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Drivers and consequences of sustainability committee existence? Evidence from the hospitality and tourism industry

Abstract

This study's objective is twofold: (1) to investigate whether board characteristics predict the existence of a sustainability committee, and (2) to examine whether the establishment of sustainability committees stimulates sustainability reporting, external assurance, and the adoption of the Global Reporting Initiative (GRI) framework in hospitality and tourism (H&T) firms. For this purpose, the data was derived from the Thomson Reuters Eikon database for publicly traded H&T firms located in 32 countries from 2013 to 2018. The results indicate that while board size is a significant predictor of sustainability committee establishment, female and independent directors are not. Furthermore, the H&T firms with a sustainability committee are more likely to issue a sustainability report, to get an independent assurance statement on sustainability reporting, and to follow GRI guidelines in configuring sustainability report content and structure. Overall, the results suggest important implications to help H&T firms achieve sustainable goals and to design their boards accordingly.

Keywords: sustainability committee; board characteristics; sustainability report; external assurance; Global Reporting Initiative framework

1. Introduction

The hospitality and tourism (H&T) sector provides social and economic benefits to society by providing investments (Davidson & Sahli, 2014; Scheyvens & Hughes, 2019), bringing earnings and foreign exchange (Pérez & Rodríguez del Bosque, 2014), creating employment (Suárez-Cebador et al., 2018), and ensuring well-being to the local community (Pérez & Rodríguez del Bosque, 2014). Despite the benefits of the H&T sector to society, it is criticized due to its detrimental impacts on cultural heritage, the natural environment, ecosystems, and ecological habitats (Holden, 2005; Rhou & Singal, 2020). Stakeholders not only demand that H&T firms undertake responsible practices, but also that they provide information about the scope of their corporate social responsibility (CSR) efforts (de Grosbois, 2012). In response to these demands, a greater number of H&T firms engage in CSR activities (Kang et al., 2010)¹ and increasingly communicate their efforts to the various stakeholders, such as employees, consumers, investors, shareholders, and public authorities (Suárez-Cebador et al., 2018; Uyar et al., 2019). Growing concerns about the H&T sector's negative social and environmental impacts and its critical role in achieving sustainable development justify studying CSR-related issues in the H&T context.

The board forms board committees to delegate some corporate governance duties to a focused committee to enhance corporate governance and improve the effectiveness of board monitoring (Huang et al., 2009). In this sense, the boards can establish CSR-oriented board mechanisms (i.e., sustainability committees) to encourage a company to invest in sustainability initiatives and to achieve the desired level of CSR performance (García-Sánchez et al., 2019). Sustainability committees can be seen as the manifestation of CSR policies and strategies of firms (Lock & Seele, 2016) and a signal from boards to stakeholders that CSR matters are being considered at a strategic level in the organization (Eberhardt-Toth et al., 2019). Sustainability committees have a wide span of duties, from implementing sustainability policies to managing relations with stakeholders (Burke et al., 2019). Since sustainability committees are not explicitly regulated (Eberhardt-Toth et al., 2019), they are regarded as voluntary mechanisms

¹ CSR is defined as a set of voluntary activities that are integrated into the business operations in the areas of environmental, social, and governance (Singal, 2014). In the H&T context, CSR activities include socially responsible initiatives, such as non-discrimination hiring, charitable and philanthropic offerings, and supplying healthy and certified food (Tsai et al., 2010) as well as environmentally responsible initiatives, such as installing water-saving systems in hotel rooms (Kasim et al., 2014), establishing energy-saving mechanisms (Ettinger et al., 2018), using low energy consumption lamps (Merli et al., 2019), and waste recycling (Ettinger et al., 2018).

of board governance. Such committees² are becoming important mechanisms of corporate governance in protecting stakeholders, dealing with CSR issues, and enhancing shareholder value in the long run (Gennari & Salvioni, 2019). As a board's responsibility and role have been extended from the traditional view focusing only on shareholder interests to encompassing interests of wider stakeholders (Rao & Tilt, 2016), its structure and composition can influence companies' CSR policies, strategies, and investments as well as the formation of a specific board committee to deal with CSR issues particularly. However, only a few studies have analyzed the influence of board-level drivers (i.e., board independence, board gender diversity, and CEO duality) in forming sustainability committees (Eberhardt-Toth et al., 2019). Further, the role of sustainability committees in firms' CSR reporting policies, strategies, and practices remains an under-researched subject. The aim of this study is twofold. First, it analyzes the association between board structure size, gender diversity, independence, and CEO duality) and a firm's decision to establish a separate sustainability committee. Second, it examines whether and how the sustainability committee influences CSR reporting practices in the H&T industry.

This study is expected to contribute to the literature in the following ways. First, this study contributes to the tourism literature by exploring CSR in the H&T industry. Second, despite the growing interest in CSR activities in the H&T industry, prior research examining CSR reporting is scarce (Ettinger et al., 2018; Uyar et al., 2019) and mostly relies upon a single country (Nyahunzvi, 2013; Pérez & Rodríguez del Bosque, 2014) or a limited number of firms (de Grosbois, 2012). Further, most H&T literature has particularly focused on the accommodation industry (de Grosbois, 2012; Nyahunzvi, 2013; Pérez & Rodríguez del Bosque, 2014; Ettinger et al., 2018) rather than on the entire H&T industry. This study, therefore, adds to the CSR research stream by studying CSR reporting in numerous subsectors of H&T, including motels, hotels, restaurants and bars, cruise lines, gaming and casinos, and recreation and leisure, using a large international sample and providing industry-specific evidence. Third, this is one of the few attempts to analyze the influence of board characteristics on the voluntary formation of standalone sustainability committees. Fourth, it contributes to the corporate governance

² Firms can give different names to committees dealing with CSR matters, such as ethics committees, social responsibility committees, environmental committees, sustainability committees, and so on (Gennari & Salvioni, 2019). In this study, we used the term **CSR committee and sustainability committee interchangeably** referring to these types of committees.

literature by exploring the role of the sustainability committee on CSR reporting, which has not yet been studied in the H&T field.

The remainder of the paper is structured as follows: the next section provides the literature review. The third section establishes the theoretical foundations of the study and formulates the hypotheses. The fourth section outlines the research methodology, which is followed by documentation of the findings and robustness tests. Finally, the last section discusses the findings, conclusions, suggested implications, and sets the limitations of the study.

2. Literature review

Although prior CSR research has initially paid less attention to the H&T industry than industries that are regarded as heavy polluters, such as chemical, manufacturing or mining (de Grosbois, 2012), over the last decade, a growing number of papers have studied numerous aspects of CSR in the H&T industry (Tsai et al., 2010; Huimin & Ryan, 2011; Prud'homme & Raymond, 2013; Benavides-Velasco et al., 2014; Kasim et al., 2014; Theodoulidis et al., 2017; Moneva et al., 2019)³. Despite growing attention to the social and environmental impacts of the H&T sector, few studies have examined the H&T sector's CSR reporting practices (de Grosbois, 2012; Coles et al., 2014; Ettinger et al., 2018; Uyar et al., 2019). Hence, this study extends prior research by examining CSR reporting in the H&T industry on a global scale.

Firms can form a standalone committee to determine corporate CSR strategies and policies, undertake CSR practices, and communicate such efforts. A strand of research has analyzed the factors that can be associated with board sub-committees, such as audit, governance, nomination, remuneration, and risk management committees (Carson, 2002; Ruigrok et al., 2006; Huang et al., 2009; Sekome & Lemma, 2014; Jiraporn et al., 2020). However, minimal research has empirically investigated country-or firm-specific factors impacting the presence of sustainability committees (Eberhardt-Toth et al., 2019; Gennari & Salvioni, 2019). For example, Eberhardt-Toth et al. (2019) examined the impact of country-and firm-level factors on the presence of CSR committees and documented that large companies operating in resource-intensive sectors and domiciled in common-law countries are more likely to constitute CSR committees. Concerning board structure, they determined that CEO duality has a positive role in the establishment of sustainability committees. In a similar vein, Gennari

³ See the papers of Coles et al. (2013) and Rhou and Singal (2020) for a comprehensive review of CSR research in the H&T industry.

and Salvioni (2019) explored country-specific factors impacting the presence of CSR committees on boards and documented that the existence of mandatory requirements on non-financial reporting is positively associated with the establishment of CSR committees. The review of existing literature on CSR committees clearly indicates the need for more research to understand the influence of board characteristics on the formation of such committees. This study addresses this scarce research by examining whether and how the board structure (i.e., the board size, gender diversity, independence, and CEO duality) is associated with the establishment of sustainability committees.

