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The Trend of Voluntary Carbon Disclosure Practices in Malaysia: Substantive or Symbolic?

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Abstract
Purpose: This study aimed to examine the trend of voluntary carbon disclosure (henceforth referred to as VCD) practices in Malaysia. It also intended to examine whether the pattern VCD practices are substantive or symbolic.
Design/methodology/approach: A content analysis of annual reports was used to examine the quality of VCD against a checklist developed by Abd Rahman et al. (2019). The study sample comprised 1,675 annual reports of companies listed on Bursa Malaysia over a period of seven years from 2010 to 2016. Data were then analysed using the Friedman and Wilcoxon signed-rank tests.
Findings: Findings show that the quality of VCD, both substantive and symbolic disclosure practices, had significantly increased during the study period. Moreover, current VCD practices are largely substantive in nature and is intended to reflect accountability.
Research limitations/implications: The results can be merely interpreted only across the target samples, which covers a study period of seven years.
Practical implications: Findings draw the attention of the manager to specific aspects of VCD that require improvement and provide an empirical basis for policy makers and regulators when developing future VCD regulatory guidelines.
Originality/value: This study provides insights into the journey of VCD practices in Malaysia and contributes to the corpus of contemporary literature by examining substantive and symbolic disclosures in the context of developing countries.

Keywords: Carbon Disclosure, substantive Disclosure, Longitudinal, symbolic Disclosure, Substantive or Symbolic

Introduction

In light of evidence regarding man-made causes of climate change, businesses are increasingly under pressure to reduce carbon dioxide (CO_2) emissions. This seems to be particularly relevant to the so-called "carbon-intensive industries", which contribute to environmental degradation

and therefore, more prone to be targets of social activism and critique (Ganda, 2013; Huisingh et al., 2015; Kolk & Pinkse, 2008). Accordingly, there is a stronger need for companies operating in these industries to justify their existence as moral agents. The rise in VCD practices is seen as a response to this demand. VCD is particularly important as a guide for environmental protection (Tang et al., 2019), an essential part of climate change mitigation activities (Nik Ahmad & Hossain, 2019) and a tool for legitimising a company's actions (Alsaifi et al., 2020). Carbon disclosure is not governed by current accounting standards, and is not required to be audited by external auditors (Borghei et al., 2018; Choi et al., 2020). Hence, companies have quite a lot of freedom to manipulate information and use their own preferences when releasing information (Datt et al., 2019). Several problems with VCD have restricted stakeholders and investors who have interest in a company's carbon performance when making informed decisions. Problems related to VCD features as well as insufficient content and quality of disclosures have failed to satisfy investors' requirements (Zhang & Liu, 2020). Even worse, availability and the quality of VCD remains locked in greenwashing problems (Burritt & Christ, 2016). VCD is prepared to portray the company as environmentally responsible without real environmental involvement and actual improvement in environmental performance (Rodrigue et al., 2013). The information presented can lead to errors in decision-making and also induce decision makers to change strategies (Vessey, 1994).

Hence, due to the aforementioned problems, there is a need for VCD that goes beyond greenwashing. Peculiarly, differentiation between substantive disclosure items (items that are difficult to replicate) and symbolic disclosure items (items that are general rhetoric and easier to mimic) is crucial for a better reflection of high-quality VCD (Borghei et al., 2018) and the production of accountable information in VCD (Huq & Carling, 2020). To date, many studies still lack examination of substantive and symbolic disclosure, particularly on a longitudinal basis (Comyns & Figge, 2015; Liesen et al., 2015). Research evidence on this issue is even more scarce in Malaysia.

Combined with the existing research gap, this study attempted to bridge the gap by dividing a firm's VCD style into two types, namely substantive (VCHD) and symbolic (VCSD) disclosure as well as to determine whether there is a significant change in VCD, VCHD and VCSD of Malaysian companies in carbon-intensive industries. This setting enables us to examine whether a company's VCD practices are substantive or symbolic, which would then provide evidence for future investigations into activities related to VCD practices in Malaysia. The main findings highlight the upward trend of VCD, VCHD and VCSD by Malaysian companies in carbon-intensive industries, which is in line with findings of recent international longitudinal studies. Moreover, companies' VCD practices shift from symbolic to substantive disclosures. This study provides information about VCD practices in Malaysia and contributes to the existing corpus of literature by examining substantive and symbolic disclosures in the context of developing countries.

