.1057/jdg.2010.3>
6. Al-Tuwaijri, S. A., Christensen, T. E., & Hughes, K. E., II. (2004). The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equations approach. *Accounting, Organizations and Society*, 29(5–6), 447–471. [https://doi.org/10.1016/S0361-3682\(03\)00032-1](https://doi.org/10.1016/S0361-3682(03)00032-1)
7. Amato, I. H., & Amato, C. H. (2007). The effects of firm size and industry on corporate giving. *Journal of Business Ethics*, 72, 229–241. <https://doi.org/10.1007/s10551-006-9167-5>
8. American Institute of Chartered Public Accountants (AICPA). (2018). *Sustainability terms defined*. Retrieved from <https://us.aicpa.org/content/dam/aicpa/interestareas/businessindustryandgovernment/resources/sustainability/downloadabledocuments/sustainability-assurance-campaign-definitions.pdf>
9. 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. <https://doi.org/10.1111/auar.12170>
10. Arayssi, M., Dah, M., & Jizi, M. (2016). Women on boards, sustainability reporting and firm performance. *Sustainability Accounting, Management and Policy Journal*, 7(3), 376–401. <https://doi.org/10.1108/SAMPJ-07-2015-0055>
11. Arora, P., & Dharwadkar, R. (2011). Corporate governance and corporate social responsibility (CSR): The moderating roles of attainment discrepancy and organization slack. *Corporate Governance: An International Review*, 19(2), 136–152. <https://doi.org/10.1111/j.1467-8683.2010.00843.x>
12. Artiach, T., Lee, D., Nelson, D., & Walker, J. (2010). The determinants of corporate sustainability performance. *Accounting and Finance*, 50(31), 31–51. <https://doi.org/10.1111/j.1467-629X.2009.00315.x>
13. Barako, D. G. (2007). Determinants of voluntary disclosure in Kenyan companies annual reports. *African Journal of Business Management*, 1(5), 113–128. Retrieved from <https://cutt.ly/1R1ptr5>
14. Bear, S. R., & Rahman, N., & Post, N. C. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *Journal of Business Ethics*, 97(2), 207–221. <https://doi.org/10.1007/s10551-010-0505-2>
15. Bedard, J., & Gendron, Y. (2010). Strengthening the financial reporting system: Can audit committees deliver? *International Journal of Auditing*, 14(2), 174–210 <https://doi.org/10.1111/j.1099-1123.2009.00413.x>
16. Bhatia, A., & Tuli, S. (2017). Corporate attributes affecting sustainability reporting: An Indian perspective. *International Journal of Law and Management*, 59(3), 322–340. <https://doi.org/10.1108/IJLMA-11-2015-0057>
17. Braam, G. J. M., Uit de Weerd, L., Hauck, M., & Huijbregts, M. A. J. (2016). Determinants of corporate environmental reporting: The importance of environmental performance and assurance. *Journal of Cleaner Production*, 129, 724–724. <https://doi.org/10.1016/j.jclepro.2016.03.039>
18. Brammer, S., Millington, A., & Pavelin, S. (2007). Gender and ethnic diversity among UK corporate boards. *Corporate Governance: An International Review*, 15(2), 393–403. <https://doi.org/10.1111/j.1467-8683.2007.00569.x>
19. Brennan, N. M., & Solomon, J. (2008). Corporate governance, accountability and mechanisms of accountability: An overview. *Accounting, Auditing and Accountability Journal*, 21(7), 885–906. <https://doi.org/10.1108/09513570810907401>
20. Bromiley, P. (1991). Testing a causal model of corporate risk taking and performance. *The Academy of Management Journal*, 34(1), 37–59. <https://doi.org/10.5465/256301>
21. Celentano, A., Lepore, L., Pisano, S., D'Amore, G., & Alvino, F. (2020). The joint effect of board independence and CSR committee on CSR disclosure: Evidence from Italian listed companies. *Corporate Ownership & Control*, 17(4), 319–328. <https://doi.org/10.22495/cocv17i4siart9>
22. Chau, G., & Gray, S. J. (2010). Family ownership, board independence and voluntary disclosure: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 19(2), 93–109. <https://doi.org/10.1016/j.intaccaudtax.2010.07.002>
23. Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice-Hall.