Board structure and composition (i.e., the board size, independence, and gender diversity) have some effects on CSR performance and reporting (Burke et al., 2019; Gennari & Salvioni, 2019; Arayssi et al., 2020). As sustainability board committees have become important governance mechanisms to manage CSR-related risks, opportunities, and policies (Biswas et al., 2018; Gennari & Salvioni, 2019), a recent strand of research has particularly focused on their influence on the level of CSR performance and the quality and extent of CSR reporting (Please see Table 1). It appears that no study has yet investigated the association between board characteristics and CSR reporting in the H&T industry. Our study addresses this void in the literature by examining the association between sustainability committees and CSR reporting practices (i.e., CSR reporting, CSR assurance, and Global Reporting Initiative (GRI) adoption) in the H&T context.

[Insert Table 1]

3. Theoretical framework and hypotheses

H&T firms invest in CSR activities to constitute and maintain strong relationships with corporate stakeholders (Franco et al., 2019). Weak CSR performance results in a bad reputation for the firm (Franco et al., 2019). CSR committees may help to solve the conflicts between the shareholders' profit expectations in the short-term and long-term value creation (Gennari & Salvioni, 2019). We identified two alternative theories to understand the development of standalone sustainability committees, namely stakeholder theory (Freeman, 1984) and resource dependence theory (Pfeffer, 1972; Pfeffer & Salancik, 1978).

Stakeholder theory argues that the board of directors considers not only the interests of shareholders but also the interests of stakeholders (Freeman, 1984). From the perspective of

this theory, the boards of directors are relevant mechanisms for enacting stakeholder engagement processes (Michelon & Parbonetti, 2012) and encouraging the management team to address CSR matters (Pucheta-Martínez & Gallego-Álvarez, 2019). The existence of a sustainability committee demonstrates the CSR commitment of the firm to its stakeholders (Amran et al., 2014). Thus, firms can be more likely to form a focused board committee on sustainability issues to effectively manage their relations with stakeholders, to address stakeholders' interests properly, and to show their commitment to responsible corporate practice.

Besides stakeholder theory, resource dependence theory is one of the theories that is commonly used to understand the establishment of sustainability committees. The advisory role of the board is based on the resource dependence perspective (Homroy & Slechten, 2019). Resource dependence theory posits that the boards act as *resource providers* and help firms access critical resources (Pfeffer, 1972; Pfeffer & Salancik, 1978). Resource dependence theory focuses on a corporate board's tasks of establishing fruitful relationships with external parties (Ruigrok et al., 2006) and providing advice to form environmental strategy (Homroy & Slechten, 2019). According to this perspective, a sustainability committee can be identified as an important channel of resource provision in improving a firm's CSR performance and reporting. Based on mainly stakeholder and resource dependence theories, we examine whether and how board structure (i.e., the board size, gender diversity, independence, and CEO duality) influences the formation of sustainability committees and analyzes the role of these committees in CSR reporting practice.

3.1. Board structure

The debate on the link between board size and the establishment of board committees centers on both the ineffectiveness and human resource availability of large boards (Jiraporn et al., 2020). Jensen (1993) argues that larger boards are less effective due to coordination and communication problems. In this sense, a large board is more likely to form board committees to enhance board effectiveness (Carson, 2002). Larger boards can allow the inclusion of a greater number of directors with different backgrounds, skills, expertise, and values representing numerous stakeholder groups (Sekome & Lemma, 2014). Further, larger boards have the opportunity to devote the required expertise and human resources needed to be involved in board sub-committees (Huang et al., 2009; Sekome & Lemma, 2014). Therefore,

larger boards can have a greater ability to appoint directors with the necessary skills and expertise to manage sustainability issues and to be involved in a standalone sustainability committee. Prior research documented that board size is positively associated with the establishment of board sub-committees, such as audit (Carson, 2002; Reeb & Upadhyay, 2010), governance (Huang et al., 2009; Reeb & Upadhyay, 2010), nomination (Carson, 2002; Ruigrok et al., 2006), remuneration (Carson, 2002; Reeb & Upadhyay, 2010), and risk management (Sekome & Lemma, 2014). Thus, one could argue that board size is positively associated with the voluntary formation of a sub-committee specifically focused on sustainability issues. Therefore, we suggest the following hypothesis:

H1a: Board size is positively associated with the establishment of sustainability committees.

Board gender diversity is expected to be associated with the establishment of sustainability committees due to several interrelated reasons. First, from the resource dependence perspective, female directors are an essential resource linking the firm to its external environment (Ruigrok et al., 2006). According to this perspective, female directors establish contacts with the external environment and provide top management with insightful advice about stakeholders' expectations (Mallin & Michelon, 2011). Second, due to females' greater concern for sustainability issues (Al-Shaer & Zaman, 2016), their higher representation on the board can provide an opportunity for a boardroom to discuss wider stakeholder issues that go beyond a mere discussion on financial performance (Biswas et al., 2018). Third, women and men have different management styles, culture, ethical values, and traits (Adams & Ferreira, 2009; Liao et al., 2015; Al-Shaer & Zaman, 2016; Benjamin et al., 2019). In particular, female directors are likely to behave more ethically (Smith et al., 2001) and to have a higher sensitivity to others compared to their male counterparts (Bilimoria, 2000). In terms of empirical evidence, Mallin and Michelon (2011), Biswas et al. (2018), and Cordeiro et al. (2020) documented that a higher level of board gender diversity leads to a greater level of CSR (i.e., environmental, social, or sustainability) performance. However, there are mixed findings concerning the association between board gender diversity and the constitution of sustainability committees. While Al-Shaer & Zaman (2016) documented that companies with gender-diverse boards are more likely to constitute sustainability committees, Eberhardt-Toth et al. (2019) found no significant effects of board gender diversity on the existence of such committees. In line with theoretical discussions, we expect that the presence of female directors on the board

is positively associated with the formation of a separate committee dedicated to concentrating on the firm's sustainability strategies, goals, and practice. Thus, we suggest the following hypothesis:

H1b: Board gender diversity is positively associated with the establishment of sustainability committees.

Board independence from management is crucial for the board's monitoring ability (Sekome & Lemma, 2014). Independent directors of the board have a vital role in decision control since they are not directly affiliated with management like inside directors (Vafeas, 2000). Therefore, the presence of a greater number of independent directors on the board signals that the board is likely to be less managed and controlled by management (Arayssi et al., 2020). As external directors are less subjected to pressures from managers and shareholders than internal directors (Hussain et al., 2018), they are likely to be more stakeholder-oriented. Further, to protect their reputation, independent directors are more likely to respect the firm's stakeholder obligations (Mallin & Michelon, 2011) and usually to be more interested in improving and maintaining the firm's social responsibility (Zahra & Stanton, 1988). In this context, independent directors are expected to promote the constitution of sustainability committees to show to the stakeholders that the firm properly addresses their needs and interests. Prior empirical research documented that independent directors have a significant role in achieving greater CSR performance (Mallin & Michelon, 2011; Biswas et al., 2018; Hussain et al., 2018) and a higher level of CSR disclosure (Liao et al., 2015; Cucari et al., 2018). With regards to its impact on the presence of board committees, Huang et al. (2009), Reeb and Upadhyay (2010), Sekome and Lemma (2014), and Jiraporn et al. (2020) documented that board independence is positively associated with the establishment of specific board committees, such as auditing, compensation, nomination, and risk management committees. Consistent with theoretical discussions and prior empirical findings, we predict that boards with a greater number of independent directors are more likely to constitute separate sustainability committees. Thus, we propose the following hypothesis.

H1c: Board independence is positively associated with the establishment of sustainability committees.