Literature Review

Substantive or Symbolic Disclosures

It is hotly debated whether voluntary non-financial disclosures, such as VCD, exhibit accountability or are merely greenwashing (Huq & Carling, 2020). Most companies are eager to present themselves as "green," "sustainable" or "socially responsible" by making overly symbolic VCD (Jahn & Brühl, 2019). Clarkson et al. (2008), Khalil and O'Sullivan (2017) and Ong et al. (2016) describe substantive disclosures as the reported information that are verifiable against specific performance indicators and provide insight into a company's real commitment to sustainability as well as has a significant practical effect. Under this category, a company discloses information about a particular action by providing details and evidence about it and

each time the consent of the company's claim is confirmed. Thus, it is frequently viewed as more informative and credible because it is more objective and provides more precise data (Braam et al., 2016; Plumlee et al., 2015).

Whereas, symbolic disclosure is when a company makes a claim or discloses information about a particular action that is not actually dealt with in a serious manner (Khalil & O'Sullivan, 2017). For example, the company discloses information about certain actions to tackle an environmental problem or climate change issue without providing evidence about the actions and in fact there is no real effect of the claimed actions with the purpose of portraying the firm to be in alignment with social expectations (Zott & Huy, 2007). Symbolic disclosures can be easily mimicked and manipulated by companies (Clarkson et al., 2008). It characterised by a lack of credibility and substantiation, which does not indicate truthful disclosure (Bertomeu & Marinovic, 2015; Clarkson et al., 2008).

Bouten et al. (2011) suggested that voluntary reports can only be seen as a discharge of accountability if the disclosure concentrates substantive information. Disclosures should contain more substantive and quantified information to capture investors' attention and reflect the company's image to the public (Bertomeu & Marinovic, 2015; Xu & Liu, 2018). Selective substantive disclosure could indicate that the information provided is reliable and accurate, which helps convince investors and other stakeholders of trustworthiness in the company's environment practices and build a strong business reputation (Braam et al., 2016).

Trends in VCD and Hypothesis Development

Several studies have examined climate change in general and carbon disclosure practices in particular on a longitudinal basis to understand carbon disclosure motivation and shed further light on the process whereby carbon disclosure practices evolve over time. Majority of these studies identified an increased in total number and quality of disclosures in sustainability and/or annual reports (Borghei et al., 2016, Comyns, 2018; Comyns & Figge, 2015; Chithambo, 2013; Gu et al., 2013; Haque & Deegan, 2010; Kouloukoui et al., 2018; Momin et al, 2017; Talbot & Boiral, 2015). Some prior studies also provided evidence of a significant improvement in disclosure quality scores, which ranged between 59.5% to 113.87% (Choi et al., 2013; Comyns & Figge, 2015; Liu & Yang, 2018). Increase in the percentage of disclosure scores and quality reported by previous studies may be attributed to a particular factor. For instance, articulation of a specific set of regulative rules for addressing the climate challenge affects a company's disclosure behaviour (Mateo-Márquez et al., 2019). Aguiar and Bebbington (2014) reported that mean disclosure scores were higher after the UK ETS started, compared to the years before it started. Tauringana and Chithambo (2015) also revealed that GHG disclosures of 215 FTSE350 companies listed in the London Stock Exchange significantly increased after the issuance of guidelines through the Climate Change Act (CCA) and the introduction of DEFRA guidelines related to measuring and reporting GHG emissions. Liu and Yang (2018) and Borghei et al. (2016) also reported similar findings. The former shows the upward trend of corporate GHG disclosure and a significant improvement in disclosure scores was observed after the launch of EU ETS in 2005 and also the issuance of CCA in 2008. The latter reveals that the introduction of the NGER Act 2007 and the Australian ETS has an impact on the percentage increase of GHG disclosure of Non-GHG-registered companies. Besides the launch of the EU ETS, Australian ETS, the issuance of CCA and ratification of the Kyoto Protocol, Comyns (2016) found that disclosure based on the global reporting initiative (GRI) guidelines leads to better quality and more extensive reporting.

