

## Corporate Governance Practices and Environmental Reporting of Companies in Malaysia: Finding Possibilities of Double Thumbs Up

*(Amalan Tadbir Urus Korporat dan Pelaporan Alam Sekitar Syarikat di Malaysia: Mengkaji Kemungkinan Hubungan Baik antara Kedua-dua Faktor)*

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### ABSTRACT

*Demonstrating good corporate governance and maintaining sound environmental performance are among the key challenges facing the organisation to ensure its sustainability. In an attempt to investigate the linkage between these two essential aspects, this study scrutinises the annual reports of 243 companies listed on the Main Board of Bursa Malaysia. There are six selected corporate governance attributes namely, board independence, CEO duality, management ownership, board size, financial expert and meeting frequency. Overall, it was found that the existence of environmental reporting is low. Only 28% of the companies disclosed environmental information. Furthermore, on average, each company reported 4.7 sentences, while the quality, as measured by the disclosure index shows an average of 3.24. The most significant corporate governance attributes in influencing the extent of environmental reporting are board size and management ownership. The finding provide limited evidence to support that, companies which comply with corporate governance practices have the tendencies to be more environmentally responsible.*

### ABSTRAK

*Amalan tadbir urus korporat yang baik dan mengekalkan prestasi alam sekitar merupakan antara cabaran utama yang dihadapi oleh organisasi dalam memastikan kelangsungan pembangunan. Kajian ini meneliti 243 laporan tahunan syarikat tersenarai di Papan Utama Bursa Malaysia bagi mengkaji perkaitan antara kedua-dua aspek penting tersebut. Sebanyak enam ciri tadbir urus yang dipilih iaitu kebebasan lembaga pengarah, dwi-jawatan ketua pegawai eksekutif, pemilikan saham, saiz lembaga pengarah, kecekapan kewangan dan kekerapan mesyuarat. Secara keseluruhan, laporan alam sekitar adalah rendah. Hanya 28% syarikat melaporkan maklumat alam sekitar. Di samping itu, secara purata, setiap syarikat melaporkan 4.7 ayat. Manakala bagi kualiti yang diukur dengan indeks pelaporan menunjukkan purata sebanyak 3.24. Ciri tadbir urus yang paling mempengaruhi laporan alam sekitar ialah saiz lembaga pengarah dan pemilikan saham. Keputusan ini tidak dapat menyokong sepenuhnya bahawa syarikat yang memenuhi amalan tadbir urus mempunyai kecenderungan untuk lebih bertanggungjawab terhadap alam sekitar.*

### INTRODUCTION

The impact of business on the environment has become a grave concern not only among environmental activist and legislators, but also local communities, supplier, government, customers as well as the internal party such as employees and managers. As a result, companies face increasing pressure to engage in environmental activities. Thus, the commitment towards environmental activities are evidenced by reporting in various media such as stand-alone environmental reports, triple bottom line reports, sustainability report and annual report. The environmental reporting acts as a tool for providing environmental information designed to meet the accountability and to indicate companies concern on environmental issues (Shearer 2002).

Since environmental reporting is done on a voluntary basis, there are various literature focused on identifying factors that influence companies to disclose environmental

information. Among the factors found in prior study were companies size (Cormier & Magnan 2003; Frost & Wilmhurst 2000; Jaffar, Mohamad Iskandar & Muhamad 2002), corporate image enhancement (Adams 2002; Jaffar & Buniamin 2004) and incidents that directly affected the environment (Deegan, Rankin & Voughts 2000).

This study specifically investigates the influence of the corporate governance attributes on the environmental performance proxied to the environmental reporting. Following the scandals of high profile companies such as Enron, Worldcom, Tyco and some other companies in the US, the public started to question the integrity and effectiveness of monitoring mechanism in organisation (Raphaelson & Wahlen 2004). Therefore, it was claimed that greater emphasis should be made in internal context, which include boards, particularly to increase shareholder insight and influence on corporate behaviour in organisations (Kolk 2006). In essence, they are apparently accountable for any decisions (particularly the decision

to responsible and disclose the environmental information) made by the management to serve for the best interest of the shareholders.

Apart from the traditional approach of accountability in the context of corporate governance, sustainability reporting concerning the societal and environmental implication has also emerged even it is mostly on voluntary (Kolk 2006). The proper report of environmental performance is now gaining significant interest in the business community and being debated within the accounting profession and authoritative bodies (Rezaee, Szendi & Aggarwal 1995). As the number of potential readers which include the internal and external stakeholders, has increase, the transparency of the reports should be assured and reliable. The issues on the nature of accountability and the extent to which sustainability reporting can improve the accountability have been raised and debated (Livesey & Kearins 2002) proving its importance. With this development, it seems that sustainability, specifically the environmental concern and corporate governance need to be converged for better reporting. In essence, good corporate governance requires consideration of the impact a corporation has on the wider community and the environment (Andrew 2003).

The key motivation of this study is to examine whether the good corporate governance practices is significant in explaining the environmental responsibility of companies in Malaysia. Fulfilling the best practice of corporate governance and voluntarily reporting on the environment are manifestation of these two distinct but interrelated spheres of performance. In fact, the concept of sustainable development introduced by the Brundtland Report in 1987 demands the companies not only to be financially sound, but also socially and environmentally accountable to assure that the rights of future generations are not compromised (Huizing & Dekker 1992). Additionally, to the best of our knowledge, there is no other study yet has tried to link corporate governance and environmental performance. It is expected that companies which comply with corporate governance practices will have higher tendencies to be more environmentally responsible. In fact, previous studies especially on the voluntary reporting practices provided evidence that companies with certain characteristics of good corporate governance disclose more voluntary information than their counterparts (Eng & Mak 2003; Mohd Nasir & Abdullah 2004).

Therefore, this study attempts to achieve the following objectives:

- (1) To examine the *existence*, *quantity* and *quality* of environmental reporting among the Malaysian companies, and
- (2) To identify any associations between corporate governance characteristics and the *existence*, *quantity* and *quality* of environmental reporting

The remainder of this paper is organised as follows. The subsequent section will provides a literature review followed by theoretical framework and hypothesis

development. The research methodology is justified next and finally the findings and discussions are presented. Finally, the paper concluded with the discussion of the result as well as the limitation and contribution of this study.

## LITERATURE REVIEW

### ENVIRONMENTAL ISSUES IN MALAYSIA

The rapid development in economic growth and globalisation has caused serious environmental challenges in Malaysia. The vital environmental issues are air and water pollution, solid waste, water and wastewater management. Al-Amin, Siwar, Jaafar and Mazumder (2007) found that, in 2020, the emission of industry and manufacturing sector will increase which indicate an alarming rate to unseating for sustainable economy. This situation is resulted from the economic growth and high degree of openness which indicate that the economy is very sensitive to the globalisation process. Perry and Sanjeev Singh (2001) revealed that among the environmental issues in Malaysia include over-logging of primary forest, air and water pollution, and the dumping of hazardous waste.