CEO duality means that the CEO and the board chair are the same person (Eberhardt-Toth et al., 2019). While the CEO is accountable to the board for implementing decisions and

managing daily operations, the board chair is responsible for the shareholders and for directing the board (Carson, 2002). The board chair would be associated with the implementation of higher standards of corporate governance (Carson, 2002). CEOs who simultaneously serve as board chair will be less likely to establish board committees, which can reduce their influence on board decisions (Ruigrok et al., 2006). Therefore, firms with CEO duality are less likely to constitute a sustainability committee since the presence of such a committee can reduce the impact of a dual CEO on CSR decisions and choices. From the perspective of stakeholder theory, independent directors are better advocates of stakeholders' needs and interests (Nadeem, 2020). As CEO-board chair duality is detrimental to board independence (Hussain et al., 2018), the presence of CEO duality on the board increases the gap between managerial and stakeholder interests (Nadeem, 2020), which in turn, may decrease the board's propensity to invest in CSR initiatives and establish a dedicated committee to deal with CSR issues. Concerning empirical evidence, Huang et al. (2009) determined that firms with a separate CEO and board chair are more likely to constitute a governance committee. Likewise, Ruigrok et al. (2006) defined a weak negative association between CEO duality and the constitution of nomination committees. Further, Jiraporn et al. (2020) determined that in companies where CEO duality exists, there was a lower number of board committees. By contrast, Eberhardt-Toth et al. (2019) determined that CEO duality is positively associated with the presence of a sustainability committee. Thus, we expect a negative association between CEO duality and the establishment of standalone sustainability committees. Consequently, we develop the following hypothesis:

H1d: CEO duality is negatively associated with the establishment of sustainability committees.

While the first hypothesis is about the predictors of the sustainability committee's existence, the following three hypotheses are concerning the consequences of that committee.

3.2. Sustainability reporting

The stakeholder approach argues that the board of directors should be motivated to establish sustainability committees that monitor the demands of stakeholders (Gallego-Álvarez & Pucheta-Martínez, 2019) and ensure the quality of the stakeholder engagement process (Michelon & Parbonetti, 2012). The existence of a sustainability committee on the board can play a major role in prioritizing CSR issues (Burke et al., 2019), effectively monitoring CSR strategies and policies (Arayssi et al., 2020), enhancing the effectiveness of CSR strategies

(Orazalin, 2020), managing CSR-related risks and opportunities (Biswas et al., 2018; Burke et al., 2019), and improving the extent of sustainability disclosures provided to stakeholders (Michelon & Parbonetti, 2012). Such a committee is more likely to realize the importance of CSR reporting and motivate the organization to measure and report its CSR performance to address its stakeholders' demands (Amran et al., 2014). Therefore, companies that have a separate board committee responsible for sustainability issues are expected to engage in sustainability reporting and publish more sustainability reports. Accordingly, Amran et al. (2014), Liao et al. (2015), and Cucari et al. (2018) found that the presence of a sustainability committee is positively associated with sustainability disclosure. However, Rodrigue et al. (2013) empirically showed that such governance mechanisms (i.e., environmental committees) could be established under a symbolic approach to manage stakeholder perceptions and have a limited impact on environmental performance. In a similar vein, Burke et al. (2019) and Chams and García-Blandón (2019) found an insignificant association between sustainability committees and sustainability performance. Likewise, Michelon and Parbonetti (2012) determined that sustainability committees have no significant impact on corporate sustainability disclosures⁴. Nevertheless, as sustainability committees represent the interests of wider stakeholder groups (Nadeem, 2020), we expect a positive association between the presence of a sustainability committee and a firm's decision to issue sustainability reports. Thus, we suggest the following hypothesis:

H2: Firms having a sustainability committee are more likely to issue sustainability reports.

3.3. Sustainability assurance

The assurance of sustainability reports can serve as a mechanism to improve external transparency and internal control (Rossi & Tarquinio, 2017), legitimize corporate CSR activities (Rossi & Tarquinio, 2017), increase accountability to stakeholders (Kend, 2015), and enhance confidence in the accuracy and credibility of sustainability information (Ruhnke & Gabriel, 2013; Kend, 2015; Velte & Stawinoga, 2017). Assurance services for sustainability reports are provided by both accounting firms (i.e., Big 4 and non-Big 4 accounting firms) and

⁴ They found a positive impact of sustainability committees only on the social dimension of corporate sustainability disclosures.

non-accounting firms (i.e., sustainability consultants, engineering firms, certification bodies, and specialist firms) (Datt et al., 2020).

The presence of a sustainability committee is expected to encourage a firm to integrate CSR policy into its day-to-day operations (Datt et al., 2018), to engage in CSR practices (Datt et al., 2018), to disclose its sustainability initiatives, and to provide more credible sustainability information, which leads to the acquisition of independent assurance for its sustainability disclosures (Rossi & Tarquinio, 2017). Empirically, Ruhnke and Gabriel (2013) and Rossi and Tarquinio (2017) determined that companies with sustainability committees are more likely to provide assurance of their sustainability reports conducted by an independent third-party. Likewise, Datt et al. (2018) determined that a sustainability committee encourages a firm to obtain external assurance for its carbon disclosures. Thus, we propose the following hypothesis:

H3: Among sustainability reporters, firms having a sustainability committee are more likely to assure their sustainability reports externally.

3.4. GRI adoption

The GRI was founded in 1997 and achieved international prominence as a result of building partnerships with the United Nations Environmental Programme in 1999 (del Mar Alonso-Almeida et al., 2014). The GRI framework has been proposed to improve the comparability and consistency of CSR reporting (Nyahunzvi, 2013) to provide the disclosure of sustainability information in a standardized way (Nikolaeva & Bicho, 2011). It has become the most common framework for voluntary reporting on social and environmental issues (Fuente et al., 2017). The adoption of GRI guidelines indicates a greater level of harmonization and comparability of CSR information at the international level and prevents companies from disclosing indicators of good CSR performance and omitting bad performance indicators (Fuente et al., 2017). Further, GRI adoption would help companies gain a competitive advantage, enhance their reputation, and achieve legitimacy (Nikolaeva & Bicho, 2011). A sustainability committee can signal that it functions effectively by increasing transparency and quality of CSR reporting through the adoption of GRI guidelines (Fuente et al., 2017). Sustainability committees can also promote the adoption of the GRI framework to provide the presentation of comparable and credible information to demonstrate the firm's strong commitment to social and environmental issues and to improve the legitimacy of corporate activities. The empirical findings documented by

Fuente et al. (2017) showed that the existence of sustainability committees is positively associated with GRI adoption. Thus, we develop the following hypothesis:

H4: Among sustainability reporters, firms having a sustainability committee are more likely to adopt the GRI framework.

4. Research Methodology

4.1. Sample

The data for this study was entirely derived from the Thomson Reuters Eikon database (will be referred to as "Thomson" in this paper) as it was adopted in prior studies (Yekini & Jallow, 2012; Dell'Atti et al., 2017). Thomson covers publicly traded companies globally affiliated with over 150 countries and enables retrieving board, CSR, financial, and market data (Refinitiv, 2019a). H&T is one of the 54 industry groups that include motels, hotels and cruise lines, restaurants and bars, gaming and casinos, and recreation and leisure sectors (Refinitiv, 2019b). Thus, the study is based on all publicly traded H&T firms located in 32 countries and included in Thomson (see Table A1 in Appendix). The initial sample of the study includes 772 firm-year records of the H&T industry between 2013 and 2018.

As part of the data screening, the sample is subject to missing data analysis. The preprocessing of the data is undertaken before further analysis, which includes checking the missing values, determining the outliers, and imputation of the missing values. Accordingly, female directors (i.e., gender diversity) data have ten firm-year records of missing values (1.3%), and free float percentage (i.e., ownership structure) has seven firm-year records of missing values (0.91%). Based on the Little's MCAR test results, the missing values are random (Chi-Square = 5.56; df = 2; p-value: .062). Since the missing values of these two variables have a random pattern, the Markov Chain Monte Carlo (MCMC) imputation method using linear regression as the model type for scale variables is employed. Following the missing data analysis and the corresponding imputation steps, no outliers in the data were investigated. To determine the possible outliers, the multivariate outlier detection methodology called the Minimum Covariance Determinant (MCD) estimator is employed to robustify the Mahalanobis distances (Verardi & Dehon, 2010). As a result of this analysis, two firm-year extreme records are eliminated as the outliers from the initial sample. Therefore, the final sample size is 770 firm-year records used for further analysis. The final sample includes 92 firm-year records in

2013, 96 in 2014, 115 in 2015, 140 in 2016, 156 in 2017, and 171 in 2018, which is 770 firm-year records.

