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Environmental Disclosures of Sri Lankan Property Development Companies: Towards Legitimacy or Accountability

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ABSTRACT

The environmental concerns of the world have increased over time. With the increased pressure from the public and other stakeholders, organizations report on their environmental activities and the associated impacts. Businesses are driven by the rule that 'corporates have a responsibility beyond its basic responsibility to its shareholders' and accordingly, they are held accountable for their actions on society and environment in ways of communicating environmental-related information to the interested stakeholders. Accordingly, this study is designed to investigate the level of extent, quality and nature of environmental disclosures of Sri Lankan property development companies and concurrently judges whether the disclosures are in-line with either of the two concepts 'accountability' and 'legitimacy.'

The study has adopted a quantitative approach, followed by a content analysis with the application of Clarkson et al. (2008) and Tilt and Symes (2000) indexes. Out of (31) property development/real estate companies who were listed on the Colombo Stock Exchange, a sample of 20 companies were selected for the study. The study's findings revealed that property development companies' environmental disclosures are more towards exercising accountability than practicing legitimacy. The study will provide valuable insights for corporations and business personnel to further develop environmental disclosures towards long-term sustainability.

1. INTRODUCTION

The environment has become a crucial area in today's business world and businesses have a responsibility that extends over their primary responsibility. Therefore, organizations have started to record and report on the impact they caused to the environment and the actions that have been taken to mitigate those. Accordingly, concepts like Environmental Accounting (EA) and Environmental Management Accounting (EMA) have emerged. Bracci and Maran (2013) stated that during the last ten years after identifying the environment's importance, the concept called 'Environmental Management Accounting' emerged. Further,Setthasakko (2010) identified environmental management accounting as a tool to design, trace, and track the monetary and non-monetary value of organizations' environmental activities. As the authors explained, environmental management accounting is a reporting mechanism used to report the organization's environmental performance. Organizations are socially accountable because they use resources from the environment and society. Therefore, they have an obligation and a responsibility to give something back to society and the environment. This has been explained in the social contract theory. It explains that organizations are socially responsible and they have an obligation towards society.

Ashfaq and Rui (2019) stated that giving something back to the society in which businesses operate is the only way for organizations to achieve long term success. Further, they mentioned that in countries where Corporate Social Responsibility (CSR) is voluntary, companies are still under pressure to ensure that they have been performing their operations as responsible citizens and reporting on CSR activities. Due to that, organizations had to focus more on environmental disclosures. Similarly, China focused more on the risks and pitfalls when the increase in environmental disclosures became a new trend (Lei, Mol & Shuai, 2017). Also, they indicated that the actual amount and types of environmental information disclosed to civil society actors increased rapidly within one decade. The typical disclosures include but are not limited to information on environmental state, monitoring data, environmental impact assessment, environmental management performances, environmental audits, public environmental legislation,environmental inspections processes and results, responses to environmental complaints, accidents, etc. Public and other stakeholders' attention to environmental disclosures has been increased as they use those disclosures to make informed decisions (Mohamed, 2015). They further said that organizations have voluntarily increased social and environmental disclosure by using different sources and media to answer those information requirements. As a practice, businesses include environmental-related information in their annual reports and further, some businesses provide a separate sustainability report which includes environmental information. They include how their activities impacted the environment and what kind of actions they have taken so far in mitigating those impacts. Some organizations present a summary of the sustainable development goals that they have achieved. Ashfaq and Rui (2019) explained that to increase CSR reporting reliability in annual reports, companies may appoint an external expert to assure that the CSR report presented by the management provides a fair presentation of performance.

Further, Jariya (2015a) indicated that there seems to be an increased pressure on the organizations to improve the existing annual reports, which will capture the environmental concerns as well. As support and guide for businesses and organizations, some authoritative bodies/responsible bodies have provided environmental information guidelines. Those are the National Green Reporting System, Global Reporting Initiative, AA 1000 Series, The UN Global Compact's Communication on Progress and ISO 14001 Environmental Management. According to Hsieh (2012), ISO 14001 is the most widely used voluntary environmental initiative and it provides a systematic approach to compliance and continual improvement.

