

# Board Characteristics, Sustainability Steering Committee and E-Waste Information Disclosure: A Conceptual Framework

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**Abstract:** Environmental sustainability has become a buzz word in today's business. Corporate firms are urged to disclose their environmental practice, including the ways of managing the waste. In the digitalization era, waste from electrical and electronic appliances (e-waste) has increased exponentially, thus triggered corporate firms to report their commitments in managing their e-waste. The purpose of this study is to conceptually explain factors that influence e-waste information disclosure. By utilizing the virtue ethics theory, this study believes that board characteristics such as board size, board independence, board meeting, board gender diversity may give impact to e-waste information disclosure. Furthermore, the study also believes that, and the presence of sustainability steering committee may enhance corporate firms to disclose their e-waste information disclosure.

**Keywords:** *Board characteristics, board size, board independence, board meeting, board gender diversity, sustainability steering committee, e-waste info disclosure*

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## 1.

### Introduction

In this era of globalization, environmental problems are becoming increasingly significant. One major environmental problem is poor waste management, and of late, the media and research studies have highlighted the poor management of electrical and electronic waste (e-waste). E-waste is a form of discarded electrical and electronic equipment that releases hazardous materials into the waste stream [1]. It contains veritable toxic materials,

such as mercury, lead and cadmium [2], which may critically bring negative impacts to the environment, human beings, and animals. A past study revealed that e-waste exposure can cause an increase in spontaneous abortions, stillbirths, and premature deliveries [3].

A study by United Nations University (UNU) in 2017 has reported that by 2050, the number of e-waste produced would have more than doubled, reaching approximately 111 million tons per year [4]. While the latest global e-waste monitor, 2020 revealed that the total weight of global

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e-waste generation increased to 2.5 million metric tons (Mt) on average from 51.8 million Mt in 2018 to 58.6 million Mt in 2019, which is enough for the e-waste to reach the moon and back twice. Under the current situation, the generation of e-waste might increase more than expected due to the Covid-19 pandemic and lockdown. When the world faces the new normal, information and communications technology (ICT) becomes more important for communication and working [5]. As a result, the use of gadgets and appliances would also increase, as is e-waste.

By looking at the statistics, Asia generated the highest quantity of e-waste in 2019 at 24.9 Mt. From this figure, 364kt of e-waste was generated in Malaysia [1]. Within three years, the country has generated an increase of 84 kt, which equals 1 kg per capita of electronic waste in Malaysia. The amount is staggering, and unless something is done, Malaysia would become a dumping cite of e-waste which would give harm to environmental sustainability.

Inappropriate disposal and treatment of e-waste has significant consequences for the environment, human health, and the mission to achieve the Sustainable Development Goals which included in The Twelfth Malaysia Plan (12MP). As a result of the government's environmental commitment, all publicly listed companies have been required to declare their sustainability pledges beginning in 2016[6]. E-waste reporting is essential for a company's proper e-waste management. However, e-waste was reported by only 7.5 percent of the 789 companies listed on Bursa Malaysia Securities Berhad's stock exchange, according to a study by [7].

Previous studies in the sustainability disclosure area have focused more on environmental reporting [8]–[12], while research on e-waste information disclosure is very limited even though e-waste issues have been there for quite some time now [7] [13]

In every company, environmental management is critical. The board of directors play a vital role in this regard because it is the board's fiduciary responsibility to oversee its strategy, risk, and capital allocation [14]. Because of the gap in previous studies, this research will specifically study the impact of board characteristics on e-waste information disclosure through the virtue ethics theory lens. The theory

posits moral excellence, goodness, chastity, and good character in the board of directors. It shows that a board with the best characteristics can lead to quality environmental management.

Aside from board characteristics, the sustainability steering committee will be included in the research model to fill a gap in the previous literature. The Malaysia Code on Corporate Governance requires every public listed company to identify a designated person within management to be strategically dedicated to sustainability matters [15]. A sustainability steering committee is a group of experts who can assist businesses in developing plans to enhance their social and environmental performance [16]. With the help of experts, environmental reports can be produced effectively [17].

The relationship between board characteristic, sustainability steering committee and e-waste information disclosure in Malaysian public listed companies is gaining attention from researchers. Therefore, its is the objective of this paper to conceptually explain the relationship between the board characteristics and sustainability steering committee with e-waste information disclosure.