4.2. List of variables

The variables are categorized into the following four types: sustainability data, board characteristics, ownership structure, and financial variables. First, sustainability data includes the following binary variables; sustainability committee (SustCommittee) (Burke et al., 2019), sustainability reporting (SustReport) (Kuzey & Uyar, 2017), the existence of independent assurance statement on sustainability reports (ExterAssur) (Ruhnke & Gabriel, 2013), and adoption of GRI framework in sustainability reports (GRIframe) (Uyar et al., 2019). Second, board characteristics including board size (BoardSize) (García Martín & Herrero, 2020), board gender diversity (GendDiv) (García Martín & Herrero, 2020), board independence (BoardIndep), and CEO duality (CEOdual) were adopted from various studies (Adel et al., 2019; García Martín & Herrero, 2020). Third, the free float percentage (FreeFloat) is used as a proxy for ownership structure (Ruhnke & Gabriel, 2013). Fourth, three financial variables are commonly used control variables in sustainability studies, including firm size (FirmSize), leverage, and profitability (Ruhnke & Gabriel, 2013). The rationale behind the selection of these three control variables is that larger, highly leveraged, and more profitable firms are more likely to engage with sustainability practices due to the availability of financial resources and the need for greater legitimacy concerns. The sub-section titled *Empirical methodology and models* further explains which variables are dependent or independent, based on the model specifications. The detailed list of the variables and their descriptions are provided in Table 2.

[Insert Table 2 here]

4.3. Descriptive statistics

The descriptive statistics for the variables are shown in Table 3. They showed that 49.09% firm-year records include a SustReport, 45.71% firm-year records have a specific SustCommittee, 44.03% firm-year records indicating whether the same person occupies the CEO and the board chair positions, 31.48% firm-year records have ExterAssur on SustReport, and 48.41% firm-year records adopt GRI guidelines in preparing SustReport. Furthermore, while H&T firms have, on average, 9.11 directors on their boards, female directors are 17.19% of all directors on boards, and independent directors are 74.03% of all directors. Furthermore, the free float rate shows that 74.70% of shares are traded on the stock exchange. Finally, H&T firms finance their

assets' 63.72% with liabilities, and their profitability as measured by return on assets' ratio is, on average, 8.48%.

Moreover, the descriptive statistics are decomposed based on whether the firms have a SustCommittee or not, as it is the main variable of investigation. Considering the board characteristics, it appears that H&T firms with a SustCommittee have larger (i.e., 10.13 versus 8.24 members), more diverse (i.e., 19.61% versus 15.15%), and more independent (i.e., 75.72% versus 72.61%) boards compared to those who have not a SustCommittee. Slight differences are also observable in ownership structure and financial characteristics.

Furthermore, the bottom part of Table 3 highlights what consequences it yields to have a SustCommittee based on frequency analysis. It appears that H&T firms with a SustCommittee are more likely to issue a SustReport (i.e., 86.65%) than those without a SustCommittee (i.e., 17.46%). Besides, the likelihood of getting ExterAssur and adopting GRIfame on SustReport are greater for H&T firms with a SustCommittee (i.e., 37.70% and 56.39%, respectively) than those without a SustCommittee (i.e., 5.48% and 15.07%, respectively).

[Insert Table 3 here]

4.4. Correlation analysis

The bivariate correlation analysis based on Spearman's correlation coefficients is provided in Table 4. There were binary categorical variables included in the list of variables. Thus, non-Spearman's correlation analysis, as the non-parametric correlation approach, is employed for bivariate linear associations between the variables (Field, 2013). The correlation analysis includes two panels where Panel A consists of the full sample (N=770), while Panel B consists of a sub-sample (N=378) of the existence of SustReport (please see Table 3). The reason behind running the correlation analysis for these two samples is because Model 1 and 2 are run for the full sample, whereas Model 3 and 4 are run for the sub-sample, which has a SustReport (please see the following sub-section for the description of all models).

Both in Panel A and B, the results indicated that there is a significant positive correlation between SustCommittee and board characteristics (i.e., BoardSize, GendDiv, BoardIndep) except CEOdual. Moreover, according to Panel A, SustCommittee is positively correlated with SustReport. Additionally, both in Panels A and B, SustCommittee is significantly and positively correlated with ExterAssur and GRIfame.

Furthermore, the multicollinearity issue is investigated before testing the hypothesis. For this purpose, the variance inflation factors (VIFs) values are calculated which range between 1.09 and 1.38 in Model 1, between 1.09 and 1.45 in Model 2, and between 1.09 and 1.41 in Model 3 and Model 4, which are well below the suggested cut-off value of 10 (Hair et al., 2010). The VIFs do not indicate any severe multicollinearity issues. Also, the existence of a serious multicollinearity issue is considered if the pairwise correlations exceed a threshold value of 0.7 (Johnston and DiNardo, 1984; Booth et al., 1994; Douglass et al., 2003; Belsley et al., 2005), and if the suggested threshold value of the VIFs is greater than 10 (Belsley, 1993; Hair et al., 2010). The results of the VIF and the bivariate correlation coefficient indicate no serious multicollinearity issue even though the bivariate correlation coefficient between SustCommittee and SustReport is near 0.7 (does not exceed 0.7).

[Insert Table 4 here]

4.5. Empirical methodology and models

The data of the study is in the form of a firm-year panel data structure. The proposed models include the dependent variable with binary outcomes (i.e., SustCommittee, SustReport, ExterAssur, and GRIfame), which necessitates the employment of logistic regression analysis. Before performing the Panel Data Logistic Regression Analysis, a further test is required to decide between Panel Data or Pooled Logistic Regression Analyses. Thus, a likelihood-ratio (LR) test of $\rho = 0$ is performed to decide between a pooled estimator and a panel estimator (StataCorp, 2015). This test helps us to understand the fact that a panel estimator is not different from a pooled estimator if $\rho = 0$ that is the proportion of total variance contributed by the panel-level variance component. The LR test of $\rho = 0$ revealed that (Model 1: $\chi^2 = 358.89$, p -value: 0.001; Model 2: $\chi^2 = 148.81$, p -value: 0.001; Model 3: $\chi^2 = 118.85$, p -value: 0.001; Model 4: $\chi^2 = 154.58$, p -value: 0.001), the ρ is statistically significantly different from zero and therefore the panel data logistic regression analysis is an appropriate to employ in the baseline analysis for testing the proposed hypothesis. Therefore, this study employed Panel Logistic Regression analysis using the Huber/White/sandwich VCE estimator (Wooldridge, 2002) to investigate the proposed models. Furthermore, Random-Effect estimator for the Panel Data Logistic Regression analysis is chosen for testing the following proposed models which are appropriate for the unbalanced panel data (Eberhardt-Toth, 2017), and also alleviates endogeneity concerns (Hassan et al., 2019) which might be caused by omitted variable bias or reverse causality.

Moreover, numerous prior studies on CSR subjects adopted the Random-Effect estimator for the Panel Data Logistic Regression as well (Cucari et al., 2018; Godos-Díez et al., 2018; Franco et al., 2019; Hassan et al., 2019).

There are four proposed models formulated using the given functional relationships in Eq (1).

$$\text{Panel logit } (Y_{it} = 1 | X_{it}) = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it} \quad (1)$$

In the proposed models, Y_{it} indicates the binary dependent variables, X_{1it} indicates the testing variables, X_{2it} indicates the control variables, and ε_{it} indicates the error term. Furthermore, the indices "i" indicate the firm as the panel variable, and "t" indicates the year as the time variable. In Model 1, utilizing full sample ($N = 770$), SustCommittee is the dependent variable, and BoardSize, GenDiv, BoardIndep, and CEOdual are the testing variables that examine the predictors of SustCommittee. In Model 2, utilizing full sample ($N = 770$), SustReport is the dependent variable, and SustCommittee is the testing variable that investigates whether the existence of the SustCommittee is associated with the issuance of the SustReport. Model 3 and 4 are run based on a subsample of 378 firm-year observations since the existence of a SustReport is a priority for the existence of ExterAssur and GRIfame in a firm-year record. Thus, in Model 3, ExterAssur is the dependent variable, and SustCommittee is the testing variable, which investigates whether the SustCommittee is a predictor of the ExterAssur. In Model 4, GRIfame is the dependent variable, and SustCommittee is the testing variable that explores whether the SustCommittee is associated with the adoption of the GRIfame on the SustReport. Finally, while FreeFloat, FirmSize, Leverage, and Profitability are used as the control variables in Model 1, BoardSize, GendDiv, BoardIndep, CEOdual, FreeFloat, FirmSize, Leverage, and Profitability are used as the control variables in Model 2, Model 3, and Model 4.

