CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

As Chapter One provides the overview and objectives of this study, this chapter will present the background of the study. Most empirical studies to date provide a descriptive basis from which a number of disclosure patterns have emerged. Studies have also found associations between several corporate characteristics and environmental disclosure. Most empirical studies on environmental disclosure have focused on the reporting practices in developed countries like USA, UK, Australia as well as New Zealand.

2.2 Previous Studies

Environmental disclosures constitute part of what frequently are labeled social responsibility disclosures. Social responsibility disclosures can include among other things, disclosures relating to the interaction between an organization and its physical and social environment inclusive of disclosures relating to human resources community involvement, the natural environment, and energy and product safety (Gray, 1995).

Trotman (1979) studied the corporate social disclosures of the largest 100 Australian companies for the period 1967–1977. The results indicated the environmental disclosures increased and the increase was a strategy to improve public image and gain public acceptance. It was also noted that the practice of disclosing social information as a means of minimizing the likelihood of strikes, products boycotts and the introduction of legislation detrimental to the organization.

Deegan and Gordon (1996) researched 25 Australian companies for the period from 1980 to 1991. They used content analysis using number of words to analyze. They also differentiated between positive and negative news. The findings showed that the level of environmental reporting have increased significantly. For positive news increased by 12 words in 1980 to 105 words in 1991 whereas negative news increased from 0 words in 1980 to
7 words in 1991. Average numbers of positive words were 180.6 words and negative news was 5.7 words.

Jaggi and Zhao (1996) studied environmental disclosure of 100 companies in Hong Kong from the period of 1992-1994. The results indicated that only 13 companies provided continuous environmental report for the period and the type of reporting was mostly qualitative reporting, with 3 companies reported financial information.

Harte and Owen (1991) found in their surveyed of UK companies on the development of green reporting only one company used a separate report for disclosing information on environmental. They also found that 40% of companies mentioned social and environmental issues in their statement of corporate objectives and these issues were most commonly found in the chairman's statement or review of corporate objectives. It was noted that the average length of environmental information was one page and twelve companies included a statement of corporate objective dealing with environmental matters. Finally they found that most disclosures were narrative in nature.

Gray et. al., (1995) reported an increased in social and environmental reporting in U.K. companies from the period from 1979 to 1991 from 0.1 page to 0.5 page. The number of companies also increased from 5% in 1979 to 70 % in 1991. Most of the reporting was in term of general and qualitative. Gray et. al. (1995) also classified and discussed much literature in three groups: decision usefulness studies, economic theory studies and political theory studies. In the social and political theory groups Gray et. al. (1995) include stakeholder theory, legitimacy theory and political economy theory. They see these three theories not as separate nor competing. Rather the stakeholder theory and legitimacy theory are viewed as overlapping perspective different from that of economic theory. Corporation make social disclosure not just for their own economic self interest, but because they are pressured to exhibit social responsibility by employees, customers, suppliers, the general public and other social activist group
For the economic theory approach the basic argument relies on Watts and Zimmerman's (1978) agency theory. To avoid potential pressure from government regulatory agencies, which enforce corporate social responsibility, companies increase voluntary corporate disclosures. Government regulations are seen as costly and restrictive on business decision making. Watts and Zimmerman suggest that these restrictions adversely affect management's wealth by imposing the political costs of reduced flexibility in the adoption of potentially profit maximizing policies. Corporations respond by employing a number of devices including social responsibility disclosure campaigns to counter these government interventions.

Guthrie and Parker (1990) undertook a comparative international analysis of corporate social disclosure practices in the US, UK, and Australia for the year 1983. They reviewed and documented disclosures related to environment, energy, human resources, products, community involvement and other. Guthrie and Parker (1990) found that corporate social disclosures in Australia were relatively limited compared to US and UK. The mean number of pages allotted to all social disclosures was greatest for the US (1.26 pages) and the least for Australia (0.70) pages. In relation to environmental disclosures, Guthrie and Parker found without exception that no company provided "bad news" about its activities. They also found that in Australia, the UK and US, corporations similarly prioritized the social responsibility disclosures, with human resources disclosures being the greatest in quantity, followed by community involvement, and then by environmentally-related disclosures.

Roberts (1992) stated that such disclosures could be viewed as a medium for managing, negotiating or manipulating stakeholders without whose support and approval the organization can no longer exist. Patten (1991,1992) noted that such disclosure could also be viewed as a means of establishing or protecting the legitimacy of an organization by influencing public opinion and the public policy process.
Based on the survey of studies on corporate social disclosures in the U.S., U.K., Australia and New Zealand, Hackstone and Milne (1996) reported that the general pattern in corporate social disclosure appears to be consistent across all countries with human resources, environment and community receiving most attention in the disclosure. Hackstone and Milne (1996) also noted the three theories i.e. stakeholder theory, legitimacy theory and political economy theory and reported that serious doubts exists as to whether the empirical evidence available to date is enough to establish the superiority of one theory over the others.