In supporting the background information, this study attempts to measure the level of environmental disclosures of Sri Lankan property development companies and further focuses on whether they are reporting and disclosing towards legitimacy or accountability. Accordingly, the study observes the extent, quality and nature of environmental disclosures in property development companies over five years starting from 2014 onwards (2014-2018). The researchers believe that a minimum period of five years is required to visualize better the extent, quality, and nature of disclosures. When referring to past literature, a relatively lesser number of studies have been carried out in the property development sector. Those studies have covered three years ending in 2012 (2010-2012).

Similarly, Ahmad & Haraf (2011) have considered property development companies' environmental disclosures across three years (2004-2006). They explain the importance of focusing on the property development sector due to the adversity of sector-specific activities. In the Sri Lankan context, several studies have considered all the companies listed on the Colombo Stock Exchange (CSE). Nevertheless, fewer studies have focused on property development companies. For example, Jariya (2015b) and Mohamed (2015) have studied the determinants of environmental disclosures in annual reports of Sri Lankan listed manufacturing companies. Further, the study of Dissanayake, Tilt and Xydias-Lobo (2016) has focused on the sustainability reporting by publicly listed companies in Sri Lanka. Accordingly, the past studies have focused on public listed companies' environmental disclosures up to the early twenties without paying much attention to sector-wise disclosures.

2. OBJECTIVES OF THE RESEARCH

In addressing the critical issue, researchers have developed two specific research objectives as follows:

1) To identify the extent, nature and quality of environmental disclosures of the property development companies.
2) To identify the trends in the environmental disclosures of these companies over five years (2014-2018).

3. REVIEW OF LITERATURE

3.1. Environmental accounting and related disclosures

The past literature reveals that the concept of environmental accounting has emerged in the 1960s and 1970s (Parker, 2005). It has further developed in the 1980s (Adams, 2004). Lee (1995) mentioned that the accounting profession's main concern was to protect the public interest initially. Gray (1993), as cited in Lamberton (2005) identified three methods of Sustainability Accounting (SA). Those are sustainable cost and full cost, natural capital inventory accounting and input-output analysis. Under sustainable cost and full cost, sustainable cost means the cost incurred to restore nature into the state before the firm's impact. Full cost means, Mathews (1993) as cited in Lamberton (2005) the cost which consists of all the costs, including organizations' economic, activities including social and environmental costs. Natural capital inventory accounting means recording natural capital stocks over time, with changes in stock levels used to indicate the (declining) quality of the natural environment. The input-output analysis considers the material and energy inputs and products and wastes outputs in physical units. Over time, Triple Bottom Line (TBL) accounting and the Global Reporting Initiative (GRI) concepts have come into prominence. According to Hsieh (2012) in effectively dealing with the environmental issues arising from the business environment, business entities have developed environmental management systems as a management tool. Jariya (2015a) indicated that corporate environmental disclosures have emerged as an exciting area for accounting academics and professionals.

Kuo and Chen (2013) explained the meaning of environmental disclosures in their research as; the information that indicates organizations' present, past and future environmental management activities and performance. Besides, Senn and Spring (2020) define Environmental Accounting Information (EAI)/disclosures as Environmental Expenditures (EEs) devoted to preserving the environment. This includes environmental expenses and investments, Environmental Liabilities (ELs) included in the statement of financial position, statement of comprehensive income, and notes to financial statements or disclosed in annual reports.Ahmad and Haraf (2011) explained the sub-categories of environmental disclosures comprise governance structure and management systems, credibility, environmental performance indicators, environmental spending, vision and strategy claims, environmental profile, and environmental initiatives. According to Kabir and Akinnusi (2012) organizations have focused more on community involvement issues. Further,Jariya (2015a) highlighted that much of the environmental disclosure items were reported under the sustainability reporting section and some of the items under the CEO report and the vision, mission and value statement. Dissanayaka et al. (2016) indicated that most entities report on sustainability either as a separate report, as disclosures throughout the annual report or as a separate sustainability report within the annual report. According to Ekundayo and Josiah (2020) Environmental Accounting Disclosure (EAD) has increasingly gained prominence in different parts of the world as businesses, corporations, and conglomerates. They now seek to optimize their value to ensure long-term sustainability by prioritizing environmental disclosure issues by an entity for the preparation of environmental financial statements.