Malaysian Government is also concerns and focuses on environmental aspects in 9<sup>th</sup> Malaysia Plan (2006-2010). The Government has a responsibility to ensure there is a balance between development and environmental sustainability. Therefore, the government will step up enforcement and increase preventive measures (Ahmad Badawi 2005). Furthermore, in the 2006 budget, a sum of RM1.9 billion is allocated for the implementation of environmental preservation projects. Out of this, RM40 million is provided to prevent erosion of coastal areas, while RM370 million is allocated for drainage and flood mitigation nationwide, RM14 million for improvement of rivers and river estuaries, RM991 million for repairing the existing sewerage plants and construction of new plant. While, RM363 million is allocated for solid waste management program (Ahmad Badawi 2006).

The management of the company needs to realise the importance of social responsibility, specifically issues with regards to environmental concern. The board members and executives regarded themselves as having a great influence on the environmental performance of the company (Cahill & Engelman 1993). Previous study found that, environmental information is useful and influenced users in their decision making (Deegan & Rankin 1999). This will lead to environmental reporting as an instrument to respond and act as written evidence on the issue.

### ROLE OF ENVIRONMENTAL REPORTING TO ENSURE THE SUSTAINABILITY

The publishing of environmental reports has become an important way for companies to communicate relevant environmental issue to various stakeholders and one way

which the company can demonstrate their responsibilities (O'Donovan 2002; Parker 1986). The use of environmental reporting also signals the organisation's environmental commitment to customers, shareholders and the public. Therefore, it will allow the society to understand better the full implications of corporate activity. In addition, environmental reporting provides additional information to potential investors in order to make investment decision (Hood & Nicholl 2002).

Environmental reporting also acts as an internal agent of change. It helps companies to illuminate weaknesses, opportunities and set new goals. Additionally, it allowed comprehensive assessment of all corporate resources and impacts (Parker 1986). Therefore, it can be used to measure effectiveness of corporate environmental programmes and highlight areas of the business that are not managing the environmental impact well (Hood & Nicholl 2002).

In addition, environmental reporting acts as an important tool in involving and educating the employees on environmental issues (Hood & Nicholl 2002). Perhaps more important, environmental disclosure is a source of documented evidence that can be used by external parties to evaluate company performance. The ability of the company to demonstrate good environmental management via environmental reporting would promote reputational advantages (Hood & Nicholl 2002; O'Donovan 2002).

The most important, environmental reporting can be used as a tool to legitimize companies' existence in the society (Jaffar & Buniamin 2004; Nik Ahmad & Sulaiman 2004). This is consistent with legitimacy theory; imply that companies need to appear to have a goal, which are congruent with those of the society at large (O'Donovan 2002; Nik Ahmad & Sulaiman 2004). In Malaysia, legitimacy theory suggests that firms will take steps to ensure that their activities and performance are acceptable to society (Nik Ahmad & Sulaiman 2004). Furthermore, most companies in Malaysia used environmental disclosure not only to portray an environmental and social responsibility (Thompson & Zakaria 2004) but used it to enhance the image and reputation of the companies (Hood & Nicholl 2002; Jaffar & Buniamin 2004; Nik Ahmad & Sulaiman 2004; O'Donovan 2002). As a result, environmental disclosure can offer a financial benefit to the business (Yusoff, Yatim & Mohd Nasir 2004).

#### DEVELOPMENT OF ENVIRONMENTAL REPORTING AND CORPORATE GOVERNANCE

Environmental reporting is a voluntary initiative in Malaysia and has only emerged in the last decade or so. However, there are several reporting recommendations and guidelines, with direct and indirect reference to environmental information have been issued. These include the financial reporting standards (FRSS) by the Malaysian Accounting Standards Board (MASB), the Malaysian Code on Corporate Governance (MCCG), and the Association of Chartered Certified Accountant's (ACCA) Environmental Reporting Guidelines.

The Finance Committee on Corporate Governance (FCCG) of the Securities Commission introduced the MCCG in 2000. Paragraph XVII of this part suggests that the board of directors seeks and assesses information that goes beyond financial performance of the company, including environmental performance. Additionally, Paragraph 10 of FRS 101 – *Presentation of Financial Statements* encourages business entities to prepare environmental reports to supplement the financial statements. Meanwhile, FRS 137 – *Provisions, Contingent Liabilities and Contingent Assets* which was issued in 2001 provides explicit examples on environmental contingent liabilities in the Appendix 4 of such standard.

Moreover, the ACCA with the collaboration of the Malaysian Department of Environment (DOE) published the "Environmental Reporting Guidelines for Malaysian Companies" in March, 2003. This explains what environmental reporting is and provides an overview of its evolution over the last 12 years. It also contains guidance on what environmental reports might contain, drawing from best practice guidelines and using selected examples from published environmental reports of a number of large companies from around the world.

Another recent development relates to the introduction of two environmental reporting awards, namely the National Annual Corporate Report Awards (NACRA) which includes a category on environmental reporting in 2000, and the Malaysian Environmental Reporting Awards (MERA) by ACCA in 2002. In 2004, MERA was replaced by the Malaysian Social and Environmental Reporting Awards (MESRA), with the inclusion of social disclosure in the award.

Meanwhile, the proper report of environmental cost and obligation is now gaining significant interest in the business community as it has been debated within the accounting profession and authoritative bodies (Rezaee *et al.* 1995). Environmental cost and obligation will continue to grow in line with the consciousness of society, government regulation and corporation towards the environmental concerns (Rezaee *et al.* 1995).

In Malaysia, currently, there is no statutory requirement in Malaysia that require public listed companies to disclose environmental information to public (Jaffar & Buniamin 2004). This situation explains the small percentage of Malaysian public listed companies that provide environmental reporting in their annual reports (Jaffar *et al.* 2002; Thompson 2002). Therefore the disclosure of environmental information is on voluntary base.

Corporate governance issue has become an important topic following the 1997 Asian financial crisis (Abdullah 2001). Issues concerning the role and function of regulators and the need for improved disclosure and good corporate governance are among the most issues that generate analysis and debates by public. This occurred since the crisis brought to the foreground the weak corporate governance practices which include lack of transparency, disclosure and accountability (Khoo 2003).

To overcome some of these problems, in 1997, the Financial Reporting Act was introduced and the Malaysian Accounting Standards established as the sole authority to issue accounting standards. All companies must comply with the mandatory standards. Then, in March 1998, in order to enhance the standards of corporate governance, the Malaysian Government announced the foundation of High Existence Finance Committee that would look into establishing a framework for corporate governance and setting best practices for business. Another step in creating good corporate governance was created in the same month when the Registrar of Companies (ROC) together with few professional bodies formed an entity known as Malaysian Institute of Corporate Governance (MICG). The functions of this entity are to promote and encourage corporate governance development, provide education and training for the benefits of its members and other interested institutions in Malaysia. Apart from that, the ROC had also introduced a Corporate Governance Award in conjunction with its 100 years celebration (Abdul Shukor 2001).

In November 1998, Malaysia partnered with the World Bank and the Asian Development bank in coordinating the Asia-Pacific Economic (APEC) forum to find ways to improve corporate governance. Then in March 1999, High Existence Finance Committee published a report on Corporate Governance that laid the groundwork for drafting the Malaysian Code of Corporate Governance. The Committee has made some recommendations in order to restore the confidence of investors and overseas markets in the Malaysian capital markets. Then, in order to achieve better corporate governance, substantial reforms have also been introduced, particularly the amendments to the Securities Industries Act, the Securities Commission and the listing rules of the Bursa Malaysia.