## 2. Literature Review

### 2.1 E-waste Research in Malaysia

To improve the environmental reporting in Malaysia, Bursa Malaysia had made a change several years ago. The Bursa Malaysia Sustainability Reporting Guidelines 2nd Edition 2018 has emphasized the importance of companies disclosing their e-waste (electrical and electronic waste activities in the telecommunications and technology industries to demonstrate their environmental commitment [18].

E-waste is electrical and electronic waste which implies that the item has no future use and that the owner regards it as worthless or excess in its current state [19]. E-waste can also be known as broken, non-working, obsolete electronic appliances, such as television and refrigerators.

E-waste contains various materials that are disposed of and recycled in various ways. If not properly managed, it can be damaging to the environment and human health in various

ways [1]. The presence of toxic metals and chemical substances from e-waste are harmful and hazardous [2]. E-waste management is also essential for reaching the Sustainable Development Goals. The ambitious 2030 Agenda for Sustainable Development was endorsed by the United Nations and all member countries in September 2015.

Previously, many kinds of research have been produced for environmental reporting in general. A few research have taken part in developed and developing countries [10], [12], [20]–[28]. While only several studies about e-waste reporting has found [7]. Even though e-waste disclosure is very important to achieve Sustainable Development Goals, unfortunately, studies on e-waste disclosure in Malaysia are still limited. E-waste needs more attention and focuses from every industry because every sector contributes to e-waste production in a significant volume or small volume.

## **2.2 Board Characteristics and Environmental Reporting**

As there is limited literature regarding e-waste information disclosure, literature of environmental reporting from past studies will be used as existing literature since it is the most relatable to e-waste information disclosure and e-waste information disclosure is part of environmental reporting.

### *2.2.1 Board Size and Environmental Reporting*

The impact of board size on environmental reporting has been studied in the past. The premise that has more significant number of board sizes will enhance environmental reporting due to the knowledge shared by the board of directors [29]. According to certain research, the size of the board has a favorable effect on environmental and sustainability reporting [12], [30]. Corporate transparency can be fostered when a business has a big board of directors because of the available resources and pool of expertise [31].

Despite the findings above, previous studies show a different perspective of the impact of large board size towards the board on environmental reporting [8], [9], [32]–[35]. Several studies, however, show that significant differences do exist, even if the results are contradictory. There is negative impact of large board size. Larger boards are much less effective than small boards, according to [36],

because when boards have too many members, agency difficulties might arise because some directors may join as free riders.

However, there are mixed findings of the influence of board size on environmental reporting in previous studies. Different contexts will be applied for further research since the studies about the impact of board size on environmental reporting are already saturated.

### *2.2.2 Board Independence and Environmental Reporting*

Board independence is a useful indicator of how well the board is being monitored because it examines the competence of the persons who serve on it. The board of directors oversees the corporation's daily operations and is directly responsible for establishing and implementing corporate strategy [37]. An independent director can give effective leadership by honestly marshalling the board's priorities [15].

A previous study shows that independent board positively impacts environmental reporting [8], [34], [38], [39]. It shows that increasing the number of independent non-executive directors has a significant impact on environmental reporting clarity [34]. It shows that conflict of interest issues in environmental reporting can be prevented with more independent board members. The more independent a board member is, the more likely he or she is to disclose environmental information [38], [39].

However, this is contrary to the finding of a number of prior studies which found a negative association between board independence and environmental reporting [12], [35], [40]–[42]. There are also prior studies that found no relation between board independence and environmental reporting in Malaysia, based on prior studies. Despite the board's independence, they learn that environmental facts are not always viewed as vital to its performance [41], [42].

The findings of prior studies on the effect of board independence on environmental reporting are not conclusive and may need to be conducted in a different setting.

### *2.2.3 Board Meeting and Environmental Reporting*

A board meeting is a meeting of a company's board of

directors where the company's policy and major decisions about the company's future operations are discussed. According to [43], board activity is measured by the frequency of board meetings, and previous research and [8] found that has linked board meetings to the number of board of directors' meetings held each year. More frequent board meetings are connected to ethical corporate social responsibility reporting, particularly the ability to meet legal conflict mineral reporting obligations [44].