3.2. Motivations for adapting environmental disclosures

Pressure from the public is also the main driver that influences corporates to have proper environmental disclosures. Clarkson et al. (2008) mentioned that poor environmental performers face more political and social pressure. Therefore, they try to increase environmental disclosures in changing the stakeholders' perceptions about the organization's annual performance. According to stakeholder theory, companies should respond to complex regulations and build trusting, engaging, and constructive dialogue with their stakeholders to develop a competitive advantage. Environmental disclosure about the firm's performance will help stakeholders understand how companies can effectively contribute to a more just and sustainable world (Baalouch *et al.,* 2019).In terms of the organization's size, Adam (2002) mentioned that decision making and reporting are highly dependable on the country of origin, corporate size and corporate culture. This study also argues that public pressure acts as a core initiative that forces companies to start reporting.

Further, the study has explained that reporting unfavorable/bad news enhances corporate credibility and image. Similarly, Deegan and Gordon (1996) explained that Australian companies had identified the benefit of disclosing negative information, which will increase the transparency and credibility of the reported information. Hsieh (2012) explained that increasing environmental consciousness also inspired hotels to take proactive actions to reduce hotel operations' negative impact on the environment through better management. The author highlights that large companies have identified the competitive advantage of environmental improvements and are more likely to disclose their environmental-related activities. KPMG (1993) as cited in Yusoff and Lehman (2009) indicated that reporting both the good news and bad news will increase their reports' credibility. If firms only report good news, then it will create suspicion about the credibility of their reports.

Further, Bewley and Li (2000) mentioned that under voluntary disclosure theory, disclosing good news and retaining awful news could be a matter of management incentives. Lodhia (2003) also explained the same thing as mentioned above. Said, Omar and Abdul (2013) have differently explained this. In identifying the environmental contractual obligations, chairman and Chief Executive Officer (CEO) of the company who intend to fulfill their social contract need to understand what is regarded as good and evil in the society and environment in which they operate.

There seems an absence of involvement of accountants in environmental accounting and reporting. Consequently, the number of experts in social and environmental matters is lesser and there is no precise regulation for the mandatory adoption of environmental accounting practices. According to Liu and Anbumozhi (2008) main factors that influence the disclosure of environmental information are the firms' environmental sensitivity and size. Likewise, Choi, Lee and Psaros (2013) explained that firm size, the level of carbon emissions and the quality of corporate governance affect the determination of voluntary carbon disclosure. Similarly, Rahman, Zain and Al-Haj (2011) explained that large companies tend to disclose more information than small companies. Lorenzo, Dominguez, Alvarez and Sanchez (2009) made the point that large-sized companies are thoroughly analyzed by the mass media, public opinion and governments, which encourages them to reveal more information regarding greenhouse gas emission. Simultaneously, they explained that low performing companies tend to disclose more information to make them attractive to different stakeholders. The same concern has been explored by Mohamed (2015) that, by being socially responsible large organizations try to obtain legitimacy for their actions.

Further, the author explained a positive relationship between the firm size and level of environmental disclosures. Ashfaq & Rui (2019) also have touched on this point as corporate characteristics (firm size, profitability, foreign listing and industry type) widely affect corporate social and environmental disclosures. Apart from that Alrazi, Villiers and Staden (2016) have found that organizations try to match their environmental disclosures with the level of public interest regarding their country's environment.

When examining the Sri Lankan context Jariya (2015b) mentioned in his study that there is a negative relationship between disclosure level and size of the company. Similarly, Belkaoui and Karpik (1989) stated that image building and public interest concerns are the reasons for the social performance and disclosure of that social information. Some authors such as Lorenzo et al. (2009), Islam (2011) and Jariya (2015b) explained that based on the industry or sector in which the company operates in the level of disclosures may vary. Company characteristics such as company size, industry sector, profitability and corporate governance mechanisms are the factors that affect the adoption of Corporate Social Responsibility (CSR) reporting practices (Ali, Frynas & Mahmood, 2017). Further, this study explains that prominent companies are highly affected by media, NGO and regulators regarding environmental and social issues. They explained that there is a significant difference in corporate social responsibility reporting between developed and developing countries. In developed countries, concerns of regulators, shareholders, creditors, investors, environmentalists, and the media are considered highly important. In developing countries, they only consider the influential stakeholders' concerns such as international buyers, foreign investors, international media and international regulatory bodies. Apart from those human capital characteristics such as chairman's age, an independent chairman, non-executive directors and a CEO with a law background could also influence the environmental reporting practices by entities (Said et al., 2013). Wang, Shen and Yang (2020) argue that the disclosure of environmental information improves the company's investment efficiency, which acts as a motive behind disclosing environmental information. The authors also state that the companies with better environmental performance prefer to disclose a higher level of environmental information than others.