The role of corporate governance is to provide guidance for the boards of listed companies by clarifying their responsibilities and providing prescriptions of control exercised by boards over their companies. The Finance Committee has agreed on the need to adopt international standards of best practice in developing the Code. The Malaysian Code is modelled based on the recommendations of UK Hampel Committee. The Code outlines a definition of corporate governance and set out four forms of recommendations and the compliance responsibilities for the recommendations.

## THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

### AGENCY THEORY

The study is founded on the proposition of agency theory, the theoretical framework most often used by researchers to understand the relationship between the board characteristics and firm value (Carter *et al.* 2003). It involves a contract under which the principal engages another party,

called agent, to perform some services on their behalf, where some power of decision making are delegated to the agent (Jensen & Meckling 1976). In corporate world, principal is the shareholders who are the owners of the company, whereas the management of the company represents the agent.

Kelton and Yang (2008) stated that agency problem arise due to the conflicts of interest between shareholders and managers. This can occur when the agent fails to act in the best interest of principal and the effect may be reflected in the company's share price (Brennan, 1995). As the parties within the internal organisation, management has the upper hand over the shareholders pertaining to access to information. Therefore, agency theory suggests voluntary disclosure as a mean to mitigate the divergent interests between shareholders and the corporate managers, while at the same time make an attempt to discipline poor management. In addition, to safeguard the interests of the shareholders, board of directors is appointed through an election during the annual general meeting. Thus, the role of the board of directors is imperative to counter 'managerial opportunistic' behaviour, which include taking action for their own personal interests at the expense of the shareholders interests (Donaldson & Davis 1991). In this scenario, the corporate governance framework in which board of directors serves as an effective tool in meeting the expectations and needs of the shareholders that is defined as the "accountability to the shareholders" is vital.

Apart from more attention is focused on the environmental problems being paid by the government and mass media, board of directors may be interested in the "accountability to the environment" through environmental preservation activities. Thus they chose to report such information due to several reasons. Firstly, as highlighted in the literature review, the best practice of corporate governance as laid down in MCCG urges the board of directors to monitor environmental performance of the company (FCCG 2000). By observing a mere voluntary recommendation, it may shed some lights on the public about the company's determination to practice good corporate governance and boost the shareholders confidence in their investment security.

Secondly, not only good environmental record may hinder companies from unnecessary non-compliance costs, but also it may lead to a better longer term financial and economic performance (Clarkson *et al.* 2006; Earnhart & Lizal 2007) and thus this is consistent with the shareholders' wealth maximisation goal. In contrast, management may have different opinion as environmental activities requires sizeable amount of investment. This may be seen as an unattractive in the short run as profit may slump (Connely & Limpaphayom 2004) and so does the management compensation. Therefore, to ensure the board of directors' function effectively, several essential attributes are proposed by the corporate governance scholars and some of them are summarised in Figure 1.

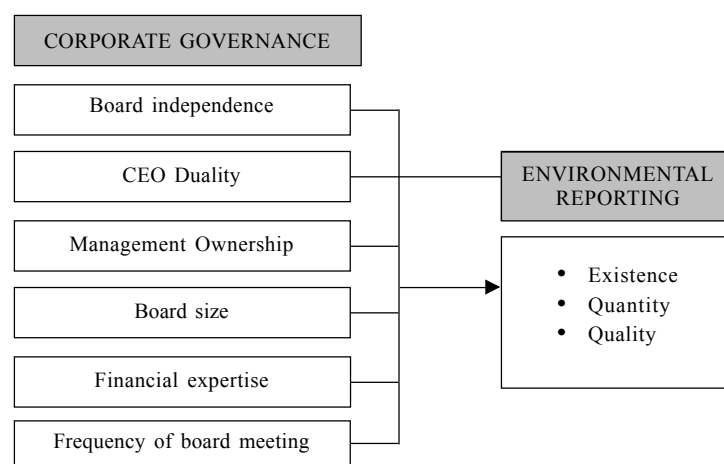


FIGURE 1. Essential attributes of corporate governance that lead to environmental reporting

Figure 1 lists *board independence*, *CEO duality*, *management ownership*, *board size*, *financial expert* and *frequency of board meeting* as the essential attributes of corporate governance. The conceptual framework of the study is completed with environmental reporting as the dependent variable. Environmental reporting is determined by a particular company disclosing some form of environmental information in its annual report. To achieve this, the study uses the checklist and decision rules developed and used by Hackston and Milne (1996), Williams and Ho (1999) and Deegan *et al.* (2002). In particular, we expect that certain corporate governance attributes may lead companies to report on the environment. The following paragraphs discuss the hypotheses development.

#### BOARD INDEPENDENCE

According to Weir and Laing (2001), the board of directors is responsible for the day-to-day management of the company and has a direct responsibility to formulate and implement corporate strategy. The board, which comprises of a number of independent directors, has a greater monitoring and controlling ability over management (Fama & Jensen 1983). The state of “independence” is met when a director *inter alia* is neither holding significant ownership nor holding any executive position in the company (Bursa Malaysia 2006). It is expected that since these independent directors are supposed to represent the interests of other stakeholders, they will have more influence on environmental reporting (Haniffa & Cooke 2005). Furthermore, since the involvement in social activities may enhance one’s prestige and honour in society, they will be more interested to do so in order to satisfy the social responsibility of the firm (Zahra & Stanton 1988).

In Malaysia, the MCCG proposes that the composition of the board of directors comprises one-third independent members (FCCG 2000). In fact, it became a requirement that must be met by Malaysian companies that are listed on Bursa Malaysia. However, if a company has only three

board members, two of them are required to be independent (Bursa Malaysia 2006). In a recent research, Haniffa and Cooke (2005) found that the composition of non-executive directors (i.e. independent) is significantly and positively related to corporate social disclosure. Meanwhile, other research on voluntary disclosures found mixed results. Those who found significant positive association include Cheng and Courtenay (2004), Fama and Jensen (1983), Ho and Wong (2001), and Mohd Nasir and Abdullah (2004). On the other hand, Barako, Hancock and Izan (2006), Eng and Mak (2003) as well as Gul and Leung (2004) have found negative association. Thus, our hypotheses, on the basis of agency theory are stated as follows:

- H<sub>1A</sub>: There is a significant association between board independence and the existence of environmental reporting.
- H<sub>1B</sub>: There is a significant association between board independence and the quantity of environmental reporting.
- H<sub>1C</sub>: There is a significant association between board independence and the quality of environmental reporting.

#### CEO DUALITY

Nelson (1998) and Zairi (2000) stressed the importance of leadership in ensuring the success of social responsibility endeavours. According to them, companies that are successful in integrating the CSR into their management systems shared four characteristics, namely, value-based transformational leadership, cross-boundary learning, stakeholder linkages and performance levers. Similarly, Adams (2002) incorporated the ‘internal context’ as one of the factors that influence corporate social and ethical reporting, which includes *inter alia* the identity of the chair. Hence, the role of the CEO in guiding the organisation towards achieving social and environmental objectives is extremely significant.