A board meeting and environmental reporting have a beneficial association [21]. The previous study stated a relationship between a board meeting and environmental reporting disclosure. Board meetings can positively impact environmental reporting because they allow directors to stay informed and up to speed on important changes inside the firm, allowing them to handle developing critical concerns more quickly [45].

Despite prior evidence, a few studies show disagreement with the positive relationship between a board meeting and environmental reporting [46], [47]. A study has found board meeting has an insignificant relationship with environmental disclosure in the plantation industry [47]. The insignificant relationship between a board meeting and environmental reporting can be caused by the short time that directors spend together in the board meeting is not used for the meaningful exchange of ideas [43].

#### 2.2.4 Board Gender Diversity and Environmental Reporting

Diverse perspectives on the board add to a wide range of experiences and information, allowing for better strategic decision-making. As a result, gender diversity on boards became a well-known trait [48], [49]. If the board of directors is gender diverse, it is more probable that different types of expertise, ideas, and viewpoints will be included in the decision-making process [50]. It will improve the companies' performance and efficiency [48].

According to [51], men and women behave differently when it comes to ethics. Female directors have their ideals and are more concerned with stakeholders than male directors. The inclusion of a female director on a board of directors improves the quality of sustainability reporting [52]. This enhanced supervision by female directors

improves companies disclosure [53]–[55]. [56] found that women directors are more socially responsible. It shows that women directors have virtue as a character trait, and this virtuous character can lead to good action.

Nevertheless, [57] found a non-relationship between the board gender and environmental reporting. The study stated that both genders had an insignificant influence on environmental reporting disclosure in non-financial companies from 2011 until 2013 in Malaysia. Evidence of prior studies is not conclusive and need further research in a different setting.

#### 2.3 Sustainability Steering Committee and Environmental Reporting

The board sub-committee in environmental issues is known as the sustainability steering committee. The sustainability steering committee's roles and duties include aiding management with strategy formulation and monitoring sustainability performance regularly [58]. The board needs to appoint committed persons within management to strategically manage sustainability, including incorporating sustainability issues into the company's operations [15]. MCGG has recently empowered environmental reporting within publicly listed companies [15].

Previous studies found that the environmental disclosure would perform better with the environmental committee ([17], [54], [58]–[61]) Previous studies found that improving environmental reporting through an effective board significantly reduces knowledge asymmetry. As a result, having a strong board is essential for guaranteeing appropriate environmental reporting [17], [59].

However, on the contrary, a number of studies found that the sustainability steering committee positively influences environmental reporting. The study by [62] showed that sustainability steering committees have an insignificant influence on corporate social responsibility reporting. An empirical study by [63] also supported that the sustainability steering committee has no impact on corporate social responsibility reporting.

The previous study shows a mixed finding of the influences of sustainability steering committees towards environmental and environmental reporting. However, studies on sustainability steering committees are still

limited and new in environmental reporting research field.

## 2.4 Research theory

### 2.4.1 Virtue ethics theory

Moral perfection, goodness, purity, and excellent character are the centre of virtue ethics theory. Virtue is a state of mind in which one acts in a specific scenario. It is not a habit in the sense that a practice might be mindless [64]. This theory involves two factors, the affective and intellectual and they are likely intertwined. In virtue theory, the affective idea means performing the right thing while having happy sentiments, and the brilliant idea means doing the right thing for the right reason [64]. Other than that, intellectual virtues are closely linked to this ability to consider various facts. They have the distinct value of being intellectual and practical simultaneously [65]. These virtues' intellectual activity necessitates study and meditation on concepts and principles, realizing that this act must be of content and goodness [65].

[66] has discovered that virtue ethics is a beneficial framework for driving virtuous business activity and promoting ethical company culture. It is a significant discovery because ethical corporate practices and a strong ethical culture are vital. Virtue ethics allows board members to emphasize inspirational standards of ethics, motivating them to do good even when they are not being watched [67]. According to virtue ethics theory, virtue ethics can also be easily integrated into company codes of ethics, inspiring the board of directors to have a good character that can act as a buffer against future crises [66]

In virtue ethics, a person is regarded ethically correct if their behaviors demonstrate a certain virtue, according to [68]. While a virtuous character is expected to lead to good conduct, it is worth mentioning that virtuous character and proper action do have a link. The virtue ethics theory was adopted in this study because it clearly shows that board characteristics and sustainability steering committee can be translated into better e-waste information disclosure by using virtue ethics theory. Such a perspective leads to the strong support of the theoretical framework of this research.