3.3. Environmental disclosures in the local and international context

In Sri Lanka, environmental disclosures are voluntary and this has been explained by Jariya (2015a) and Mohamed (2015). Board size and dual leadership have a positive relationship with sustainability reporting, but with the board's female directors, there is a negative relationship with the sustainability reporting (Shamil, Shaikn, Ho & Krishnan,2014). They also explained that there is a positive relationship between firm size and sustainability reporting. Further, they mentioned a positive relationship between firm growth and sustainability reporting and a negative relationship between firm age and sustainability reporting. Similarly, Mohamed (2015) mentioned that older companies disclose more information than the new companies as they have identified the importance and associated benefits of disclosing detailed environmental information. Jariya (2015b) discusses that in Sri Lanka, large listed manufacturing companies disclose environmental information than small-sized companies. Further, this study reveals that firms with high profits/profitable firms do not disclose more social and environmental information than firms with low profits/unprofitable firms. Mohamed (2015) also touches on the same point where high profitable listed manufacturing companies do not disclose environmental information than low-profit manufacturing companies. However, Wijesinghe (2012) mentioned in his study; only a few companies are doing extensive CSR reporting, while other companies are not giving that much importance in this regard. In Sri Lanka, there is no clear guidance to disclose, as this information is not mandated. Hence, there is no consistency between companies.

When referring to the international context, Branco and Redrigues (2006) mentioned that attention for social responsibility reporting had been increased in the world. Because of the growing attention to environmental information by the public, organizations can not eliminate environmental activities. Therefore, by engaging in environmental activities, organizations try to make a better image and authors state that the best way to do that is to provide descriptions about environmental activities carried out by the firms (Yusoff & Lehman, 2009). As per Kuo and Chen (2013), when people are more concerned about environmental issues, organizations tend to provide more information regarding environmental activities through media or corporate social responsibility reports. Monteiro and Guzman (2010) also pointed out that stakeholders tend to reduce their impact on the environment and provide more information regarding environmental performance voluntarily because of the increased awareness of the environment.

Further, this study explains that after the issuance of the new accounting standard in Portugal, both the level of environmental disclosure and the number of firms disclosing environmental information has been increased during 2002-2004. Also, they stated that some companies in Portugal disclose more information voluntarily in their annual reports other than those required by the new standard. The increase in the CSR disclosures means that organizations have identified the necessity of reporting their social practices (Kabir & Akinnusi 2012).

Japanese organizations provide more information regarding environmental activities. They have established a separate department to handle environmental issues, have environmental specialists and do regular environmental audits (Kuo & Chen, 2013). Further to this, firms operating in environmentally sensitive sectors provide more information regarding environmental performance. They use their corporate social responsibility reports to create a better legitimacy image. In some countries, they publish an assurance environmental disclosure report, a verification report regarding the environmental disclosures (Giordano, Spring & Cho, 2018). Rahman et al. (2011) proposed that to create user confidence in the disclosure's truthfulness, social audits should be conducted. In Italy, the number of environmental management accounting registrations and the number of ISO 14001 certifications has been increased over time (Bracci & Maran 2013). Clarkson et al. (2008) indicated that if a firm with poor environmental performance is carrying out the environmental reporting only because of the legitimacy, that firm will provide more soft disclosures and will not provide their actual environmental performance while poor performers will disclose less or they will remain silent about their environmental performance. Most organizations tend to focus more on short term economic gains than long-term environmental and social sustainability (Setthasakko, 2010). It is found that the sensitive environmental sectors such as the oil and gas sector provide much lesser information about their environmental performance (Chatterjee & Mir, 2008). Most of the companies, regardless of whether they are environmentally sensitive or not, have demonstrated their commitment by playing an essential role in contributing to the growth and development of the community and the environment (Said *et al.,* 2013). Moreover, the findings of a real estate sector related case study highlight the fact that, because of the significant impact of buildings on the environment, the environmental objectives have been included as a priority in several European, real estate companies' strategies. The real estate sector consumes over 40% of the global energy annually, 30% of the raw materials, and 12% of the drinking water, generating 25%–40% of the solid waste and 20% of the total gas emissions (Rashidfarokhi, Yrjana, Wallenius, Toivonen, Ekroos & Viitanen, 2018). According to He and Loftus (2014), environmental reporting of better-performing companies also remains lower. In the Pakistan context, the level of environmental disclosure is relativelylow and companies prefer to report only on favorable implications (Ashfaq & Rui 2019). They also explained that Pakistan companies' corporate social responsibility strategies have the least concern about the environmental factor. They argue that it is a common situation in developing countries where environmental disclosures are not mandatory. The researchers have highlighted the importance of government mediation and the argument was that government participation in environmental reporting would increase the level of related disclosures (Rahman *et al.*, 2011).