In corporate governance literature, a separation of CEO roles from the roles of the chairman is needed to ensure the independence of the board of directors (Chaganti, Mahajan & Sharma 1985). It is believed that if the CEO holds the chairman position, a state called “CEO duality” will occur and his/her influence may reduce the effectiveness of the board of directors in monitoring the management (Agrawal & Chadha 2003). In fact, this is one of the problems described by Haniffa and Cooke (2002) as ‘dominant personality phenomenon,’ which is increasingly receiving considerable concern.

Haniffa and Cooke (2002) further classified the issue in two views. The first view supports the separation of the two roles to provide checks and balances for the performance of management. While the second view argues that the separation is not crucial since many companies are well run even with the roles combined and have a strong and capable board for monitoring. Additionally, the combination of the roles of chairman and CEO is permitted under MCCG (FCCG 2000). Nevertheless, the respective companies must make public the reasons underlying the combination of roles.

Previous studies by Forker (1992) found that CEO duality is associated with lower voluntary disclosures and it shows that the monitoring function of an individual who occupies the positions of both the CEO and chairman could be compromised. Consistent with the result, Gul and Leung (2004) found a significant and negative relationship between duality and voluntary disclosure. However, on the other hand, other research such as Barako *et al.* (2006), Cheng and Courtenay (2004) and Ho and Wong (2001) found insignificant association between duality and voluntary disclosure. To be consistent with agency theory, our hypotheses are as follows:

- H<sub>2A</sub>: There is a significant association between role duality and the existence of environmental reporting.
- H<sub>2B</sub>: There is a significant association between the role duality and the quantity of environmental reporting.
- H<sub>2C</sub>: There is a significant association between the role duality and the quality of environmental reporting.

#### MANAGEMENT OWNERSHIP

The MCCG does not specify the ideal level for management ownership. However, managers are more likely than shareholders to emphasise corporate social performance and environmental performance because they are not spending their own money (Graves & Waddock 1994) or pursuing non-profit goals to secure their position (Wang & Coffey 1992). This in turn may improve their reputation and gain public prestige (Halme & Huse 1997). Therefore, it is suggested that the lower the management ownership, the tendency that the company will report on the environment will be higher.

Previous studies found mixed observations concerning the association between ownership structure and reporting practices. Leung and Horwitz (2004) and Mohd Nasir and Abdullah (2004) found that management

ownership has a positive and significant association with voluntary disclosure. A similar association was also found if the percentage of shares held by the largest shareholders is considered (Haniffa & Cooke 2002). In contrast, there are also studies that found either insignificant (Halme & Huse 1997; Leung & Horwitz 2004; Nagar *et al.* 2003) or negative associations (Hossain, Tan & Adams 1994; Leung & Horwitz 2004). Therefore, based on the agency theory, it is reasonable to come up with the following hypotheses:

- H<sub>3A</sub>: There is a significant association between management ownership and the existence of environmental reporting
- H<sub>3B</sub>: There is a significant association between management ownership and the quantity of environmental reporting
- H<sub>3C</sub>: There is a significant association between management ownership and the quality of environmental reporting

#### BOARD SIZE

There is no requirement pertaining to the number of directors to make up the board but the MCCG asserts that the number of directors is an important factor in the board of directors’ effectiveness (FCCG 2000). A larger board size may bring a greater number of directors with experience (Xie, Davidson & DaDalt 2001) that may represent a multitude of values (Halme & Huse 1997) on the board. On the contrary, Chaganti *et al.* (1985) claimed that smaller boards are manageable and more often play a role as a controlling function whereas larger boards may not be able to function effectively as the board leaves the management relatively free.

Published studies that linked board size and voluntary disclosure (including environmental information) are rather lacking. Besides Halme and Huse (1997), which found no significant association between the number of board members and the tendency for companies to report on the environment, as well as Cheng and Courtenay (2004), which found a similar result for voluntary disclosure (in which environmental information is a part of it), other studies are almost untraceable. However, there are studies linking corporate performance (financially) and board size (Bonn 2004; Dwivedi & Jain 2005).

The study by Bonn (2004) found no relationship between board size and firm performance. She further argued that the board size only measures the factual number of directors without capturing their task. Hence, one could argue that it is the skills and knowledge board brings to the firm is significant but not the number. In contrast, Dwivedi and Jain (2005), found a positive relationship although the association was weak. They conclude that larger boards are in a position to improve the governance of the company. Fulfilling the proposition of agency theory, we hypothesize that:

- H<sub>4A</sub>: There is a significant relationship between board size and the existence of environmental reporting.

H<sub>4B</sub>: There is a significant relationship between board size and the quantity of environmental reporting.

H<sub>4C</sub>: There is a significant relationship between board size and the quality of environmental reporting.

#### FINANCIAL EXPERTISE

Financial expertise is important in dealing with complexities of financial reporting (Kalbers & Fogarty 1993). A director with a corporate or financial background may be more familiar with the ways that earnings can be managed and may better understand the implications of earnings management (Xie *et al.* 2001). Furthermore, Agrawal and Chadha (2003) and Park and Shin (2004) asserted that the ability to deter earnings management will be greater when independent members have accounting or finance expertise. With the exception of the studies by Agrawal and Chadha (2003), Park and Shin (2004) and Xie *et al.* (2001), there is lack of research that focuses on board expertise. Most of the studies focused on audit committee expertise since it falls within the recommendation of corporate governance guidelines, in particular, Blue Ribbon Committee.

Findings on the audit committee suggested that financial expertise is less associated with material internal control weakness (Krishnan 2005; Zhang, Zhou & Zhou 2007), occurrence and/or lower extent of earnings management (Abbot *et al.* 2004; Bedard, Chtourou & Courteau 2004; Xie *et al.* 2001), financial statement fraud (Abbott *et al.* 2000). Also, audit committee members with financial reporting and auditing knowledge are more likely to understand auditor judgments and support the auditor in auditor-management disputes, to address and detect material misstatements (DeZoort & Salterio 2001; Karamanou & Vafeas 2005), to conduct frequent meetings (Raghunandan & Rama 2007), to engage in voluntary disclosure (Karamanou & Vafeas 2005; Kelton & Yang 2008) and to have higher quality of disclosure (Felo, Krishnamurthy & Solieri 2003; Mangena & Pike 2005). Thus, considering the possible impact of financial expertise on environmental reporting and by adopting the definition of financial expertise as per Bursa Malaysia Listing Requirements (Para 15.10), we hypothesize that:

H<sub>5A</sub>: There is a significant relationship between financial expertise and the existence of environmental reporting.

H<sub>5B</sub>: There is a significant relationship between financial expertise and the quantity of environmental reporting.

H<sub>5C</sub>: There is a significant relationship between financial expertise and the quality of environmental reporting.