24. De Silva, A. B. S., Manawaduge, A., & Ajward, R. (2017). The relationship between selected corporate governance mechanisms and degree of earnings management in selected Sri Lankan listed companies. *CA Journal of Applied Research*, 7(1), 38–56. Retrieved from <https://cutt.ly/0R1oJa5>
25. Dharmadasa, P., Gamage, P., & Herath, S. K. (2014). Corporate governance, board characteristics and firm performance: Evidence from Sri Lanka. *South Asian Journal of Management*, 21(1), 7–31. Retrieved from https://www.researchgate.net/publication/348917031_Corporate_Governance_Board_Characteristics_and_Firm_Performance_Evidence_from_Sri_Lanka
26. Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment*, 11(2), 130–141. <https://doi.org/10.1002/bse.323>
27. Fathi, J. (2013). Corporate governance and the level of financial disclosure by Tunisian firms. *Journal of Business Studies Quarterly*, 4(3), 1–50. Retrieved from <https://cutt.ly/bR1u2tg>
28. Fernandes, S. M., Bornia, A. C., & Nakamura, L. R. (2019). The influence of boards of directors on environmental disclosure. *Management Decision*, 57(9), 2358–2382. <https://doi.org/10.1108/MD-11-2017-1084>
29. Finkelstein, S., & D'Aveni, R. A. (1994). CEO duality as a double-edged sword: How boards of directors balance entrenchment avoidance and unity of command. *Academy of Management Journal*, 37(5), 1079–1108. <https://doi.org/10.5465/256667>
30. Forker, J. J. (1992). Corporate governance and disclosure quality. *Accounting and Business Research*, 22(86), 111–124. <https://doi.org/10.1080/00014788.1992.9729426>

31. Frias-Aceituno, J. V., Rodriguez-Ariza, L., & Garcia-Sanchez, I. M. (2013). The role of the board in the dissemination of integrated corporate social reporting. *Corporate Social Responsibility and Environmental Management*, 20(4), 219–233. <https://doi.org/10.1002/csr.1294>
32. Fuente, J. A., García-Sánchez, I. M., & Lozano, M. B. (2017). The role of the board of directors in the adoption of GRI guidelines for the disclosure of CSR information. *Journal of Cleaner Production*, 141, 737–750. <https://doi.org/10.1016/j.jclepro.2016.09.155>
33. Gabarro, J. J. (1987). *The dynamics of taking charge*. Boston, MA: Harvard Business School Press.
34. George, G. (2005). Slack resources and the performance of privately held firms. *The Academy of Management Journal*, 48(4), 661–676. <https://doi.org/10.5465/amj.2005.17843944>
35. Glass, C., Cook, A., & Ingersoll, A. R. (2016). Do women leaders promote sustainability? Analyzing the effect of corporate governance composition on environmental performance. *Business Strategy and the Environment*, 25(7), 495–511. <https://doi.org/10.1002/bse.1879>
36. Graves, S. B., & Waddock, S. A. (1994). Institutional owners and corporate social performance. *The Academy of Management Journal*, 37(4), 1034–1046. <https://doi.org/10.5465/256611>
37. Gray, R., Javad, M., Power, D. M., & Sinclair, C. D. (2001). Social and environmental disclosures and corporate characteristics: A research note and extension. *Journal of Business, Finance and Accounting*, 28(3–4), 327–356. <https://doi.org/10.1111/1468-5957.00376>
38. Gul, F. A., & Leung, S. (2004). Board leadership, outside directors' expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, 23(5), 351–379. <https://doi.org/10.1016/j.jaccpubpol.2004.07.001>
39. Hair, J. F., Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2004). *Multivariate data analysis* (7th ed.). Retrieved from <https://cutt.ly/7R1al8V>
40. Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, 24(5), 391–430. <https://doi.org/10.1016/j.jaccpubpol.2005.06.001>
41. Hannan, M. T. (1998). Rethinking age dependence in organizational mortality: Logical formalizations. *American Journal of Sociology*, 104(1), 126–164. <https://doi.org/10.1086/210004>
42. Hellsten, S., & Mallin, C. (2006). Are 'ethical' or 'socially responsible' investments socially responsible? *Journal of Business Ethics*, 66(4), 393–406. <https://doi.org/10.1007/s10551-006-0001-x>