4. RESEARCH METHODOLOGY

4.1. Research Framework

The study is theoretically backed by 'legitimacy theory', a theoretical stance that predicts companies' behavior towards managing and maintaining key stakeholders' perspectives through company disclosure (Khan, 2020). According to legitimacy theory, companies disclose social responsibility information to present a socially responsible image so that they can legitimize their behaviors to their stakeholder groups. The frameworkis based on the idea that a social contract exists between business and society (Paiva, 2020).

According to Williams and Adams (2013) legitimacy, is viewed in terms of an organization's relationship with various competing stakeholder groups with conflicting interests where the organization will be faced with different legitimacies. Accordingly, corporate social disclosure/ environmental disclosure is a mechanism that may be employed in developing legitimacy strategies. In this paper, the organizational legitimacy is used in investigating the strategic intentions behind the disclosure of environmental information by Sri Lankan property development companies.

4.2. Research Approach

The quantitative approach supports the study and a content analysis was carried out by using Clarkson *et al.* (2008) and Tilt and Symes (2000) indexes. The rationale behind the application of content analysis was that many scholars have used it in quantitative research studies. More data could be collected by using that approach by studying annual reports (Ashfaq & Rui, 2019). Additionally, this study utilized a longitudinal approach, which has been used to analyze the data set. Reasons for using a longitudinal approach is, many environmental researchers have used this approach as it can explain the disclosure practices of companies over multiple periods (Laine, 2009; Tilling & Tilt, 2010).

The property development sector was selected for the study, as it is an environmentally conscious sector and as there were fewer researches carried out in this sector. Smith, Yahya and Amiruddin (2007) mention that the property development sector is highly vulnerable to environmental concerns and hence it seems to be appropriate to analyze those companies' environmental disclosures.At the time of data collection, there were thirty-one (31) property development/real estate companies who were listed on the Colombo Stock Exchange (CSE). Annual reports of all the companies have been examined and from the 31 companies, twenty (20) companies have disclosed the environmental activities they carry out. Those twenty companies were selected as the sample of the study in carrying out the content analysis.

The study was supported by a pilot test carried out by the researcher to reduce the issues of data reliability and get familiarized with the data set. The twenty companies' annual reports over five years from 2014 to 2018 were analyzed under content analysis. The analysis is carried out under two main criteria:the extent of disclosures and quality and nature of disclosures.

4.3. Extent of disclosures

In examining the extent of environmental disclosures of property development companies, the study examined the annual reports. It counted the number of sentences disclosed about the environment, environmental activities, and impact on the environment. The index developed by Tilt and Symes (2000) was applied to identify these companies' extent of disclosures. The rationale for using this index is, it was developed by analyzing an environmentally sensitive sector (mining sector). It includes twenty-four (24) broader sections that cover the environmental disclosures in annual reports. Based on the context and to avoid the data set's reliability issues, this index was modified in the following manner. Firstly the 'capital expenditure and other costs' category was removed. Secondly,the new items reported by the companies in their annual reports were added to the index to cover all the disclosures presented by the companies.

4.4. Quality and nature of disclosures

In studying the quality and nature of the environmental disclosures, this study has utilized the Clarkson *et al.* (2008) model. There seems a clear rationale behind applying the index as it was developed based on the Global Reporting Initiatives (GRI) guidelines. Further, the index includes a category called "nature" of disclosures which was not included in other instruments (Ahmad & Haraf, 2011). The disclosures' nature has been categorized into two separate sub-sections: 'hard' and 'soft' disclosures. Hard disclosures include information that is more reliable and can be verified. Whereas soft disclosures include the information, which is more general environmental disclosures. The Clarkson et al. (2008) index consists of 45 disclosure items, which carries 95 scores. The total score of 95 has been divided among the hard and soft disclosures. The Maximum scores applicable for the hard disclosure items are 79 and the remaining 16 scores have been allocated to the soft disclosure items. Further this index consists of seven themes from A1 to A7. Hard disclosure items consist of themes from A1 to A4 and soft disclosure items consist of the remaining themes from A5 to A7. The related themes are as follows:

1. A1 – Governance Structure and Management System
2. A2 – Credibility
3. A3 – Environmental Performance Indicators
4. A4 – Environmental Spending
5. A5 – Vision and Strategy Claims
6. A6 – Environmental Profile
7. A7 – Environmental Initiatives

Each item in themes apart from A3 theme (Environmental Performance Indicators) is allocated with scores of zero and one. If the particular item in the theme is available in the annual report, it is scored as one and if not available the score will be zero. Items in the A3 theme consists of 10 sub items and each item is allocated with a score range between zero to six (0-6).

5. DATA ANALYSIS AND RESULTS

5.1. Descriptive statistics

The table 1 presents descriptive statistics on the extent, quality and nature of environmental disclosures over the five years. In the table, under the extent of disclosures highest sentences disclosed are fluctuated between 1 to 91 sentences in 2014, 1 to 85 sentences in 2015, 1 to 80 sentences in 2016, 1 to 79 sentences in 2017 and 1 to 80 sentences in 2018. Similarly, under the quality of disclosures, sentences have ranged between 0-65 over the five years. When evaluating the quality of disclosures year wise, in 2014 sentences have fluctuated between 0-52, in 2015 and 2016 variation is between 0-54, in year 2017 it is between 0-64 and in 2018 it is between 0-65. When focusing on the disclosures' nature, it can be seen that there is a higher score for hard disclosures compared to soft disclosures. Further it is observable that the scores of extent, quality and nature of disclosures have been increased over the five years.

5.2. Extent of environmental disclosures

Summary statistics about the extent of environmental disclosures have been provided in the table 2. It displays the number of companies, which have disclosed between the given sentences range and the percentage of the disclosed companies to the total sample over the five years (2014-2018). This was measured by using Tilt and Symes (2000) index. As shown in the table, some companies have over performed in disclosing environmental disclosures. For an example, in every year, one company has disclosed sentences that are above 300. The reason for the overperformance is that some follow the GRI index and have obtained the ISO 14001 certification and have provided the impact of their activities on environment in both quantitative and qualitative measures. When reviewing the overall performance, most companies have disclosed between the sentence range of 10-30 (the percentage between 35-50 percent from the total sample), while few companies performed beyond that level. However, when considering the overall performance, that is satisfactory compared to the past literature. In the past literature it could be seen that most of the companies were not performing well. Additionally, a developing country like Sri Lanka, having such kind of performance should be appreciated.

Table 1
Descriptive Statistics

		Year	*Minimum*	*Maximum*	*Mean*	*Standard deviation*
		2018	12	47	1.5833	0.8949
	Soft	2017	12	47	1.6	0.9014
		2016	13	47	1.6	0.8675
		2015	13	47	1.5666	0.8578
		2014	10	42	1.4333	0.8327
Nature of Disclosures	Hard	2018	0	65	0.8885	0.9503
		2017	0	64	0.8846	0.94
		2016	0	54	0.7846	0.84
		2015	0	54	0.7154	0.8496
		2014	0	52	0.7039	0.8222
Quality of Disclosures		2018	0	65	16.3	0.9527
		2017	0	64	16.3	0.9478
		2016	0	54	15	0.8791
		2015	0	54	14	0.8907
		2014	0	52	13.45	0.8484
Extent of Disclosures		2018	1	80	5.231	6.577
		2017	1	79	4.336	5.566
		2016	1	80	3.819	5.053
		2015	1	85	3.419	4.817
		2014	1	91	3.345	4.907

Table 2
Extent of environmental disclosures (number of sentences)

Number of companies and as a percentage of total sample	2018	Percentage of total sample	35	10	10	15	0	15	0	5	0	0	10
		No. of companies	7	2	2	3	0	3	0	1	0	0	2
	2017	Percentage of total sample	40	10	10	20	5	5	0	0	5	0	5
		No. of companies	8	2	2	4	1	1	0	0	1	0	1
	2016	Percentage of total sample	50	10	10	15	5	0	0	0	5	0	5
		No. of companies	10	2	2	3	1	0	0	0	1	0	1
	2015	Percentage of total sample	50	15	20	0	5	0	0	5	0	0	5
		No. of companies	10	3	4	0	1	0	0	1	0	0	1
	2014	Percentage of total sample	50	15	20	0	5	0	0	5	0	0	5
		No. of companies	10	3	4	0	1	0	0	1	0	0	1
		No. of sentences/ year	1 - 30	31 - 60	61 - 90	91 - 120	121 - 150	151 - 180	181 - 210	211 - 240	241 - 270	271 - 300	Ab- ove 300