#### FREQUENCY OF BOARD MEETING

Frequent board meetings suggest a more active board (Raghunandan & Rama 2007) which is more effective in monitoring the management. Malaysian Code on Corporate Governance (2000) let companies decide on the number of

meetings to be held during a year. However, as a rule of thumb, the number shall coincide with "the audit cycle and the timing of the published financial statements" (p. 40) which suggests a minimum of four times. Generally, the number of board meeting is positively related with the number of audit committee meeting (Raghunandan & Rama 2007), voluntary disclosure (Karamanou & Vafeas 2005), earnings quality (Dey 2008; Vafeas 2000; Xie *et al.* 2001) while negatively related with material internal control weakness (Zhang *et al.* 2007) and forecast precision (Karamanou & Vafeas 2005). Based on the claims of prior research, our hypotheses are:

H<sub>6A</sub>: There is a significant relationship between frequency of board meeting and the existence of environmental reporting.

H<sub>6B</sub>: There is a significant relationship between frequency of board meeting and the quantity of environmental reporting.

H<sub>6C</sub>: There is a significant relationship between frequency of board meeting and the quality of environmental reporting.

## METHODOLOGY

### DATA

The empirical test was based on a sample of Listed Companies at Main Board for the year 2005. Data were extracted from the annual reports of these companies through the website provided by Bursa Malaysia ([www.bursamalaysia.com](http://www.bursamalaysia.com)). All financial firms are excluded as these sectors are additionally governed by certain rules and procedures from regulatory bodies such as BNM and Ministry of Finance. Furthermore, the operations of these companies are deemed to have less impact to the environment (Frost & Wilmshurst 2000; Wilmshurst & Frost 2000) and as such increase the likelihood of non-reporting incidence (ACCA 2002, 2004; Ahmad *et al.* 2003).

The final sample consists of 243 companies that were randomly selected using the random number generator available in Excel. This sample represents 41 percent of the remaining population and it is consistent with the minimum sample size as suggested by either conventional sample size table proposed by Krejcie and Morgan (1970, as cited in Sekaran 2003: 294) or modern online sample size calculator by Raosoft, Inc. Data is extracted using the content analysis method from the annual reports of these companies for the year 2005.

### CONTENT ANALYSIS

The environmental reporting practices of the sample companies were assessed based on a content analysis of the annual reports. Content analysis refers to "a research technique for making replicable and valid inferences from data to their context" (Krippendorff 1980). Annual report is selected as the document to be analysed, among other

things, are due to its greater accessibility to the researchers (Gray, Kouhny & Lavers 1995; Unerman 2000; Wilmshurst & Frost 2000) and the fact that in Malaysia, there are not many companies that produce a stand-alone environmental report (ACCA 2002).

#### MEASUREMENT OF VARIABLES

The dependent variable (environmental disclosure) comprises of three different stages in environmental reporting (i.e. existence, quantity and quality). The *existence* of reporting determines whether a particular company is disclosing some forms of environmental information in its annual report. A company that reports the information is coded as '1' and if non-disclosed it is coded as '0'.

Meanwhile, the *quantity* of reporting is based on the number of sentences since sentences can be used to convey meaning and thus, are likely to provide more reliable measures (Hackston & Milne 1996) than other measurement units such as number of words and proportions of a page.

Finally, the quality of reporting is assessed from the Disclosure Scores (DS) derived from an index developed by Alrazi (2005). This index developed based on a review of various scoring systems including the adjudication criteria used in the Association of Chartered Certified Accountants' Malaysian Environmental and Social Reporting Awards (ACCA's MESRA) and the National Annual Corporate Report Awards on Environmental Reporting (NACRA-ER).

The Malaysian Code of Corporate Governance has emphasised that the key for the good corporate governance is through well balanced of director's composition. It is important as it will bring to more effective of its monitoring function. A well balanced of composition refers to the composition that should not be controlled by a particular group of people that could compromise its independence in its conduct (Abdullah 2001). Independence according to Malaysian Codes of Corporate Governance means that the board should consist of members who are independence of both, the management and the significant shareholder. Therefore, the Codes stressed that at least 1/3 of the board should be non-executive who are independent. Non executive directors are defined as directors who are not affiliated with the management. Thus the extent of a board's independence is measured by the number of non executive directors to the number of directors on board.

Duality refers to a position, where one person carries on the duties as a chairman and CEO simultaneously. The board is consider not effective and independent if the board chairman is also the CEO of the company as conflict of interests will arise and it bring to domination of decision making by a single person. Thus, there should be a clear separation of roles between the board chairman who leads the company and CEO who runs the company (Abdullah, 2001). However, the Malaysian Codes of Corporate

Governance states that if the roles of the board chairman and the CEO are combined, a strong independent element on the board must exist and the decision to combine these roles must be publicly explained. We assign CEO duality to take the value of '1' when the firm has a CEO who is also serving as the chairman, and '0' otherwise.

The main objective of corporate governance is to separate ownership and control (Palenzuela, Lara & Hurtado 2003). It is believed that, director who holds a sizeable ownership in the firms is more likely to question and challenge management's proposals because his or her decision will impact his or her own wealth (Paton & Baker 1987). Naturally, a director in this position will less likely to support actions that would reduce their wealth (Chtorou, Bédard & Courteau 2001). For the purpose of the study, management ownership is measured as directors direct equities divided by total voting equity outstanding.

In this study, the size of the board of directors is based on the number of members. The number of directors is an important factor in determining the effectiveness of the board. According to Chaganti *et al.* (1985) board size has various implications on how the board functions. A smaller board is manageable and more often, it plays a role as controlling function. Whereas a larger board may not be able to function effectively as the board leaving the management relatively free. Even though larger board is difficult to manage, it may be valuable for the breadth of services as it would add diversity of experience of the boards (Xie *et al.* 2001). Apart from that, larger board provides better environmental links and more expertise (Chtorou *et al.* 2001). Thus board size is significant attribute that affect the board function and eventually the corporate performance.

Board of directors' competency in term of accounting and financial knowledge has received widespread attention from media and regulators (Agrawal & Chadha 2003). The Cadbury report 1992 emphasizes that the non executive directors' competency is an important factor to ensure the effectiveness of board monitoring. Among others, directors should have knowledge on managing company and corporate governance processes (Chtourou *et al.* 2001). Directors with corporate and finance background tend to have better understanding on financial reporting as compared to those who do not have that knowledge (Xie *et al.* 2001). Members with no experience in accounting and finance are less likely to detect problems in financial reporting. This is consistent with Xie *et al.* (2001) who found that the relationship between experienced board of director (directors with corporate and finance background), with earnings management is low. Similarly, Agrawal and Chadha (2003) indicate that the probability of earnings manipulation is low for firms with board of directors who have knowledge in accounting and finance. Therefore for effective monitoring, by the end 2003, all major U.S stock markets required that at least one member of the audit committee must have financial expertise. Malaysian Code of corporate governance has also emphasised the same criteria where all members of



audit committee should be financially literate and at least one of them should be a member of an accounting association or body. Thus, for the purpose of the study, directors' competency is measured by giving a score of '1' if the firm has at least one director who has professional qualification and 0 otherwise.

The frequency of meeting is measured from the total of meetings that was held by the board of directors in the particular year. According to Xie *et al.* (2001), audit committees who are more active will lead to more effective monitoring. Audit committee that meets more often is more likely to detect problems and monitor the issues in financial reporting. A study by Chtourou *et al.* (2001) has found that independent directors do not seem to be sufficient to ensure the effectiveness of its function. The results proved that the members must also be active for better monitoring.