Studies on the practice of environmental reporting in developing countries are few (Tech et. al. 1998; Choi 1998). Choi (1998) studied environmental reporting of 64 Korean companies in 14 industries in their semi annual financial report. The companies were divided into high profile (food and beverage, pulp and paper, chemical, petroleum, rubber and plastics, non-metalllic mineral and basic metal) and low profile industries (textile, leather, publishing, fabricated metal, machinery, electronics and wholesale industries). The pattern of disclosure was firms with high profile industries disclosed systematically more and better information than their counterparts in low profile industries.

Low et. al., (1985) analyzed the 1983 annual reports of 80 public listed companies in Singapore. Of these 20 had previously been commended for good financial reporting in the Annual Report Award competition sponsored jointly by Singapore Society of Accountants, the Singapore Institute of Management and the Stock Exchange of Singapore. The remaining 60 companies were randomly selected from six industrial sectors namely industrial and commercial, finance, hotel property, plantation, and mining with ten companies in each sector. Low et. al., (1985) concluded that social accounting in Singapore was in its infancy. The award winning companies did disclose social information more readily than the other 60 companies.

Foo and Tan (1988) studied 299 of 305 Malaysian and Singapore companies listed on the stock exchange of Singapore as at the end of 1985. The incidence of corporate social reporting in Singapore companies was
higher than Malaysian companies. Large Malaysian and Singapore companies were found to have high incidence of corporate social disclosure than their smaller counterparts, regardless whether the company size was measured in terms of market capitalization, assets value, paid up capital, profit before tax, or turnover.

Andrew et. al. (1989) noted in his study of 119 annual reports of public listed companies in Malaysia and Singapore for the year ending December 1983, that only 26% of the companies were disclosing and in term of industry banking and finance companies were the highest. The large and medium size companies disclosed higher social information compared to small companies.

Tsang (1998) studied 33 companies from three industries (banking, food and beverages, and hotel) in Singapore over a ten year period from 1986 to 1995 and it was noted environmental disclosures increased from 9%(1986) to 64%(1993). Most of the reporting was in the Board of Directors Report and the Chairman’s Statement. Banking industry had the highest proportion of companies disclosing social information throughout the ten year period and hotel industry had the lowest proportion.

Romlah (2001) studied Malaysian companies, the reliability of disclosure of environmental information by environmentally sensitive industries in their annual report. The findings were that the information disclosed in the annual report does not represent the true environmental performance of the company. 94% of companies which have problems related to environment do not disclose this in the annual report. 38% of these companies provided positive environmental information mentioning that they have taken into account the effect of companies’ operation on the environment. Companies that have higher environmental problems that are companies that are non-compliant to Department of Environment Regulations, have higher level of environmental information disclosed, compared to companies that do not have environmental problems. The majority of these companies also provided positive environmental information. This findings is consistent with the theory of political cost which stated that companies that are exposed to potential wealth transfer (due to bad social or environmental
performance) would employ certain methods or procedures to prevent or minimize that transfer.

Nik Nazli (2001) reported that environmental disclosures of the construction and industrial products sector of Malaysian companies were minimal with neutral information being the most prevalent and purely descriptive statements. Generally the environmental information disclosed in annual reports was located in different parts of the annual report.

From overseas studies, it can be seen that the tendency for companies to disclose environmental information in their annual reports is increasing and it is timely to examine the extent of environmental reporting and the characteristics of Malaysian companies reporting environmental information.

2.3 Environmental Reporting

While deciding which corporate report to analyze in the corporate social reporting study that will have an impact on the volume of corporate social disclosure, there is a further aspect of quantification, which affects all quantitative content analysis studies.

Table 1 identifies the method used in a selection of corporate social disclosure content analysis studies to quantify disclosures and shows there is wide diversity in this area. Quantification takes the form of either the number of documents containing a particular category of disclosure, and/or the number of characters, words, sentences, pages, or proportion of pages devoted to different categories (or themes) of social disclosure of the proportion of volume of corporate social disclosure to total disclosure. As one of the key assumptions underlying all quantitative signifies the importance of the category (Deegan and Rankin, 1996; Gray et. al., 1995a; Krippendorff, 1980) different measurement techniques might lead to different impressions of the relative importance of each disclosure category. Greater homogeneity of measurement techniques might therefore have the benefit of aiding comparison of results between different studies.
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Table 1: Characteristics of selected papers which have used a form of content analysis as a research method.

Studies have justified the measurement of volume in terms of words by maintaining that volume of disclosure can thereby be recorded in greater detail (Deegan and Gordon, 1996; Zeghal and Ahmed, 1990). Quantification in terms of whole sentences tends to be justified in that sentences can be
counted with more accuracy than words (Hackston and Milne, 1996; Tsang, 1998) and sentences are used to convey meaning whereas discerning the meaning of individual words in isolation is problematic (Hackston and Milne, 1996).