5.3. Overall quality of environmental disclosures

As explained in the methodology section, the quality of environmental disclosures was measured using Clarkson *et.al.* (2008) index. Summary of the measurements achieved by using the index are given in table 3. The overall quality of environmental disclosures is shown in that table. The highest score obtained for the index is within the range of 51-60. The index's total score is 95 and when comparing the score obtained for the index with the total score of the index; it is at an appreciable level. The underlying reasons for that performance are explained under the extent of disclosures. Some companies have followed the GRI guidelines. They have obtained the ISO 14001 certification and have disclosed both the qualitative and quantitative environmental impact measurements of their activities. This result is quite different from the past literature, because in past literature a poor performance was observed for the environmental disclosures in developing countries. Apart from that, most companies have scored between 1-10 score range and over the years that has been reduced and some companies have scored 31-60 range. That is a good sign because some organizations have identified their responsibility towards the environment. Simply, they have tried to be more accountable to the environment. As a conclusion about the overall quality of the environmental disclosures, although the quality of the environmental disclosures of property development companies in Sri Lanka is low initially, it has tended to increase. Hence, it can be concluded that overall quality of Sri Lankan property development companies' environmental disclosures is at a moderate level.

Table 3
Overall quality of environmental disclosures (disclosure index scores)

Number of companies and as a percentage of total sample	2018	Percentage of total sample	50	25	0	5	10	5
		No. of companies	10	5	0	1	2	1
	2017	Percentage of total sample	55	20	0	10	10	5
		No.of companies	11	4	0	2	2	1
	2016	Percentage of total sample	65	10	0	10	10	5
		No.of companies	13	2	0	2	2	1
	2015	Percentage of total sample	65	10	5	10	5	5
		No.of companies	13	2	1	2	1	1
	2014	Percentage of total sample	65	15	5	5	5	5
		No.of companies	13	3	1	1	1	1
		Disclosure score/year	1-10	11-20	21-30	31-40	41-50	51-60

5.4. Nature and trend of environmental disclosures

By following Ahmad and Haraf (2011), the nature of the environmental disclosures has been measured by using the Clarkson et.al index. Table 4 summarizes the scores for hard disclosure items and table 5 summarizes the scores for soft disclosure items. When looking at the hard disclosure items in table 4, there is a relatively higher score for A1, A2 and A3 over the five years and for A4 the score is comparatively low. As explained in the quality of disclosures A4 theme shows a poor performance. It can be seen that under A3 theme it has poor performance under table 3, but here it has obtained a relatively higher score. Reason for that is there was a company who was performing well and because of that the score is high. Nevertheless, when considering the hard disclosures score, it can be identified that there is a moderate level of performance. Compared to past performance, it is quite different, because most of the studies had poor performance under hard disclosures.

When referring to the table 5 it depicts the scores for the soft disclosure items. A5 and A7 themes have obtained relatively high scores over the years and A6 has achieved quite low scores compared to A5 and A7. As a total, there is a moderate level of performance under the soft disclosures as well. In conclusion, the nature of these companies' disclosure includes both the hard and soft disclosures which is at a moderate level.

Table 4
Score for hard disclosures for the sample companies by category

Hard disclosures by category					
Year wise Percentage	*Governance Structure and Management System*	*Credibility*	*Environmental Performance Indicators*	*Environmental Spending*	*Total*
Year					
%	19.48[a]	28.14	50.22	2.16	100
2018	45	65	116	5	231
%	19.57	27.83	50.44	2.16	100
2017	45	64	116	5	230
%	22.06	26.47	49.02	2.45	100
2016	45	54	100	5	204
%	23.81	28.57	46.03	1.59	100
2015	45	54	87	3	189
%	22.4	28.42	48.09	1.09	100
2014	41	52	88	2	183