Meanwhile, the control variables are the company size and industry. These two variables are consistently found to be related to the level and extent of disclosure (Wilmschurst & Frost 2000; Cormier & Magnan 2003; Campbell 2004). Company size is measured by total assets. Previous studies that used total assets as a proxy for size include Ahmad, Hassan and Mohammad (2003), Cormier and Magnan (2003), and Jaffar *et al.* (2002). As for industry, the companies are divided into two: high environmentally sensitive and low environmentally sensitive. This involves reviewing the works of previous researchers (see for example, Wilmschurst & Frost 2000) and also a report issued by the Department of Environment, Malaysia (DOE 2002). Thus, companies regarded as highly environmentally sensitive are involved in the following operations – mining, chemicals, transportation, oil and gas, wood and timber, utilities, agriculture, construction and properties, and manufacturing. For diversified companies, they are classified as highly environmentally sensitive if 51 percent of their revenue is derived from these nine operations (Lemon & Cahan 1997).

## FINDINGS AND DISCUSSION

Table 1 describes the industry representation based on Bursa Malaysia's industrial classification. The companies in our sample are representatives of various sectors, with considerable numbers are from industrial products sector (30%), followed by trading/services sector (22%) and properties sector (19%). None of the companies is from the mining sector and in fact, there is only one company from that sector was listed on the Board as of the cut-off date. Since the sample selection method is based on the random-sampling, such exclusion is considered as insignificant.

TABLE 1. Industry representation

No	Industry	Number	%
1	Industrial Products	73	30
2	Trading/Services	53	22
3	Properties	47	19
4	Consumer Products	28	12
5	Construction	17	7
6	Plantation	14	6
7	Technology	7	3
8	Infrastructure Project Companies	2	1
9	Hotel	1	0
10	Trusts	1	0
	Total	243	100

## DESCRIPTIVE ANALYSIS OF THE ENVIRONMENTAL REPORTING

Table 2 reports the findings on the number of reporting companies according to the industrial classification. An analysis of the sample annual reports revealed that 68 out of 243 reports contained some form of environmental information. It is evident that there is an improvement in

TABLE 2. Distribution of reporting companies

No	Industry	Frequency		Environmental Section	
		Number	Per Reporting Co. (%)	Number	Per Reporting Co. (%)
1	Industrial Products	19	28	4	21.05
2	Trading/Services	19	26	3	15.79
3	Properties	10	15	2	20
4	Consumer Products	6	8	0	0
5	Construction	4	7	1	25
6	Plantation	8	13	4	50
7	Technology	1	1	0	0
8	Infrastructure Project Companies	1	1	1	100
9	Hotel	0	0	0	0
10	Trusts	0	0	0	0
	Total	68	28*	15	6.2**

\* Number of reporting companies divided by total reporting companies (i.e. 68/243).

\*\* Number of reporting companies that provide environmental section divided by sample (i.e. 15/243).

number of reporting companies from 13% in 1999 as reported by Ahmad *et al.* (2003) to 28% in 2005. Data presented in Table 3 demonstrates that among the ten sectors, industrial products comprise has the highest percentage among the companies (28%) that voluntarily report environmental information followed by trading/services (26%), properties (15%) and plantation (13%). Of these 10 sectors, the companies in hotel and trust sectors did not provide any environmental information in their annual reports. In exploring further, only 15 out of 243 companies (6.2%) reported the environmental information in a separate environmental section in the annual report.

Table 3 provides a summary of the findings on the “quantity” and “quality” of the environmental information reported by the sample companies according to the industry. In total, these 68 companies provided 1,142 sentences with an average 4.70 sentences. The highest number of sentences disclosed in plantation industry was 362, and the lowest number of sentences disclosed is 1. It was also observed that the highest disclosure score is reported by the industrial product industry with 233 score and the average for each company is 3.24%. Based on the results, it was suggested that the environmental reporting in Malaysia is still at its infancy stage.

TABLE 3. Quantity and quality of environmental information

No	Industry	Quantity (Sentences)		Quality (Disclosure Score)	
		Total	Average/ industry	Total	Average/ industry
1	Industrial Products	306	4.19	232.96	3.19
2	Trading/Services	176	3.32	184.26	3.48
3	Properties	110	2.34	107.43	2.29
4	Consumer Products	33	1.18	30.85	1.10
5	Construction	43	2.53	45.75	2.69
6	Plantation	362	25.86	141.46	10.10
7	Technology	1	0.14	6.38	0.91
8	Infrastructure Project Companies	111	55.50	37.23	18.62
9	Hotel	0	0.00	0	0.00
10	Trusts	0	0.00	0	0.00
	Total	1142	4.70*	786.32	3.24**

\* Total sentences divided by sample.

\*\* Total disclosure score divided by sample.

The analyses on number of sentences based on industry show that three industries, namely, infrastructure project companies, plantation and industrial products reported the highest average environmental sentences (55.5, 25.86 and 4.19 sentences respectively). It is significant to note that the highest scoring for quality is consistent with the result for “quantity” with the exception of the third highest scoring industry that is trading/services. Nevertheless, this should be interpreted with caution since the infrastructure project companies industry is represented by only 2 companies in the sample. Besides, a closer look on the result suggests that the company with highest “quantity” is from the plantation industry (i.e. Golden Hope Plantations Bhd), while the highest for “quality” is from the industrial products industry (i.e. Shell Refining Company (F.O.M.) Berhad).

#### DESCRIPTIVE STATISTICS

This study aims to identify the association between corporate governance practices (if any) with the existence, “quantity” and “quality” of environmental information disclosure. Our study utilised six mostly cited important corporate governance characteristics, namely, “board independence,” “CEO duality,” “management ownership,” “board size,” “financial expert” and “frequency of board

meeting.” It is also observed that 59 companies (24%) are classified as high environmentally sensitive. On average, the sample companies have eight members in their board of directors. Forty percent of them are independent from the management and have significant ownership. A further analysis shows that there are 40 companies (16%) which do not meet the requirements of the Bursa Malaysia listing requirement that is to have at least two or one-third (whichever is higher) of the board members to be independent. In fact, one of these companies does not have any independent member. Additionally, the management holds an insignificant direct shareholding in the companies with an average of 8%. The statistics on board characteristics reveals that the CEO serves as chairman of the board for 11.5% (28) of our sample.

Table 4 presents the finding of descriptive statistic relating to the continuous variables. All continuous variables are not normally distributed as indicated by the non-parametric Komolgorov-Smirnov normality test. In essence, significance level of less than 0.05 indicates non-normality (De Vaus 2002). Therefore, the variables are transformed to normal scores before conducting the regression analysis since one of the requirements of linear regression is for the data to be normally distributed (Field 2000).

TABLE 4. Descriptive statistics for the continuous variables

	ENVQTY	ENVQLTY	Blnd	MOwn	BSize	ΣAssets	FE	MF
Mean	4.700	3.236	40.187	8.411	7.810	1608611363	21.2391	5.5267
Std. Dev.	19.766	7.863	11.302	13.451	2.039	5258385837	12.89713	2.42113
Min.	0.000	0.000	0.000	0.000	3.000	1697524	0.00	2.00
Max.	246.000	54.260	83.330	58.550	15.000	63438200000	83.33	21.00
Skewness	8.844	3.380	0.650	1.930	0.513	8.776	0.901	3.063
Kurtosis	96.735	13.412	1.139	2.916	0.540	90.889	1.683	12.691
K-S test	6.329*	5.921*	2.252*	4.145*	1.875*	5.923*	1.870**	4.341**

\* Significance at 0.01; K-S with significance <.05, hence data not normally distributed.