43. Herda, D. N., Taylor, M. E., & Winterbotham, G. (2012). The effect of board independence on the sustainability reporting practices of large U.S. firms. *Issues in Social and Environmental Accounting*, 6(2), 178–197. <https://doi.org/10.22164/isea.v6i2.69>
44. Ho, L.-C. J., & Taylor, M. E. (2007). An empirical analysis of triple-bottom-line reporting and its determinants: Evidence from the United States and Japan. *Journal of International Financial Management and Accounting*, 18(2), 123–150. <https://doi.org/10.1111/j.1467-646X.2007.01010.x>
45. Ho, S. S. M., & Wong, K. S. (2001). A study of the relationship between corporate governance structures and the extent of voluntary disclosure. *Journal of International Accounting, Auditing and Taxation*, 10(2), 139–156. [https://doi.org/10.1016/S1061-9518\(01\)00041-6](https://doi.org/10.1016/S1061-9518(01)00041-6)
46. Htay, S. N. N., Rashid, H. M. A., Adnan, M. A., & Meera, A. K. M. (2012). Impact of corporate governance on social and environmental information disclosure of Malaysian listed banks: Panel data analysis. *Asian Journal of Finance and Accounting*, 4(1), 1–24. <https://doi.org/10.5296/ajfa.v4i1.810>
47. Ienciu, I.-A., Popa, I. E., & Ienciu, N. M. (2012). Environmental reporting and good practice of corporate governance: Petroleum industry case study. *Procedia Economics and Finance*, 3, 961–967. [https://doi.org/10.1016/S2212-5671\(12\)00258-4](https://doi.org/10.1016/S2212-5671(12)00258-4)
48. Janggu, T., Darus, F., Zain, M. M., & Sawani, Y. (2014). Does good corporate governance lead to better sustainability reporting? An analysis using structural equation modeling. *Procedia — Social and Behavioral Sciences*, 145, 138–145. <https://doi.org/10.1016/j.sbspro.2014.06.020>
49. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency cost and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
50. Karamanou, I., & Vafeas, N. (2005). The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis. *Journal of Accounting Research*, 43(3), 453–486. <https://doi.org/10.1111/j.1475-679X.2005.00177.x>
51. Kassinis, G., & Vafeas, N. (2002). Corporate boards and outside stakeholders as determinants of environmental litigation. *Strategic Management*, 23(5), 399–415. <https://doi.org/10.1002/smj.230>
52. KPMG. (2013). *The KPMG International Survey of Corporate Responsibility Reporting 2013*. Retrieved from <https://assets.kpmg/content/dam/kpmg/pdf/2013/12/corporate-responsibility-reporting-survey-2013.pdf>
53. Laksmana, I. (2008). Corporate board governance and voluntary disclosure of executive compensation practices. *Contemporary Accounting Research*, 25(4), 1147–1182. <https://doi.org/10.1506/car.25.4.8>
54. Lant, T. K. (1992). Aspiration level adaptation: An empirical exploration. *Management Science*, 38(5), 623–644. <https://doi.org/10.1287/mnsc.38.5.623>
55. Lewis, B. W., Walls, J. L., & Dowell, G. W. S. (2014). Difference in degrees: CEO characteristics and firm environmental disclosure. *Strategic Management Journal*, 35(5), 712–722. <https://doi.org/10.1002/smj.2127>
56. Lipton, M., & Lorsch, J. W. (1992). A modest proposal for improved corporate governance. *Business Lawyer*, 48(1), 59–77. Retrieved from <https://www.jstor.org/stable/40687360>
57. Lourenço, I. C., Callen, J. L., Branco, M. C., & Curto, J. D. (2013). The value relevance of reputation for sustainability leadership. *Journal of Business Ethics*, 119(1), 17–28. <https://doi.org/10.1007/s10551-012-1617-7>
58. Madi, H. K., Ishak, Z., & Manaf, N. A. A. (2014). The impact of audit committee characteristics on corporate voluntary disclosure. *Procedia — Social and Behavioural Sciences*, 164, 486–492. <https://doi.org/10.1016/j.sbspro.2014.11.106>
59. Mahmood, Z., Kouser, R., Ali, W., Ahmad, Z., & Salman, T. (2018). Does corporate governance affect sustainability disclosure? A mixed methods study. *Sustainability*, 10(1), 1–20. <https://doi.org/10.3390/su10010207>