5. Findings

The random-effects logistics regression analysis results of the proposed models are shown in Table 5. In Model 1, the results indicate that BoardSize ($p < .01$) and FirmSize ($p < .01$) have a significant positive association with SustCommittee while GendDiv, BoardIndep, CEOdual, FreeFloat, Leverage, and Profitability have no significant association with SustCommittee. Thus, H&T firms with larger boards and more assets are more likely to designate a sustainability committee. The direction of the causality between BoardSize and SustCommittee is further investigated using the Granger causality test (Granger, 1969) by utilizing a software module

developed by Joly (2010) and Lopez and Weber (2017). This test aims to check the existence of reverse causality such that the establishment of a SustCommittee enlarged boards by possibly recruiting new members. The results revealed that BoardSize granger causes SustCommittee ($\chi^2(1):5.34$; p-value=0.0208), but SustCommittee does not granger cause BoardSize ($\chi^2(1):2.03$; p-value=0.1541). Therefore, the results indicate that the direction of the causality is from BoardSize to SustCommittee, which eliminates the possibility of reverse causality.

In addition, the results in Model 2 reveal that SustCommittee ($p < .01$), BoardSize ($p < .01$), FirmSize ($p < .01$), and GenDiv ($p < .10$) has a significant positive relationship with SustReport. This means that H&T firms with a sustainability committee are more likely to publish sustainability reports. Furthermore, the results in Model 3 show that SustCommittee ($p < .05$), GenDiv ($p < .01$), FirmSize ($p < .01$) have a significant positive association with ExterAssur while FreeFloat ($p < .10$) and Leverage ($p < .10$) have a weak negative significant association with ExterAssur. According to the results of Model 4, SustCommittee ($p < .01$), and BoardIndp ($p < .10$) have a significant positive relationship with GRIframe. Hence, H&T firms with a sustainability committee are more likely to get external assurance on sustainability reports and adopt GRI guidelines in preparing those reports.

[Insert Table 5 here]

5.1. Robustness check

For robustness checks, the following three alternative methodologies are used, and the results are reported accordingly in this section: Multi-Level Mixed-Effects Logistic Regression, Rare Events Logistic Regression, and Panel Data Logistic Regression Analysis with one-year lagged values of independent variables to control for the endogeneity problem. The justification for the selection and appropriateness of these methodological is provided in each of the following paragraphs.

First, the data set includes records with country, sub-sector, and firm levels. Thus, it is multi-level panel data. To account for the multi-level aspect of this research study, Multi-Level Mixed-Effects Logistic Regression analysis is performed where country, sub-sector, as well as the firm, are denoted as the multi-levels. The four sub-sectors, according to the Thomson Reuter Eikon database, are casinos and gaming, leisure and recreation, hotels, motels, cruise lines, and restaurants and bars. The results of the analyses are provided in Table 6. Among variables of interest, BoardSize has a significant positive association with SustCommittee (Model 1), while

SustCommittee has a significant positive relationship with SustReport (Model 2), ExterAssur (Model 3), and GRIframe (Model 4). The results in Table 6 are consistent with the results of the baseline analysis.

[Insert Table 6 here]

Second, frequency analysis of the dependent variables ExterAssur (Model 3) and GRIframe (Model 4) revealed in Table 3 that there is a relatively high discrepancy between distributions of the categories for these two variables. Namely, a high level of difference between the existence and non-existence of binary values for the two variables (i.e., ExterAssur and GRIframe). To address this issue, Model 3 and Model 4 are subject to Rare Events Logistic Regression analysis, which is used in the possible risk of rare events (King & Zeng, 2001; Cain et al., 2017). The analysis results are provided in Table 7. The results showed that SustCommittee has a significant positive association with SustReport, ExterAssur, and GRIframe, which are in line with the initial baseline analysis results.

[Insert Table 7 here]

Finally, the endogeneity issue is addressed by taking lagged values of the test variables as well as the control variables by one year (Richardson et al., 2013; Ngare et al., 2014; Godos-Díez et al., 2018). The results are shown in Table 8 indicated consistency with the baseline analysis, where BoardSize has a significant positive association with SustCommittee, and SustCommittee has a significant positive association with SustReport, ExterAssur, and GRIframe. Thus, three robustness checks verified the baseline results and confirmed that the findings are robust against alternative methodologies. However, it is noteworthy that the second robustness test yielded a positive and significant association between GenDiv and SustCommittee, whereas it was insignificant in the baseline analyses.

[Insert Table 8 here]

6. Discussion and conclusion

This study aims to explore the drivers and consequences of having a sustainability committee in H&T firms. The study posits that growing interest in sustainability issues requires a more structured corporate design to enable full commitment and align firms' interests with stakeholders' interests. Full engagement entails consideration of sustainability performance, reporting, report assurance by an independent body, and adoption of GRI guidelines to issue an

accurate and consistent report. Thus, the study proposes that the sustainability committee plays a crucial role in meeting these objectives and putting CSR issues on the corporate agenda. Nevertheless, the literature does not fully address this key role of the sustainability committee undertakes, although some studies incorporate it into the study models. Moreover, this study responds to the calls of prior studies concerning sector-specific drivers and the consequences of sustainability committee establishments (Gennari & Salvioni, 2019). The findings are discussed, along with previous studies in the following paragraphs.

First, among the board variables, only board size predicts the establishment of sustainability committees. Firms with larger boards are more likely to have a sustainability committee that lends support to the hypothesis H1a, which is in line with the notion that larger boards enable H&T firms to form specific committees dedicated to specific tasks. Other board characteristics (i.e., gender diversity, independence, and CEO duality) do not explain firms' tendency to designate a sustainability committee; hence, the hypotheses H1b, H1c, and H1d are rejected. However, one robustness test indicated a positive role of female directors in the establishment of sustainability committees, whereas independent directors are ineffective according to all tests. Although contrary to expectations, the insignificance of female and independent directors in predicting sustainability committee establishment confirms Eberhardt-Toth et al. (2019), who also found insignificant influence for female directors and negative influence for independent directors in the constitution of sustainability committees. Considering the baseline results, a lack of a significant association between independent and female directors and sustainability committees may be attributable to several reasons⁵. There might be a substitution role between independent and female directors and sustainability committees. The independent and female directors might be undertaking the role of sustainability committees so that this situation cancels the need for such a specific committee.

Moreover, the appointment of female and independent directors to the board might have been the result of meeting concrete board composition criteria as mandated by corporate governance codes in some countries, or they might have been appointed for window-dressing the board structure for appeasing stakeholders which renders their influence on decision-making limited (Gallego-Álvarez & Pucheta-Martínez, 2019). Alternatively, they might not

⁵ Noting also that GenDiv was a significant predictor of SustCommittee according to the results of two robustness tests, namely Multi-Level Mixed-Effects Logistic Regression and Rare Events Logistic Regression. Thus, this situation requires precaution regarding the baseline finding.

have sufficient autonomy to exercise their skills under some dominant shareholders, such as family members or blockholders. However, all these arguments require further empirical justification, which suggests future research avenues. Moreover, the non-existence of reverse causality between board size and the existence of a sustainability committee implies that H&T firms do not enlarge their boards as a result of sustainability committee formation. Instead, they use their existing portfolio of directors to assign to a sustainability committee, meaning that the configuration of such a committee does not cause H&T firms to incur additional costs by recruiting new directors for that committee.