Not many studies have investigated substantive and symbolic disclosures on a longitudinal basis. Faisal et al. (2016) found that more substantive information was reported in annual and sustainability reports of 24 aerospace, air courier and airline companies listed in Forbes 2000

for both, 2011 and 2013. In addition, the authors reported that substantive information disclosed increased by 33.33% from 2011 to 2013, but increased merely by 10.5% across the same period for the sustainability reports of these companies. In contrast, Momin et al. (2017) found that disclosure practices are underpinned by reputation management objectives and reflected a symbolic rather than a substantive legitimation strategy. Consistent with legitimacy theory expectations, Momin et al. (2017) report that companies used carbon disclosure as a tool to achieve legitimacy.

Legitimacy theory has been widely used to explain the motivation behind voluntary disclosure. Naturally, legitimacy processes change from time to time due to different social contexts in which companies work (Samkin & Schneider, 2010). Changing societal values may cause dissatisfaction among members of society in terms of organisational operations, causing it to dramatically revoke the company's social contract (Samkin & Schneider, 2010). Based on legitimacy theory, companies incorporate social and institutional beliefs to maintain their stability and legitimacy in society (DiMaggio & Powell, 1983). The theory argues that climate change creates a legitimate threat to companies (Pellegrino & Lodhia, 2012). A longitudinal study provides insights into the interlinkages between disclosures and legitimation strategies to tackle legitimate threats (Laine, 2009; Samkin & Schneider, 2010). Legitimation strategies can be either reactive or proactive (Samkin & Schneider, 2010). Reactive legitimation strategies are employed when stakeholders are dissatisfied with some aspects of the company's performance, while proactive legitimation strategies are employed to prevent a legitimacy gap, as opposed to narrowing the gap (Lindblom, 1994). Companies will adjust the extent and type of disclosure in order to meet changing needs in social expectations and maintaining their legitimacy (De Villiers & Van Staden, 2006). VCD serves as a tool for companies to generate positive impressions, hence, gaining and maintaining organisational legitimacy (Lui & Yang, 2017; Patten, 1992). Therefore, the increase in VCD is a response to society's increased expectation (Liu & Yang, 2018). In line with the legitimacy theory and the review of previous studies, the following hypotheses were formulated:

H1: There is a significant change in total carbon disclosure (VCD) over the seven-year period in this study

H2: There is a significant change in substantive disclosure (VCHD) over the seven-year period in this study

H3: There is a significant change in symbolic disclosure (VCSD) over the seven-year period in this study

Method

This study examined the VCD of Malaysian listed companies active in "carbon-intensive industries". The study sample consisted of 1,675 annual reports of companies listed on the Bursa Malaysia over a period of seven years from 2010 to 2016. This particular period (2010 to 2016) was selected because it witnessed increased carbon awareness and was characterised by extensive policy debates on climate change and GHG emissions (Alsaifi et al., 2019; Jaggi et al., 2018). Important international conventions on climate change were marked and numerous significant developments in national policies focused on reducing GHG emissions and promoting energy efficiency also occurred during this time frame. All of these initiatives have contributed to a better understanding of the present and future impacts of climate change and possible mitigation measures in carbon-intensive industries that might have a significant impact on actions and the disclosure of carbon emission information.

This study relied on secondary data information regarding VCD quality derived from companies' annual reports and used the VCD checklist developed by Abd Rahman et al. (2019) to measure the quality of VCD. The checklist consists of 44 carbon-related information items (VCD) divided into two categories, 29 involving substantive disclosure items (VCHD) and 15 involving symbolic disclosure items (VCSD). This study employed unweighted indexes, whereby all indexed items were considered equally important, with "1" indicating the company's disclosure of an item of information and "0" weighted for non-disclosure. The final score is calculated as a ratio of the total disclosure score divided by the maximum possible disclosure by the company. In line with Faisal et al. (2019), if firms use a substantive approach to VCD, the VCD practices are expected to be associated with higher quality disclosures. The non-parametric Friedman test was used to determine changes in the overall VCD, VCHD and VCSD over the years. The Wilcoxon-Signed ranks test was performed to compare disclosure means of a particular item with the other years.