Notes: a 19.48%=45/231

Table 5
Score for soft disclosures for the sample companies by category

Soft disclosures by category					
Year wise Percentage *Year*	*Vision and Strategy Claims*	*Env. Profile*	*Env. Initiatives*	*Total*	*Observed average score per company*
%	49.47[a]	12.64	37.89	100	
2018	47	12	36	95	4.75
%	48.96	12.5	38.54	100	
2017	47	12	37	96	4.8
%	48.96	13.54	37.5	100	
2016	47	13	36	96	4.8
%	50	13.83	36.17	100	
2015	47	13	34	94	4.7
%	48.84	11.63	39.53	100	
2014	42	10	34	86	4.3

Notes: a 49.47%=47/95

When looking at the trend of environmental disclosures over the years, it can be identified that the environmental disclosures have been increased over the five years. It is observable that most organizations are trying to adopt GRI guidelines, Sustainable Development Goals and are trying to obtain independent verifications for their products and management systems. Additionally, overtime the companies in property development sector have become more accountable regarding their actions towards the environment.

Table 6
Comparisons of soft to total scores

Ratio from Clarkson *et al.* (2008) study	Poor performers	50.95
	Good performers	34.23
Average scores	2018	29.14
	2017	29.45
	2016	32
	2015	33.22
	2014	31.97
	Disclosure scores (ratio)	Soft/ total (%)

The table 6 depicts a comparison of soft disclosures to total scores. The index has used this to indicate the legitimization and a higher percentage indicates higher attempts to legitimize. According to Clarkson et.al (2008), firms that seem to be good performers had poor environmental performance and firms seem to be poor performers had good environmental performance. But based on the results of this study it can be concluded that in Sri Lankan property development companies, a moderate level of performance is observable regarding the extent, quality and nature of environmental disclosures. The trend of the environmental disclosures has been increased over the five years from 2014-2018. Further, those companies disclose their environmental activities and impact based on their accountability towards the environment and all the other stakeholders rather than practicing the legitimization.

6. CONCLUSION

The present study has examined the extent, quality, nature and trend of environmental disclosures of property development companies in Sri Lanka,intending to identify whether those disclosures are legitimate or accountable. The findings from present study, by and large, are in line with findings of Mohamed (2015) whose study explains that the extent of environmental disclosures in Sri Lankan companies is moderate. Under the criteria of 'extent of environmental disclosures', companies performed poorly while some companies were performing exceptionally well. The same applies to the quality and nature of disclosures as well. Some companies gained high scores for the indexes and some companies obtained low scores. Under the criteria of 'nature of disclosures', two sub categories were identified as hard and soft disclosures.It is detectable that both the hard and soft disclosures had moderate level scores. Based on those results, it could be mentioned that the extent, quality and nature of environmental disclosures of property development companies in Sri Lanka are moderate.

The stakeholders' pressure is a significant factor that affects the increase in environmental disclosures over the years. Apart from that based on the results, it can be concluded that companies in the property development sector disclose on their actions and the impact that they generate over the environment. This is a safeguard that they apply in fulfilling their responsibility for accountability towards the environment and affected stakeholders. The study's primary purpose is fulfilled in that manner and property development companies have been more accountable in terms of environmental disclosures rather than being legitimized.

In terms of contribution, this study will help property development companies in Sri Lanka identify the areas they need to focus on more when disclosing their environmental activities. Moving to the study's limitations, there can be limitations associated with the content analysis approach and counting on numbers may not be the most suited method when identifying the extent of disclosures. Apart from that the sample size was petite and it was twenty property development companies while web disclosures could not be accompanied for the study. If the web disclosures were comprehended in the study, it will increase the research's reliability. Future researches can be better planned and carried out in overcoming the identified limitations.Furthermore, future researchers may accompany various data collection and analyzing methods in assuring the validity of research. In light of that there exists a possibility for applying interviews, surveys and questionnaire observations, and document reviews as data triangulation techniques. The areas of interest for future studies can include motivations for adapting environmental disclosures, environmental disclosures in the local and international context (a comparative study), the relationship between environmental performance and environmental disclosures, stakeholders' general perception on environmental disclosures and their information needs. Similarly, cross sector studies are encouraged in other environmental-sensitive industries across different financial years.

Note

1. The sample of companies were selected from the Colombo Stock Exchange. The companies who are engaging in property development/real estate activities were taken for the sample.
2. The Cronbach Alpha value was calculated for the sample companies regarding the reliability and that was 0.82.

Declaration of conflicting interests

The authors declared no potential conflicts of interest concerning the research, authorship, and publication of this article.

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