60. Majeed, S., Aziz, T., & Saleem, S. (2015). The effect of corporate governance elements on corporate social responsibility (CSR) disclosure: An empirical evidence from listed companies at KSE Pakistan. *International Journal of Financial Studies*, 3(4), 530–556. <https://doi.org/10.3390/ijfs3040530>
61. Mangena, M., & Tauringana, V. (2007). Corporate compliance with non-mandatory statements of best practice: The case of the ASB Statement on Interim Reports. *European Accounting Review*, 16(2), 399–427. <https://doi.org/10.1080/09638180701391014>

62. Mapparessa, N., Bakry, M. I., Totanan, C., Mile, Y., & Arumsari, A. (2017). The effect of political visibility, company characteristics and gender diversity to sustainability report disclosure. *International Journal of Civil Engineering and Technology (IJCIET)*, 8(9), 1019-1028. Retrieved from https://iaeme.com/MasterAdmin/Journal_uploads/IJCIET/VOLUME_8_ISSUE_9/IJCIET_08_09_113.pdf
63. McMullen, D. A., & Raghunandan, K. (1996). Enhancing audit committee effectiveness. *Journal of Accountancy*, 182(2), 79-81. Retrieved from <https://www.proquest.com/openview/ba0258b42f302448b1656b39540e51fe/1?pq->
64. Michelon, G., & Parbonetti, A. (2012). The effect of corporate governance on sustainability disclosure. *Journal of Management and Governance*, 16, 477-509. <https://doi.org/10.1007/s10997-010-9160-3>
65. Muttakin, M. K., Khan, A., & Subramaniam, N. (2015). Firm characteristics, board diversity and corporate social responsibility: Evidence from Bangladesh. *Pacific Accounting Review*, 27(3), 353-372. <https://doi.org/10.1108/PAR-01-2013-0007>
66. Nazari, J. A., Herremans, I. M., & Warsame, H. A. (2015). Sustainability reporting: External motivators and internal facilitators. *Corporate Governance*, 15(3), 375-390. <https://doi.org/10.1108/CG-01-2014-0003>
67. Oba, V. C., & Fodio, M. I. (2012). Board characteristics and the quality of environmental reporting in Nigeria. *The Journal of Accounting and Management*, 2(2), 33-48. Retrieved from <https://cutt.ly/AR1zfma>
68. Ortiz, E., & Martin, S. (2014). Global Reporting Initiative (GRI) as recognized guidelines for sustainability reporting by Spanish companies on the IBEX 35: Homogeneity in their framework and added value in the relationship with financial entities. *Intangible Capital*, 10(5), 1-18. <https://doi.org/10.3926/ic.492>
69. Osemeke, L., Osemeke, N., & Okere, R. O. (2020). The role of board in corporate social responsibility: A normative compliance perspective. *Corporate Ownership & Control*, 17(4), 152-165. <https://doi.org/10.22495/cocv17i4art13>
70. Oyelere, P., Laswad, F., & Fisher, R. (2003). Determinants of internet financial reporting by New Zealand companies. *Journal of International Financial Management and Accounting*, 14(1), 26-63. <https://doi.org/10.1111/1467-646X.00089>
71. Panjaitan, I. (2017). The influences of sustainability report and corporate governance toward financial and entity market performance with political visibility as moderating variable. *Binus Business Review*, 8(1), 61-66. <https://doi.org/10.21512/bbr.v8i1.1282>
72. Ramadhan, S. (2014). Board composition, audit committees, ownership structure and voluntary disclosure: Evidence from Bahrain. *Research Journal of Finance and Accounting*, 5(7), 124-138. Retrieved from <https://iiste.org/Journals/index.php/RJFA/article/view/12325/12717>
73. Richardson, A. J., & Welker, M. (2001). Social disclosure, financial disclosure and the cost of equity capital. *Accounting, Organizations and Society*, 26(7-8), 597-616. [https://doi.org/10.1016/S0361-3682\(01\)00025-3](https://doi.org/10.1016/S0361-3682(01)00025-3)
74. Rouf, A. (2011). Corporate characteristics, governance attributes and the extent of voluntary disclosure in Bangladesh. *African Journal of Business Management*, 5(19), 7836-7845. <https://doi.org/10.5897/AJBM10.1180>