Second, firms having a sustainability committee are more likely to issue a sustainability report, which means that committees play a role in driving firms to communicate the outcomes of sustainability practices. Hence, this result lends support to the second hypothesis regarding the association between sustainability committees and the issuance of sustainability reports. Most prior studies in other sectors also found a similar positive effect of sustainability committee on sustainability reporting tendency (Cucari et al., 2018; Godos-Díez et al., 2018; Pucheta-Martínez & Gallego-Álvarez, 2019; Arayssi et al., 2020) although there are some exceptions (Michelon & Parbonetti, 2012). Third, companies having a sustainability committee are more likely to seek external assurance for sustainability reports, which implies that they are aware of the incremental value generated by the independent verification of sustainability report contents. Therefore, this finding leads to the acceptance of the third hypothesis regarding the association between sustainability committees and the attestation of sustainability reports by an independent assurance service provider. This finding confirms several prior studies (Peters & Romi, 2015; Rossi & Tarquinio, 2017; Datt et al., 2018). Fourth, companies having a sustainability committee have a higher tendency to prepare and publish a sustainability report in accordance with GRI guidelines in line with Fuente et al. (2017). This evidence also signals that the sustainability committee has a conscience in following GRI guidelines and its contribution to the report quality. Thus, this result lends support to the fourth hypothesis regarding the association between sustainability committees and adopting GRI guidelines. Overall, the study shows that the corporate governance mechanism, except board size, is not yet influential in the establishment of sustainability committees. However, sustainability committees foster H&T firms' social responsibility posture towards stakeholders (Ullman, 1985).

The theoretical implications of the study are that stakeholder and resource dependency theories partially explain the establishment of sustainability committees to address stakeholders' concerns better. Because, while overall boards of directors predict sustainability committee existence, female and independent directors do not. This implies that larger boards, regardless of female and independent director proportion, are sufficient to provide necessary human resources in forming sustainability committees or they enhance their efficiency by establishing board sub-committees (Sekome & Lemma, 2014; Jiraporn et al., 2020). However, it should be noted that while female directors' positive role in the establishment of sustainability committees was supported by one of the robustness tests, independent directors' function on the committee formation was not supported in any test. The inconsistent finding concerning female directors' role on the existence of sustainability committees confirms the contradictory findings of prior studies such that while Al-Shaer & Zaman (2016) found a positive association, Eberhardt-Toth et al. (2019) found no significant association between board gender diversity and the existence of such committees. Moreover, the mean value of a 17.19% female proportion on boards may not be sufficient to become influential in corporate decision-making due to the dominance of male directors; women directors may have to obey group decision-making imposed by the majority.

Moreover, the insignificance of independent directors on the sustainability committee existence is a bit surprising since they are assumed to be imposed less pressure by shareholders and are expected to balance better the interests of shareholders and stakeholders (Naciti, 2019). Nevertheless, despite the high rate of board independence ratio (74.03%), their ineffectiveness on the sustainability committee presence may cast doubt over their actual independence (i.e., not being connected to owners) or their qualifications on sustainability issues (i.e., lack of CSR experiences and skills) (McCabe & Nowak, 2008; Gordon, 2007). A recent study found a non-significant association between board independence and environmental and social performance in the H&T sector, which confirms the current finding (Uyar et al., 2020). Concerning CEO duality, the study finds inconclusive results; insignificant result in the baseline analysis and negative and insignificant results in the robustness tests which confirm two competing views proposed in the theoretical part; CEO duality is against or in favor of the establishment of the board committees (Eberhardt-Toth et al., 2019; Jiraporn et al., 2020 respectively). This inconclusive outcome justifies further investigation; the qualifications of CEOs, if data exists, may be a predictor of sustainability committee existence. Moreover, the established

sustainability committees also constitute a resource with their skills and expertise that play a significant role in the CSR commitment of firms.

The study has several practical implications for H&T firms, policymakers, assurance service providers, and GRI. The study highlights the importance of a proven link among three inter-related facets of sustainability reporting. As the issuance of sustainability reports is becoming widespread and common among organizations, the stakeholders wonder whether the report contents are reliable or not. At this point, sustainability committees undertake a critical role in delivering what the stakeholders expect. They encourage firms to get external assurance for their sustainability reports from independent bodies that close or narrow the reliability gap arising from the discrepancies between CSR performance and disclosure. The sustainability committees also motivate firms to prepare their sustainability reports complying with the GRI framework, which enhances consistency and comparability of report contents and structures over the period and among peer companies. Moreover, it is also possible that sustainability committees may enable other directors, like independent and female, to focus on other tasks by freeing them from dealing with CSR issues, which ensures more efficient functioning of overall boards of directors. Thus, H&T firms are recommended to establish a specific sustainability committee to determine a corporate CSR agenda, to pursue CSR goals, and to assess the impact of outcomes on various stakeholders, including employees, customers, shareholders, and society, among others. Policymakers who are liable to ensure the credibility of corporate reports may develop policies considering the findings of the study, such as demanding or advising H&T firms to designate a specific sustainability committee with knowledgeable and expert members. Moreover, benefiting from the results of the study, assurance service providers may also suggest firms establish a sustainability committee that may also facilitate and make more efficient the works of independent assurance by establishing an internal tracking, reporting, and assurance system. Furthermore, the critical role of sustainability committees in inciting firms to comply with GRI guidelines is verified by the findings.

The study poses a limitation about its generalizability to non-listed H&T firms and other sectors. The existence of sustainability committees in small H&T firms may further be explored by another study, which may have different findings and implications as they may not have slack financial and human resources as much as larger firms. The study proposes several research avenues. First, how concentrated ownerships affect the likelihood of a sustainability

committee can be examined to seek answers to such questions "are family-firms, substantial managerial shareholdings, or other types of blockholding advocates of or against such committees?". Another future research avenue can focus on the value-relevance of establishing a sustainability committee like whether it is sufficient to augment firm value or its interaction with reporting, assurance, or GRI framework better generate incremental firm value. Additionally, contrary to expectations, future studies may deepen the investigation of why female and independent directors are not at all influential in establishing sustainability committees. Is it because of the insufficient proportion of those directors on the boards or lack of expertise on sustainability issues, or they fulfill the sustainability committee's role in the firms? Moreover, the paper considers only board gender diversity due to data availability; future studies might consider other dimensions of board diversity like the diversity of skills, nationality, and international experience, among others if data is available. Finally, other than the consequences identified in the study, what else roles can sustainability committees undertake in H&T firms might be explored, such as ecological or social innovations.

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Table 1: A summary of prior research on the association between sustainability (i.e., CSR) committees and CSR performance and CSR reporting

Author(s)	Sample and period	Dependent variable(s)	Independent variables	Significant result(s)
Mallin and Michelon (2011)	100 firms listed in the Business Ethics 100 Best Corporate Citizens (278 firm-year observations) 2005-2007	Social performance	Board independence Board competence Board gender diversity CEO duality Sustainability committee Board relational capital	Board independence (+) Board competence (+) Board gender diversity (+) CEO duality (-) Board relational capital (+/-)
Michelon and Parbonetti (2012)	114 firms listed in the Dow Jones Index 2003	Sustainability disclosure	Board independence Community influential board members Sustainability committee CEO duality	Community influential board members (+)
Amran et al. (2014)	113 firms operate in the Asia-Pacific region 2010	Sustainability reporting quality	Board size Board independence Board gender diversity Organizational vision and mission integrated with CSR value Sustainability committee Collaboration with non-governmental organizations (NGOs)	Corporate vision and mission combined with CSR value (+) Sustainability committee (+) Collaboration with NGOs (+)
Liao et al. (2015)	329 firms listed in the 2011 CDP FTSE350 2011	Greenhouse gas disclosure	Board gender diversity Board independence Environmental committee	Board gender diversity (+) Board independence (+) Environmental committee (+)
Biswas et al. (2018)	407 firms listed in the Australian Securities Exchange (2,188 firm-year observations) 2004-2015	Environmental performance Social performance	Board gender diversity Board independence Sustainability committee	Board gender diversity (+) Board independence (+) The presence of a sustainability committee (+)
Cucari et al. (2018)	54 Italian firms listed in the Milan Stock Exchange (215 firm-year observations) 2011-2014	Environmental, social and governance (ESG) disclosure	Board gender diversity Board age Sustainability committee Board independence	Board gender diversity (-) Sustainability committee (+) Board independence (+)
Hussain et al. (2018)	100 U.S. firms listed in the Global Fortune 2013 (152 firm-year observations)	Economic performance Environmental performance	Board size Board independence CEO duality	<i>Corporate environmental performance:</i>