Findings

Descriptive statistics

Table 1 presents descriptive statistics of VCD, VCHD and VCSD of Malaysian companies in the carbon-intensive industry over a seven-year period of study. Results indicate that companies made minimal VCD, VCHD and VCSD disclosures in their annual reports with an average score of 6.57%, 4.55% and 2.03% respectively. The finding is comparable to the results of a previous Malaysian study as reported by Amran et al. (2012), who discovered a mean climate change disclosure value of 2.11%. In comparison to Darus et al. (2019), Ooi and Amran (2018) and Ufera et al. (2017), who discovered an average VCD value of 15.7%, 19.72% and 26%, respectively, this study had the lowest mean VCD value. Results for VCHD were consistent with Yin et al. (2019), who discovered a substantive environmental disclosure mean value of 4.411%, but the study reported a lower VCSD compared to Yin et al. (2019), with the average symbolic disclosure is 3.792%. In the Malaysian context, the results are comparable to Nik Ahmad and Ahmad Haraf (2013), who discovered the mean value for substantive environmental disclosure to be 2.5%. Nevertheless, Nik Ahmad and Ahmad Haraf (2013) reported that symbolic environmental disclosure (3.17%) was higher than substantive environmental disclosure.

Findings in Table 1 also reveal that the quality of VCD, VCHD and VCSD increased over the years with mean scores of 5.4%, 3.6% and 1.8% in 2010 to 8%, 5.7% and 2.3% in 2016, respectively. The upward trend of VCD, VCHD and VCSD shown by Malaysian companies in carbon-intensive industries was anticipated, as it is in line with recent international longitudinal observations (Aguiar & Bebbington, 2014; Borghei et al., 2016; Chithamb, 2013), Tauringana & Chithambo, 2015; Comyns, 2018; Comyns & Figge, 2015; Faisal et al., 2018; Haque & Deegan, 2010; Kılıç & Kuzey 2019a; Kouloukoui et al., 2018; Lui & Yang, 2017; Momin et al.. 2017; Talbot & Boiral, 2015).

Friedman and Wilcoxon Signed Ranks tests were performed to determine whether there were any significant changes in VCD, VCHD and VCSD scores during the seven-year period. The findings are presented in Table 2. Results of the Wilcoxon Signed Ranks test indicate that the differences in Pair 1 (Score 2010 - Score 2011), Pair 5 (Score 2014 - Score 2015) and Pair 6 (Score 2015 - Score 2016) are all statistically significant at the five percent level ($p < 0.05$). In addition, results of the Friedman's test reveal a significant change in overall VCD ($\chi 2 = 5.14$, $p = 0.000$) over the seven-year period of the study. Thus, H1, is supported.

Table 1: Descriptive statistics

Variables	Mean	Std. Dev	Min.	Max.	Skewness	Kurtosis
VCD2010	0.054	0.000	0.069	0.545	2.8392	15.7066
VCD2011	0.058	0.000	0.069	0.419	1.9928	8.2243
VCD2012	0.061	0.000	0.069	0.419	1.9041	7.7929
VCD2013	0.066	0.000	0.078	0.591	2.6338	14.1265
VCD2014	0.068	0.000	0.075	0.500	2.2021	10.0681
VCD2015	0.072	0.000	0.074	0.500	2.2201	10.5701
VCD2016	0.080	0.000	0.088	0.545	2.2373	9.5292
POOLED	0.066	0.000	0.075	0.591	2.3264	11.1237
VCHD2010	0.036	0.000	0.054	0.455	3.4772	21.2289
VCHD2011	0.040	0.000	0.056	0.326	2.3316	9.4985
VCHD2012	0.041	0.000	0.054	0.326	2.3919	10.3618
VCHD2013	0.046	0.000	0.063	0.523	3.2091	18.9238
VCHD2014	0.047	0.000	0.061	0.432	2.7326	13.5382
VCHD2015	0.051	0.000	0.062	0.432	2.7391	13.4004
VCHD2016	0.057	0.000	0.073	0.455	2.5455	10.8234
POOLED	0.045	0.000	0.061	0.523	2.8194	14.2724
VCSD2010	0.018	0.000	0.023	0.136	1.5533	6.2770
VCSD2011	0.018	0.000	0.022	0.093	1.0533	3.3755
VCSD2012	0.020	0.000	0.023	0.093	1.1265	3.6709
VCSD2013	0.020	0.000	0.024	0.140	1.3582	5.4355
VCSD2014	0.021	0.000	0.023	0.093	.8159	2.8438
VCSD2015	0.021	0.000	0.022	0.091	.77293	2.8624
VCSD2016	0.023	0.000	0.025	0.136	1.1061	4.4111
POOLED	0.020	0.000	0.023	0.140	1.1214	4.1794