## CORRELATION ANALYSIS

Table 5 presents the result of the Pearson correlation analysis based on the linear regression used in the study. Based on the table, we find that *board size* has significantly negative relationship with *board independence*, *CEO duality* and *environmental sensitivity*, while positive relationship is found with total assets and *meeting frequency*. Significant positive association is also evident

between total assets with *board independence* and *meeting frequency*. On the other hand, *management ownership* is negatively associated with total asset and *financial expert*. However, none of the associations are having coefficient correlation of greater than 0.80, a situation which indicates no serious multicollinearity problem exists (Cooper & Schindler 2003; Field 2000).

TABLE 5. Pearson correlations

	Blnd	CEODual	MOwn	BSize	ΣAssets	EnvSen	FE	MF
Blnd	1.00	.084	-.114	-.198**	.165**	.005	-.024	-.045
CEODual	.084	1.00	.070	-.128*	-.079	-.036	-.105	-.046
MOwn	-.114	.070	1.00	-.072	-.216**	.066	-.148*	-.125
BSize	-.198**	-.128*	-.072	1.00	.256**	-.168**	-.102	.139*
ΣAssets	.165**	-.079	-.216**	.256**	1.00	-.077	.110	.135*
EnvSen	.005	-.036	.066	-.168**	-.077	1.00	-.084	-.037
FE	-.024	-.105	-.148*	-.102	.110	-.084	1.000	.090
MF	-.045	-.046	-.125	.139*	.135*	-.037	-.125	1.000

\* Significance at 0.05 level.

\*\* Significance at 0.01 level.

## REGRESSION ANALYSIS

Logistic regression is used to test the relationship between the *existence* of environmental information in annual reports and the corporate governance attributes. The use of this analysis is considered appropriate for this study as the dependent variable (i.e. “existence”) is a dummy variable (de Vaus 2002; Field 2000). Code “1” is used to classify companies that do have environmental reporting and “0” for companies that do not report any environmental information in the annual report. The normality test is not necessary for logistic regression since the test can be run even though the data is not normally distributed (Tabachnick & Fidell 2001). For data goodness of fit, the Hosmer Lemeshow test is used to determine any significant difference between predicted value and the model. According to Field (2000), the insignificant value of chi square shows that the model is significantly indifferent with the data tested. Based on the Hosmer Lemeshow test, the chi square value for this data is insignificant (6.583). This result is also supported by a classification accuracy rate of 74.1%.

The results of the logistic regression are presented in Table 6. The reported pseudo-  $R^2$ , namely Cox & Snell  $R^2$  and Nagelkerke  $R^2$  are 0.134 and 0.193, respectively. These results show that the model is significant and qualify for further assessment. As highlighted in Table 7, only “board size” proves to be the interrelated corporate governance factor that influences the “existence” of environmental reporting.

The multiple regressions are used in assessing the “relationship between the quantity” and “quality” of the environmental reporting and corporate governance characteristics. Prior to performing the regression analysis, sensitivity analysis is conducted to assess the stability of the results. Initially, the linear regression is run using dependent variable and continuous independent variables which is transformed using natural log. The findings however are considered unreliable and cannot be justified as the value of ANOVA is not significant. Alternatively, we transform the variables into rank scores except for total asset which uses natural log scores. Among other previous studies which used rank scores include Wallace, Naser and Mora (1994) and Wallace and Naser (1995).

TABLE 6. Logistic regression result using “existence” as the dependent variable

Variables	Coefficient	Wald Statistics	p-value
Constant	-7.191	7.259	0.007
<i>BSize</i>	0.468	6.854	0.009
<i>BInd</i>	0.239	1.992	0.158
<i>CEODua</i>	0.029	0.003	0.955
<i>MOwnership</i>	-0.308	2.969	0.085
<i>FE</i>	0.141	0.709	0.400
<i>MF</i>	0.107	0.404	0.525
$\Sigma$ <i>Assets</i>	0.315	5.806	0.016
<i>EnvSen</i>	-1.015	6.203	0.013
Cox and Snell $R^2$	0.134		
Nagelkerke $R^2$	0.193		

Tables 7 present the result from the multiple regressions in assessing the “quantity” of environmental reporting. In Table 8, the value of  $R^2$  is 0.159 which indicates that the variables used in the study account for 15.9% of the variability in the extent of environmental reporting. More importantly, the model is significant at 0.01 levels

with F-ratio of 5.547. Inspection of Table 8 also indicates that “board size” is significantly associated with the “quantity” of environmental reporting. Additionally, “management ownership” also found to be significant factor in determining the “quantity” of environmental information provided by the companies.

TABLE 7. Multiple regression results using “quantity” of disclosure as the dependent variable

Variables	Coefficient Value	<i>t</i> -statistics	Sig- <i>t</i>
Intercept	-2.356	-3.430	0.001
<i>BSize</i>	0.125	2.432	0.016
<i>BInd</i>	.048	1.000	0.318
<i>CEODua</i>	-0.050	-0.351	0.726
<i>MOwnership</i>	-0.122	-2.508	0.013
<i>FE</i>	0.037	0.762	0.447
<i>MF</i>	0.020	0.414	0.679
$\Sigma$ <i>Assets</i>	.111	3.281	0.001
<i>EnvSen</i>	.280	2.628	0.009

$R^2 = .159$ , *F*-statistic = 5.547, *p* = .000

Table 8 depicts the multiple regression results, which serve to examine the association between corporate governance factors and “quality” of environmental reporting. In Table 8, the value of  $R^2$  is 0.171 which indicates that the variables used in the study account for 17.1% of the variability in the “quality” of environmental information disclosure and the model is significant at 0.01 levels with F-ratio of 6.054. Examination of Table 8 indicates two corporate governance variables were found to be significant: “board size” and “management ownership.”

Consistent with the study by Byard, Li and Weintrop (2006), companies with greater number of board members tend to disclose not only more environmental information in the annual reports but also of higher *quality*. Byard *et al.* (2006) found that *quality* of information disclosed increase with the increase in board size. Thus it supports the claim that the greater the number of board members, the more expertise was imparted to the company. The result affirms the proposition of agency theory that the board’s

role in agency framework is to resolve the agency problem with their expertise and experience (Xie *et al.* 2001). However, this study is contrary to the finding of Halme and Huse (1997). This could be because of the difference in the date measurement level for independent variable whereby the latter used dichotomy of high and low environmental information disclosure.