		2007-2011	Social performance	Board diversity Board activity Sustainability committee	gender	Board independence (+) CEO duality (-) Sustainability committee (+) <i>Corporate social performance:</i> Board independence (+) Board gender diversity (+) Board activity (+) Sustainability committee (+) <i>Corporate social performance strengths:</i> Sustainability committee (+) <i>Corporate social performance concerns:</i> Sustainability committee (+)
Burke et al. (2019)		1,742 U.S. firms (11,458 firm-year observations) 2003-2013	CSR performance Corporate social performance strengths Corporate social performance concerns	Sustainability committee		<i>Corporate social performance strengths:</i> Sustainability committee (+) <i>Corporate social performance concerns:</i> Sustainability committee (+)
Chams and García-Blandón (2019)		239 firms listed in the Dow Jones Sustainability Index and 239 firms listed in the S&P Global BMI index (478 observations) 2017	Sustainability performance	Board size Board independence CEO duality Number of board committees Sustainability committee Board educational degree Board age Board gender diversity		Board size (+) Number of board committees (+) Board age (+) Board gender diversity (+)
Orazalin (2020)		109 U.K. listed firms (837 firm-year observations) 2009-2016	Environmental performance Social performance CSR strategy score	Sustainability committee		Sustainability committee (+)
Uyar et al. (2020)		172 H&T firms listed in the Thomson Reuters Eikon (940 firm-year observations) 2011-2018	CSR performance	Board diversity Board diligence Board independence Sustainability committee	gender	Board gender diversity (+) Board diligence (+) Board independence (+) Sustainability committee (+)

Table 2: List of variables^a

Variables	Definition
<i>CSR data:</i>	
SustCommittee	1 if a company has a specific sustainability/CSR committee, 0 otherwise
SustReport	1 if a company publishes a sustainability/CSR report, 0 otherwise
GRIframe	1 if a company follows GRI guidelines in preparing sustainability/CSR report, 0 otherwise
ExterAssur	1 if a company gets external assurance on its sustainability/CSR report, 0 otherwise
<i>Board characteristics:</i>	
BoardSize	The number of directors on corporate board
GendDiv	The ratio of the number of female directors to all number of directors on board (%)
BoardIndep	The ratio of number of non-executive directors to all number of directors on board (%)
CEOdual	1 if the same person occupies the CEO and the board chair roles, 0 otherwise
<i>Ownership structure:</i>	
FreeFloat	The ratio of number of freely traded shares to all number of outstanding shares (%)
<i>Financial variables:</i>	
FirmSize	Natural logarithm of total assets
Leverage	The ratio of total liabilities to total assets (%)
Profitability	The ratio of profit before tax to total assets (%)

^a Thomson Reuters Eikon database is the source of data for all variables

Table 3: Descriptive statistics

Full sample						Sustainability committee exist		Sustainability committee non-exist	
Variables	Obs	Mean	Std. Dev.	Min	Max	Obs.	Mean	Obs.	Mean
BoardSize	770	9.11	2.69	1.00	26.00	352	10.13	418	8.24
GendDiv	770	17.19	12.47	0.00	57.14	352	19.61	418	15.15
BoardIndep	770	74.03	15.67	0.00	100.00	352	75.72	418	72.61
FreeFloat	770	74.70	23.10	4.06	100.00	352	75.54	418	73.99
FirmSize	770	21.67	1.42	17.66	24.48	352	22.12	418	21.29
Leverage	770	63.72	34.00	7.60	362.90	352	64.55	418	63.02
Profitability	770	8.48	10.10	-62.88	48.12	352	8.40	418	8.56

Full sample				Sustainability committee exist		Sustainability committee non-exist	
	Categories	Freq.	Percent	Frequency	Percent	Frequency	Percent
SustReport	Doesn't Exist	392	50.91	47	13.35	345	82.54
	Exist	378	49.09	305	86.65	73	17.46
	<i>Total</i>	<i>770</i>	<i>100</i>	<i>352</i>	<i>100.00</i>	<i>418</i>	<i>100.00</i>
SustCommittee	Doesn't Exist	418	54.29				
	Exist	352	45.71				
	<i>Total</i>	<i>770</i>	<i>100</i>				
CEOdual	Doesn't Exist	431	55.97	202	57.39	229	54.78
	Exist	339	44.03	150	42.61	189	45.22
	<i>Total</i>	<i>770</i>	<i>100</i>	<i>352</i>	<i>100.00</i>	<i>418</i>	<i>100.00</i>
ExterAssur	Doesn't Exist	259	68.52	190	62.30	69	94.52
	Exist	119	31.48	115	37.70	4	5.48
	<i>Total</i>	<i>378</i>	<i>100</i>	<i>305</i>	<i>100.00</i>	<i>73</i>	<i>100.00</i>
GRIfame	Doesn't Exist	195	51.59	133	43.61	62	84.93
	Exist	183	48.41	172	56.39	11	15.07
	<i>Total</i>	<i>378</i>	<i>100</i>	<i>305</i>	<i>100.00</i>	<i>73</i>	<i>100.00</i>

Table 4: Spearman's Correlation analysis*Panel A: Full Sample (N = 770)*

	Variables	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
1	SustReport	1											
2	SustCommittee	0.6894*	1										
3	ExterAssur	0.4354*	0.4371*	1									
4	GRIframe	0.5686*	0.5411*	0.6054*	1								
5	BoardSize	0.3384*	0.3500*	0.2977*	0.3721*	1							
6	GendDiv	0.1613*	0.1881*	0.2514*	0.1101*	0.1362*	1						
7	BoardIndep	-0.0179	0.0963*	0.1345*	0.0911*	0.2102*	0.1975*	1					
8	CEOdual	-0.0022	-0.0261	0.0478	0.0272	0.0927*	-0.1254*	0.1512*	1				
9	FreeFloat	-0.0333	0.0357	-0.0214	-0.0735*	0.0134	0.3045*	0.3197*	0.0439	1			
10	FirmSize	0.3860*	0.3106*	0.3093*	0.3042*	0.4430*	0.0295	0.1109*	0.1953*	0.0247	1		
11	Leverage	0.0231	0.0732*	0.0049	0.0434	0.2071*	0.2698*	0.2276*	0.0768*	0.2012*	0.2309*	1	
12	Profitability	-0.0175	-0.0251	-0.0121	-0.0119	0.016	0.0452	-0.0078	-0.0334	0.0676	-0.2775*	-0.1049*	1

Panel B: SustReport: Exist (N = 378)

	Variables	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11
1	SustCommittee	1										
2	ExterAssur	0.2739*	1									
3	GRIframe	0.3264*	0.4831*	1								
4	BoardSize	0.1994*	0.2672*	0.3331*	1							
5	GendDiv	0.1874*	0.3002*	0.0367	0.0906	1						
6	BoardIndep	0.1346*	0.2220*	0.1713*	0.3270*	0.1950*	1					
7	CEOdual	-0.0532	0.0774	0.0494	0.0856	-0.3025*	0.1703*	1				
8	FreeFloat	0.1589*	0.0048	-0.0727	-0.0913	0.3892*	0.2157*	-0.0803	1			
9	FirmSize	0.0707	0.2495*	0.1698*	0.2986*	0.0053	0.2512*	0.3554*	-0.0115	1		
10	Leverage	0.1159*	-0.0072	0.0579	0.1717*	0.2968*	0.2489*	0.0128	0.1651*	0.2326*	1	
11	Profitability	0.0126	-0.0057	-0.003	0.0783	-0.003	-0.0681	-0.0033	0.0727	-0.2756*	-0.1980*	1