Table 2: Friedman test and Wilcoxon test of difference in VCD, VCHD and VCSD

Pair		**Wilcoxon Signed Ranks Test**		**Friedman χ^2 Test**	
		Z	**Asymp. Sig (two-tailed)**	**χ^2**	**Asymp. Sig**
Total Disclosure (VCD)					
Pair 1	Score 2010 - Score 2011	-2.392	0.0167	5.14	p=0.000
Pair 2	Score 2011 - Score 2012	-1.895	0.0581		
Pair 3	Score 2012 - Score 2013	-1.449	0.1488		
Pair 4	Score 2013 - Score 2014	-1.940	0.0520		
Pair 5	Score 2014 - Score 2015	-2.153	0.0309		
Pair 6	Score 2015 - Score 2016	-4.217	0.0000		
Substantive Disclosure (VCHD)					
Pair 1	Score 2010 - Score 2011	-3.928	0.0000	5.25	p=0.000
Pair 2	Score 2011 - Score 2012	-1.785	0.0748		
Pair 3	Score 2012 - Score 2013	-2.339	0.0190		
Pair 4	Score 2032 - Score 2014	-1.127	0.2637		
Pair 5	Score 2014 - Score 2015	-1.877	0.0595		
Pair 6	Score 2015 - Score 2016	-3.351	0.0007		
Symbolic Disclosure (VCSD)					
Pair 1	Score 2010 - Score 2011	0.316	0.7522	3.11	p=0.002
Pair 2	Score 2011 - Score 2012	-1.954	0.0469		
Pair 3	Score 2012 - Score 2013	-0.787	0.4477		
Pair 4	Score 2013 - Score 2014	-1.610	0.1138		
Pair 5	Score 2014 - Score 2015	-0.195	0.8222		
Pair 6	Score 2015 - Score 2016	-1.928	0.0529		

With regard to VCHD, this study hypothesised that there is a significant change in the quality of VCHD over the seven-year period of the study (H2). As shown in Table 2, results of the

Friedman's test show a significant change in overall VCHD during the year of observation (χ^2 = 5.25, p=0.000). In particular, differences in VCHD scores for Pair 1 (year 2010 and year 2011), Pair 3 (year 2012 and year 2013) and Pair 6 (year 2015 and year 2016) as tested using the Wilcoxon Signed Ranks test are all statistically significant ($p< 0.05$). The findings conclude that there is a significant change in the quality of VCHD over the seven-year period of study. Hence, H2 is supported.

There are several possible explanations for significant changes in VCD and VCHD for the above-mentioned periods. In 2010, the Malaysian government started to respond to the global issue concerning carbon emissions (Abdul Hamid et al., 2015) by issuing the National Renewable Energy Policy at the national level and signed the Cancun Agreements at the international level to address the long-term climate change challenge. Under these agendas, Malaysian companies became part of the solution to reduce CO_2 by becoming engaged in efforts towards changing practices in response to climate change. Hence, environmental concerns were progressively emphasised by companies and this is reflected in the disclosure of carbon-related information provided by the companies. Results also indicate that the significant increase occurred after the introduction of MYCarbon reporting guidelines in 2013 and after the Kyoto Protocol's second commitment period (2013-2020) took place. These guidelines had stimulated the disclosure of carbon-related information by Malaysian companies in our sample. In 2014, Bursa Malaysia had launched the F4GBM index and its ensuing constituents and companies were forced to practice good sustainability initiatives and reporting. In addition, high profile discussions at international events, such as COP20, UN Climate Summit 2014, and the World Economic Forum's January 2015 annual meeting, had propelled companies to adopt and practice climate change reporting. Additionally, the launched of the Sustainability Framework in October 2015 by Bursa Malaysia which mandated PLCs to issue a narrative Sustainability Statement in their annual report had stimulated the disclosure of carbon-related information by companies.