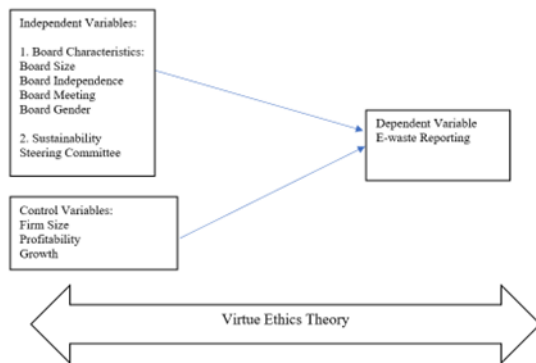
For board size, from the perspective of virtue ethics theory, a larger board can contribute to ethical behavior. It consists

of more ethical members conducive to ethics disclosure because virtue ethics drives virtuous conduct and can lead to ethical corporate culture. The board will be more focused on the importance of moral attitude and integrity [44], [66]. Other than that, by virtue ethics theory, board independence can be related to this theory because an independent director can give effective leadership better than a non-independent director. An independent director can provide effective leadership by objectively marshalling the board's priorities [69]. An independent director must be free of any influence that might impact their professional judgments, integrity, or objectivity regarding the company's economic goals, including environmental concerns [35]. It shows independent boards will act more ethically.

The virtue ethics theory also shows that having more frequent board meetings impacts ethical corporate social responsibility disclosure [44]. It also boosted board supervision and scrutiny, reduced agency costs and information asymmetry, and almost always improved disclosure quality [70]. From virtue ethics theory perspective, virtue ethics can also be easily integrated into business codes of ethics, inspiring the board of directors to have a good character that can act as a buffer against a future crisis [66]. Virtue ethics provides an opportunity to emphasize inspirational codes of ethics, encouraging board members to do good even when they are not being observed. A paradigm that emphasizes human character and integrity can be used to resolve a corporate problem effectively [67]

Next, in the perspective of virtue ethics theory, board gender can be relatable in this theory context because research found that women directors are more responsible and improve companies' disclosure, especially in environmental reporting [52], [53], [55], [56]. According to [68], virtues are a character attribute displayed in activity beneficial to anyone. A person is deemed morally right in virtue ethics if their acts demonstrate a particular virtue [68]. While a virtuous character is expected to lead to good behavior, it is worth mentioning that virtuous character and proper action do have a relationship [68].

Lastly, virtue ethics theory suggests there is a connection between the theory and sustainability steering committee. A study shows that the sustainability steering committee could help create environmental awareness to the employees about the implication of the work and the responsibility to reduce harmful effects [71]. Positive traits commonly seen as shaping the extent to which a person is morally right are known as virtuous traits in virtue ethics theory [67]. It is worth noting that all behaviors, including ethical behavior, can be taught through observations and adaptations [67]. Virtue ethics theory is relatable to sustainability steering committee because sustainability steering committee can show the employees of the company the positive traits.



## 2.5 Research Framework

## 3. Conclusion

This study will contribute to the body of knowledge as it shows crucial board characteristics and sustainability steering committee variables with e-waste information disclosure. Specifically, the findings of this study may provide novel empirical insights in the context of the virtue ethics theory, and more specifically, on the influence of board characteristics. This research will add to the numerous attempts to better understand board characteristics. The study will show the sustainability steering committee as a new variable and its influence on e-waste information disclosure.

This study can contribute to Bursa Malaysia's

sustainability policy to the best of the researcher's knowledge and practice. This study can reveal the role of board characteristics in e-waste information disclosure and the importance of the sustainability steering committee in e-waste disclosure. Previous studies have insufficient proof of the influence of board characteristics and sustainability steering committees on e-waste information disclosure in Malaysia.

This study will also produce more contributions to the e-waste information disclosure model. Past studies have focused on e-waste information disclosure with the information extracted from the environmental, social, and governance (ESG) reports on the aspect of the environment (e-waste reduction) reporting [7].

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