75. Ruigrok, W., Peck, S., & Tacheva, S. (2007). Nationality and gender diversity on Swiss corporate boards. *Corporate Governance: An International Review*, 15(4), 546-557. <https://doi.org/10.1111/j.1467-8683.2007.00587.x>
76. Senanayake, P. M. C. H. K., & Ajward, R. (2017). Selected board characteristics and performance of listed hospitality firms in Sri Lanka. *CA Journal of Applied Research*, 1(1), 20-37. Retrieved from <https://cutt.ly/sR1UpRb>
77. Shamil, M. M., Shaikh, J. M., Ho, P.-L., & Krishnan, A. (2014). The influence of board characteristics on sustainability reporting: Empirical evidence from Sri Lankan firms. *Asian Review of Accounting*, 22(2), 78-97. <https://doi.org/10.1108/ARA-09-2013-0060>
78. Sierra, L., Zorio, A., & García-Benau, M. A. (2013). Sustainable development and assurance of corporate social responsibility reports published by Ibx-35 companies. *Corporate Social Responsibility and Environmental Management*, 20(6), 359-370. <https://doi.org/10.1002/csr.1303>
79. Singh, J. (1986). Performance, slack, and risk taking in organizational decision making. *The Academy of Management Journal*, 29(3), 562-585. <https://doi.org/10.5465/256224>
80. Sumiani, Y., Haslinda, Y., & Lehman, G. (2007). Environmental reporting in a developing country: A case study on status and implementation in Malaysia. *Journal of Cleaner Production*, 15(10), 895-901. <https://doi.org/10.1016/j.jclepro.2006.01.012>
81. The Committee on the Financial Aspects of Corporate Governance. (1992). *The report of the Committee on the financial aspect of corporate governance*. Retrieved from [https://www.frc.org.uk/getattachment/9c19ea6f-bcc7-434c-b481-f2e29c1c271a/The-Financial-Aspects-of-Corporate-Governance-\(the-Cadbury-Code\).pdf](https://www.frc.org.uk/getattachment/9c19ea6f-bcc7-434c-b481-f2e29c1c271a/The-Financial-Aspects-of-Corporate-Governance-(the-Cadbury-Code).pdf)
82. The World Commission on Environment and Development. (1987). *Report of the World Commission on Environment and Development: Our common future*. Retrieved from <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>
83. United Nations. (n.d.). *The 17 goals*. Retrieved from <https://sdgs.un.org/goals>
84. Uyar, A., & Kuzey, C. (2014). Determinants of corporate cash holdings: Evidence from the emerging market of Turkey. *Applied Economics*, 46(9), 1035-1048. <https://doi.org/10.1080/00036846.2013.866203>
85. Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of Financial Economics*, 53(1), 113-142. [https://doi.org/10.1016/S0304-405X\(99\)00018-5](https://doi.org/10.1016/S0304-405X(99)00018-5)
86. Velte, P. (2019). Does board composition influence CSR reporting? A meta analysis. *Corporate Ownership & Control*, 16(2), 48-59. <https://doi.org/10.22495/cocv16i2art5>
87. Wardhani, S. R., & Cahyonowati, N. (2011). Pengungkapan Tanggung jawab sosial dan karakteristik corporate governance pada sektor finansial [Social and characteristic responsibility disclosure corporate governance in the financial sector]. *Jurnal Akuntansi dan Auditing*, 7(2), 182-202. <https://doi.org/10.14710/jaa.7.2.182-202>
88. Wijesinghe, K. N. (2012). Current context of disclosure of corporate social responsibility in Sri Lanka. *Procedia Economics and Finance*, 2(1), 171-178. [https://doi.org/10.1016/S2212-5671\(12\)00077-9](https://doi.org/10.1016/S2212-5671(12)00077-9)
89. Wiseman, J. (1982). An evaluation of environmental disclosures made in corporate annual reports. *Accounting, Organizations and Society*, 7(1), 53-63. [https://doi.org/10.1016/0361-3682\(82\)90025-3](https://doi.org/10.1016/0361-3682(82)90025-3)
90. Yang, H., Xu, E., & Lu, Y. (2012). Organizational slacks and corporate social performance of listed companies: The role of state-owned holding. Paper presented at the *International Conference on Management Science & Engineering*. <http://doi.org/10.1109/ICMSE.2012.6414219>
91. Zhang, L. (2012). Board demographic diversity, independence, and corporate social performance. *Corporate Governance*, 12(5), 686-700. <https://doi.org/10.1108/14720701211275604>