As for the VCSD category, the Friedman test depicts significant changes (χ^2 = 3.11, p=0.002), while the Wilcoxon Signed Ranks Test shows significant differences between 2011 and 2012 (Pair 2 as indicated in Table 2). Based on the results, there is a significant change in the quality of VCSD over the seven-year period in this study. Therefore, H3 is supported. A viable explanation for the significant change in VCSD between 2011 and 2012 could be due to the effect of the global financial crisis. Several studies have shown that the global financial crisis had significantly affected the amount and quality of information disclosed. Generally, the global financial crisis caused a significant decline in global economic activity (Cevik et al., 2016). As in 2012, global economic growth continued with a downturn that had begun in early 2011. Malaysian companies in carbon-intensive industries did not escape the effects of the global financial crisis. During this period, investors were more concerned about the company's performance. This condition might have forced companies to get involved in more social and environmental activities to legitimise their existence (Ahmed Haji & Mohd Ghazali, 2012). According to Malafronte et al. (2016) and Ntim et al. (2013), maintaining market confidence during a financial crisis requires effective disclosure of pertinent information. Since a solid reputation facilitates companies entering new markets (Godos-Díez et al., 2018), Malaysian companies in carbon-intensive industries were intensely engaged in VCSD to create a symbolic image of environmental responsibility.

Overall, the findings conclude that there was a significant change in the quality of VCD over the seven-year period of this study. Consistent with predictions made by the legitimacy theory, there was a general tendency for the disclosure of carbon-related information in annual reports to increase significantly between 2010 and 2016, the period which arguably saw heightened societal concern about these issues (Van Zijl et al., 2017).

Discussion and Conclusion

This study aimed to examine the trend of VCD practices in Malaysia and determine whether the pattern of VCD practices by Malaysian companies in carbon intensive industries are symbolic or substantive. Investigations into the VCD practices revealed that the disclosure scores of these companies were relatively low. Possible reasons for the low level of VCD score is the absence of a statutory requirement that requires Malaysian public listed firms to disclose carbon information to the public, inadequate public participation, insufficient government supervision and the practices are still in its early development stages (Darus et al., 2019; Nik Ahmad & Hossain, 2019). In addition, there is a possibility that firms disclose limited carbon-related information because they consider carbon information as being sensitive information. Sensitive information can, in itself, become a legitimacy threat, and particular types of carbon information can become sensitive due to changes in societal norms or legislation (De Villiers & van Staden, 2006). In spite of the low level of VCD, Malaysian companies provided slightly better yearly disclosures, indicating that these companies were attempting to improve their accountability and meet stakeholders' information needs. The yearly increase in the accountability of Malaysian companies might be a response to increased environmental awareness in both the community and industry, especially after the experience of living in an air-polluted environment (Abdullah et al., 2020). Overall, the finding highlights that companies' VCD practices shift from symbolic to substantive disclosures. Findings demonstrate that the quality of carbon information, as disclosed by Borghei et al. (2016) and Faisal et al. (2016; 2019), suggests that disclosures by Malaysian companies in carbon-intensive industries seem to be more of a "behavioural management" approach rather than a "symbolic management" approach. From a theoretical perspective, a substantive disclosure can be interpreted as a form of accountability by a company's stakeholders. Thus, it can be concluded that current VCD by Malaysian firms is a form of moral responsibility that provides stakeholders with a moderated and detailed understanding of carbon-related issues from a strategic perspective (Abdullah et al., 2020).

This study contributes to the corpus of knowledge on VCD in two ways. First, this study reports findings on VCD in developing countries, which is an area that lacks focus by focusing on substantive and symbolic disclosures. Second, this study enriches the strategic legitimacy theory. Based on sample companies in Malaysian carbon-intensive industries, the companies adopted a substantive disclosure strategy to manage stakeholders' perceptions and enhance environmental legitimacy in the long-term. This study has several implications for organisations and policy makers. Findings draw the manager's attention to specific aspects of VCD that require improvement. Specifically, this study suggests that companies should expand substantive disclosure to exercise and portray their accountability. Findings also provide evidence on the current status quo of VCD in Malaysia and inform relevant regulatory authorities how VCD practice is taking shape over time, as well as provide an empirical basis for policy makers and regulators to develop future VCD regulatory guidelines or consider the introduction of mandatory VCD.

Results of this study must be interpreted in light of its limitations. First, the focus was on Malaysian companies involved in carbon-intensive industries, which extended over a seven-year period. The results cannot be generalised to include other developed or developing countries. It might also be useful for future research to examine the VCD of Malaysian companies and companies in other developing countries by considering time series data. Future studies should also focus on financial institutions and universities that have a diminished direct impact on the environment, but still have a significant role to play. Second, given that the proxy for substantive and symbolic disclosures was based on the disclosure index developed by Abd Rahman et al. (2019), this study cannot directly comment on accountable information in other

dimensions. Further research built on this study can incorporate other dimensions of accountable information into substantive disclosures.

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