The result for “management ownership” is consistent with Hossain *et al.* (1994) and Leung and Horwitz (2004). The companies with less management shareholding have a tendency to provide more environmental information in annual reports and influence the “quality” of environmental reporting. As the “management ownership” grows beyond the appropriate level, which means that the ownership becomes concentrated, the control now is vested in the management. As asserted by Nagar Nanda and Wysocki (2003: 291),

“The proportion of inside ownership affects outside investor demand for disclosure and consequently the need to provide disclosure

TABLE 8. Multiple regression results using “quality” of disclosure as the dependent variable

Variables	Coefficient Value	t-statistics	Sig-t
Intercept	-2.362	-3.463	0.001
BSize	0.130	2.565	0.011
BInd	0.055	1.161	0.247
CEODua	-0.073	-0.511	0.609
MOwnership	-0.126	-2.62	0.009
FE	0.032	0.668	0.505
MF	0.031	0.641	0.522
ΣAssets	0.111	3.305	0.001
EnvSen	0.291	2.750	0.006

$R^2 = .171$ ,  $F$ -statistic = 6.054,  $p = .000$

incentives. For instance, if the managers own 100 percent of the firm, outside demand for information is absent” (Nagar et al. 2003: 291).

This study fails to provide evidence on the relationships between remaining four variables, namely “board independence,” “CEO duality,” “meeting frequency” and “financial expert” with “existence,” “quantity” and “quality” of environmental reporting. The result for “board independence” is consistent with the finding of Ho and Wong (2001). According to Barako *et al.* (2006), although non-executive directors are presumed to be independent, in fact they may not be, and are therefore, not effective as monitors. In fact, as suggested by MIA (2004), independence may be divided into independence of mind and independence of appearance. Thus, although the board members appear to be independent, state of mind may be affected by influences that compromise one’s professional judgment and skepticism, integrity and objectivity.

Consistent with research conducted by Mohd Ghazali and Weetman (2006) in investigating the relationship between board characteristic and extent of voluntary disclosure in annual reports of Malaysian companies as well as other studies such as Arcay and Vazquez (2005), Barako *et al.* (2006), Cheng and Courtenay (2006) and Ho and Wong (2001), this study did not find any association between of “CEO duality” and dependent variables. This implies that duality role is less influential in inducing firm to report more information on environmental concern. One of the reasons is perhaps the separation may not be crucial element since many companies are well run even with roles combined and have strong and capable board for monitoring (Haniffa & Cooke 2002). Furthermore, it is also possible that the duality CEO is also the substantial shareholder (Mohd Nasir & Abdullah 2004).

For “financial expert,” the result is consistent with Xie *et al.* (2001). A possible explanation is that, although directors with corporate and finance background tend to have better understanding on financial reporting as compared to those who do not have that knowledge, they are less likely to encourage management to engage in environmental reporting and influence the quantity and quality of environmental reporting. The result for “meeting frequency” is consistent with Zhang *et al.* (2007) and

Karamanou and Vafeas (2005). The rationale explanation is that, although board is meeting regularly, the effective monitors of management is influence by other factors such as external ownership can take the place of board monitoring actions and that efficient coordination among directors can be attained when boards are greater in number.

The results for control variables are largely consistent with prior studies (Cormier & Gordon 2001; Cormier & Magnan 2003; Frost & Wilmshurst 2000; Halme & Huse 1997; Jaffar *et al.* 2002). Tables 7 and 8 show that there is a positive relationship between company size and environmental sensitivity with “existence,” “quantity” and “quality” of environmental reporting. The study revealed that large companies and the companies that are classified as high environmentally sensitive tend to disclose more information and also provide higher quality of reporting.

It necessitates further investigation in order to evaluate consistent results in term of association between the “quantity and quality” of environmental reporting and corporate governance variables. Thus, correlation tests are performed using both Pearson (for normalised data) and Spearman’s rank correlation analyses (for non-normalised data). Both tests showed high correlation between the two dependent variables (Pearson = .988; Spearman = .996) and the correlation is significant at 0.01 level. This indicates that companies with greater amount of environmental information disclosed higher quality information.

## CONCLUSION

The main aim of this study is to investigate any possible linkage between corporate governance and environmental performance proxied to environmental reporting. The issue of whether good governance practices enhance the level and quality of environmental reporting is largely unexplored. This study is crucial since it examines whether the firms that complied with MCCG provide more environmental disclosure. It is important to examine the effectiveness of corporate governance as the monitoring and control mechanism in scrutinizing the activities of management. This study made a significant contribution

by demonstrating whether the composition and quality of the board of directors influence managers to disclose more environmental information.

In relation to the extent of environmental reporting practices among Malaysian companies, the results of this study indicate that environmental reporting practices in Malaysia is still low. It is found that only 28% of the companies disclosed environmental information in annual report with 6.2% reported in a separate environmental section. Additionally, on average, each company reported 4.70 sentences, while the quality, as measured by the disclosure index shows an average of 3.24. The study also identifies that only board size and management ownership are significant in influencing the extent of environmental reporting. These provide limited evidence to support that, companies with good corporate governance may also practice better environmental management system. We also found that larger companies and companies that conduct activities with high impacts to the environment disclosed more environmental information.

This study contributes to the literature by providing the recent state of the corporate governance and environmental reporting practices in Malaysia. Based on vigorous effort by the government and various non-profit organisations, perhaps we can observe the difference in the practices as compared to the previous studies. Additionally, since the study incorporates the issue of corporate governance, it may be one of the first attempts internationally to associate the governance practices and the inclination to report on the environment. Thus, this explains the variations in environmental disclosure in corporate annual reports. This study highlights the importance of extend research that has shown a positive association between corporate disclosure and "board size" and a negative association between corporate disclosure and "management ownership." This confirms evidence found by Byard *et al.* (2006), and Leung and Horwitz (2004).

Furthermore, the findings will impart the essentials of integrating environmental consideration to the investors community in their decision making process. As for practitioners, this scenario will challenge them to be more environmentally responsible in the future since the public value this as a noble attribute. Finally, for policy makers, this research will provide an indispensable evidence on the necessity of revisiting the existing standards and regulations. For instance, Malaysian Institute of Corporate Governance (MICG) may need to reinstate the importance of environmental performance in its governance code, and perhaps it is very timely for the Malaysian Accounting Standards Board (MASB) to introduce specific standard on environmental accounting.

One of the primary limitations of this study is only one year of data was considered for analysis. Hence, it would be interesting to conduct a longitudinal study on a yearly basis as it may help to trace the trend of environmental disclosure and the impact of corporate governance on environmental reporting practices. Secondly, the study focuses merely on examining the

environmental reporting in annual reports. Future research may adopt content analysis to examine the environmental reporting in other media such as web report, stand alone report and press media. Finally, due to the lack of previous studies (except Halme & Huse 1997; Haniffa & Cooke 2005), this study only utilised a few corporate governance variables to be tested on environmental reporting. Further studies could consider other variables such as board competency. With regard to corporate characteristics, we tested two most significant variables, namely, company size and environmental sensitivity. This is consistent with Patten (1991) who asserts that size and industry influence the level of political cost facing an organisation. Other variables that are not tested but could provide important findings include cash flow, leverage and audit firms. This would be the aim of future studies. A continued research in this line based on these variables may be essential to provide a clearer picture about the possible association between potential determinants and the existence of environmental reporting practice in Malaysia. The findings may be different if these variables had been applied and, therefore, would be able to explain environmental reporting behaviours. Additionally, the results will enlighten us on the motive and consequences of environmental disclosure.

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