* $p < 0.05$

Table 5: Panel Logistic Regression with Random-Effects Estimator Analysis

Independent variables	(1) Model 1 SustCommittee	(2) Model 2 SustReport	(3) Model 3 ExterAssur	(4) Model 4 GRIframe
SustCommittee		4.36*** (7.76)	5.43** (2.49)	6.03*** (3.97)
BoardSize	0.48*** (2.99)	0.37*** (2.75)	0.043 (0.23)	0.11 (0.63)
GendDiv	0.013 (0.47)	0.039* (1.84)	0.23*** (4.00)	-0.0069 (-0.16)
BoardIndep	-0.015 (-0.58)	-0.0090 (-0.44)	0.063 (1.63)	0.077* (1.92)
CEOdual	-0.72 (-0.86)	-0.24 (-0.39)	0.64 (0.47)	0.72 (0.60)
FreeFloat	-0.00013 (-0.01)	-0.0098 (-0.73)	-0.052* (-1.94)	-0.038 (-1.49)
FirmSize	2.11*** (5.30)	0.98*** (3.73)	1.49*** (2.67)	0.38 (0.73)
Leverage	0.012 (1.08)	-0.014 (-1.45)	-0.037* (-1.80)	0.0081 (0.73)
Profitability	-0.028 (-1.02)	0.012 (0.54)	0.022 (0.41)	0.014 (0.41)
Constant	-51.3*** (-5.92)	-25.2*** (-4.30)	-45.7*** (-3.47)	-18.8 (-1.61)
<i>N</i>	770	770	378	378
χ^2	50.25***	99.64***	24.28***	20.74***

t statistics in parentheses: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Model 1 and Model 2 are based on full sample ($N = 770$)

Model 3 and Model 4 are based on a sub-sample of the firms with existence of CSR Sustainability Reporting ($N = 378$)

Table 6: Multi-Level Logistic Regression Analysis

Independent variables	(1) Model 1 SustCommittee	(2) Model 2 SustReport	(3) Model 3 ExterAssur	(4) Model 4 GRiframe
SustCommittee		3.39*** (6.28)	2.94*** (3.66)	2.51*** (4.44)
BoardSize	0.44*** (2.82)	0.40*** (2.80)	0.11 (1.25)	0.18** (2.21)
GendDiv	0.0080 (0.30)	0.034 (1.49)	0.12*** (4.90)	-0.014 (-0.71)
BoardIndep	0.0020 (0.08)	0.025 (1.07)	0.042** (2.09)	0.0045 (0.25)
CEOdual	1.27 (1.46)	1.30** (1.97)	1.44** (2.58)	-0.13 (-0.28)
FreeFloat	0.036 (1.58)	0.010 (0.67)	-0.028** (-2.56)	-0.0028 (-0.28)
FirmSize	1.99*** (4.29)	1.16*** (3.87)	0.54** (2.46)	0.028 (0.15)
Leverage	0.023** (1.96)	0.0014 (0.16)	-0.028*** (-3.54)	0.0039 (0.70)
Profitability	-0.021 (-0.84)	0.012 (0.54)	0.046** (2.01)	0.019 (1.08)
Constant	-51.0*** (-4.86)	-33.1*** (-4.80)	-19.9*** (-3.72)	-4.15 (-0.92)
<i>N</i>	770	770	378	378
χ^2	35.70***	83.10***	40.83***	28.64***

t statistics in parentheses: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Model 1 and Model 2 are based on full sample ($N = 770$)

Model 3 and Model 4 are based on a sub-sample of the firms with the existence of CSR sustainability reporting ($N = 378$)

Country, sub-sector, and firm are defined as the multi-level

Table 7: Rare Events Logistic Regression

Independent variables	(1) Model 1 SustCommittee	(2) Model 2 SustReport	(3) Model 3 ExterAssur	(4) Model 4 GRIframe
SustCommittee		3.29*** (14.11)	2.33*** (4.39)	1.95*** (5.25)
BoardSize	0.24*** (6.00)	0.092** (2.20)	0.12** (2.19)	0.19*** (3.39)
GendDiv	0.025*** (3.79)	0.030*** (3.88)	0.095*** (5.41)	-0.0023 (-0.20)
BoardIndep	0.0029 (0.50)	-0.016** (-2.25)	0.025** (2.52)	0.018** (2.36)
CEOdual	-0.32* (-1.93)	0.00019 (0.00)	0.84*** (2.65)	0.076 (0.28)
FreeFloat	0.00085 (0.23)	-0.011** (-2.24)	-0.020*** (-2.88)	-0.012** (-2.18)
FirmSize	0.33*** (5.03)	0.56*** (5.86)	0.38*** (3.35)	0.071 (0.72)
Leverage	-0.0053** (-2.13)	-0.012*** (-3.55)	-0.023*** (-3.47)	-0.0026 (-0.65)
Profitability	0.0067 (0.79)	0.025** (2.32)	0.019 (1.32)	0.0033 (0.27)
Constant	-9.87*** (-6.97)	-12.5*** (-6.57)	-14.0*** (-5.33)	-5.46** (-2.56)
N	770	770	378	378

t statistics in parentheses: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Panel Logistic Regression with Random-Effects (independent variables lagged by one year)

Independent variables	(1) Model 1 SustCommittee	(2) Model 2 SustReport	(3) Model 3 ExterAssur	(4) Model 4 GRIframe
SustCommittee _(t-1)		5.21*** (7.05)	2.41* (1.65)	3.53** (2.32)
BoardSize _(t-1)	0.47** (2.43)	0.33** (2.03)	0.44 (1.58)	-0.082 (-0.28)
GendDiv _(t-1)	-0.0079 (-0.21)	0.051* (1.80)	0.38*** (2.92)	-0.016 (-0.22)
BoardIndep _(t-1)	-0.044 (-1.46)	-0.024 (-1.01)	-0.016 (-0.33)	0.053 (1.20)
CEOdual _(t-1)	-1.60 (-1.54)	-0.40 (-0.53)	2.27 (1.00)	-0.50 (-0.26)
FreeFloat _(t-1)	0.0016 (0.07)	-0.017 (-1.04)	-0.035 (-0.94)	-0.029 (-0.51)
FirmSize _(t-1)	1.88*** (4.18)	1.19*** (3.60)	0.94 (0.61)	1.73* (1.90)
Leverage _(t-1)	0.0075 (0.54)	-0.022* (-1.74)	-0.039 (-0.74)	0.0079 (0.48)
Profitability _(t-1)	-0.060 (-1.52)	0.010 (0.34)	-0.080 (-1.11)	0.046 (0.65)
Constant	-41.9*** (-4.40)	-27.4*** (-3.85)	-33.9 (-1.00)	-43.7** (-2.34)
<i>N</i>	598	598	312	312
χ^2	36.22***	78.02***	12.80***	13.04***

t statistics in parentheses: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix

Table A1: Country–year firm records

Country of headquarter	2013	2014	Year 2015	2016	2017	2018	Total
Australia	11	13	14	15	15	17	85
Bahrain	0	0	0	1	1	1	3
Brazil	0	0	0	0	0	1	1
Canada	3	3	4	4	4	4	22
China	1	1	1	1	2	5	11
France	2	2	2	3	3	3	15
Germany	1	1	1	1	1	1	6
Gibraltar	0	0	0	1	1	1	3
Greece	1	1	1	1	1	1	6
Hong Kong	6	6	6	7	8	8	41
Ireland; Republic of	1	1	1	1	1	1	6
Isle of Man	0	0	0	1	1	1	3
Italy	1	1	1	1	1	1	6
Japan	4	4	4	4	4	4	24
Korea; Republic (South Korea)	1	1	2	2	2	2	10
Macau	3	3	3	3	3	3	18
Malaysia	3	3	3	3	3	3	18
Malta	0	0	0	1	1	1	3
Mexico	0	0	0	0	1	1	2
New Zealand	1	1	2	2	2	2	10
Philippines	1	1	1	1	1	1	6
Singapore	1	1	1	1	1	1	6
South Africa	5	5	6	6	6	6	34
Spain	1	1	1	1	1	1	6
Sri Lanka	1	1	1	1	1	1	6
Sweden	0	0	0	0	0	1	1
Taiwan	1	1	1	1	1	1	6
Thailand	0	1	1	1	1	1	5
United Arab Emirates	0	0	0	0	1	1	2
United Kingdom	17	17	18	20	20	21	113
United States of America	26	27	40	56	68	74	291
Uruguay	0	0	0	0	0	1	1
Total	92	96	115	140	156	171	770