Milne and Adler (1999) demonstrate that many studies mistakenly conflate the unit used to measure disclosures with the unit used to identify and code disclosures. They argue that reliable identification of a corporate social disclosure requires understanding of the meaning of each disclosure, and such understanding is best achieved by consideration of whole sentences. Individual words or individual cells in a measurement grid are unlikely to convey much meaning. They recognize that, once individual disclosures have been identified and coded using units of whole sentences, quantification of disclosures can be achieved using a variety of units of measurement. However they maintain that fewer errors are likely to arise in counting sentences than counting words, and that studies have demonstrated counts of sentences give similar results to measurements of volume in terms of proportions of a page. They argue that as sentences are used to identify and code disclosures. "Using sentences for both coding and measurement seems likely therefore to provide complete, reliable and meaningful data for further analysis" (Milne and Adler, 1999).

However using sentences as the unit of measurement seems to ignore the possibility that differences in use of grammar might result in two different writers conveying the same message by using a similar number of words and taking up a similar amount of space but using a different number of sentences. Furthermore support for the contention that quantifying disclosures in terms of sentences gives similar results to quantification in terms of proportions of a page seems to rely on measuring the volume of narrative disclosures only (Hackstone and Milne, 1996).

Annual reports are regarded as important documents in corporate social reporting due to high degree of credibility they lend to information reported within them (Tilt, 1994), their use by a number of stakeholders as the sole source of certain information such as environmental information (Deegan
and Rankin, 1997), and their widespread distribution. Most justification in literature for exclusively using annual report in content analysis studies encompasses these factors. Such justifications are summed up by Adams and Harte (1998) when they state:

"Our acceptance of the social importance of the corporate annual report stresses its potential rather than fact to be influential. Corporate annual reports can therefore be if interest as much for what they do not report, as for their actual content. This focus on the corporate annual report is also consistent with previous social disclosure studies since the corporate annual report is the main form of corporate communication and particularly in the case of quoted companies is made widely available....".

A further reason given for focusing exclusively on annual reports is that it is considered virtually impossible to identify all corporate communication in social matters over a long period of time and it is therefore not possible to be sure how complete non-annual report data are, and therefore how consistent the content analysis results will be (Gray et. al. 1995b). In contrasts it is known in advance that there should be one annual report for each company in each year studied, with annual reports usually more accessible to researchers than other corporate reports (Woodward, 1998).

However there is some recognition in the literature that this exclusive focus on annual reports may result in a somewhat incomplete picture of disclosure practices (Roberts, 1991) and some studies have examined a limited number of documents other than annual reports. Ernst and Ernst (1978) used annual report and any other documents sent to shareholders with annual reports. Guthrie and Parker (1989) used both annual reports and half yearly reports of Broken Hill Proprietary Company, arguing that company produced documents are more appropriate to study than reports produced by third parties as the former are "not subject to the risk of journalist interpretations and distortions". Zeghal and Ahmed (1990) explicitly recognized that annual reports are not only medium through which companies
can report their socially responsible behavior, and for many activities other media enable more timely communication to a larger number of stakeholders. Accordingly they analyzed corporate social reporting disclosures in annual reports, corporate advertisements and brochures. Harte and Owen (1991) surveyed both annual reports and environmental reports. Buhr and Freedman (1996) used annual reports, securities exchange filings, and environmental reports. The maximum number of types of documents used in any of these studies was three (in both Zeghal and Ahmed (1990) and Buhr and Freedman (1996) studies.

This study would be consistent with overseas studies and use annual report to analyze the environmental disclosure by Malaysian companies and since annual report is used as the main medium to report this information. (Patten 1992, Deegan and Gordon 1996, Guthrie and Parker 1985, Gamble et.al. 1996, Hackstone and Milne 1996, Choi 1998, Nik Nazli 2001, Romlah 2001).

2.4 Analysis of Determinants of Financial Reporting

The relationship between corporate financial performance and environmental disclosures is positively related (Teoh et.al. 1998, Choi 1998, Deegan and Gordon 1996). However some argue that there are significant additional costs and foregone profit opportunities to being especially responsible, and thus profitability is depressed (Ullman 1976). Other contend that pursuing a proactive social policy requires superior management and so more responsible companies are likely to have more skillful management, hence better economic performance (Spicer 1978).

According to Ullman (1985), there are three types of empirical studies done in various parts of the world in determining the factors that have an influence in the social reporting disclosure. The first one examine the potential relationship between the extensiveness of a firm's social disclosure and its social performance with the hypothesis that the quantity and quality of social disclosure is positively correlated with its social performance (Abbot and Monsen, 1979; Bowman and Haire, 1975; Freedman and Jaggi, 1982; Fry
and Hock, 1976; Ingram and Frazier, 1980; Preston, 1978; Wiseman, 1982). In all these studies, social disclosure were differently measured i.e. using social disclosure scale derived from Ernst and Ernst (1978), percentage of page in the annual report, quality of disclosure in the annual report and the quantity of disclosure in the annual report.

The second type of study examines the potential relationship between environmental performance and economic performance, with the hypothesis that environmental performance and economic performance can be correlated positively or negatively (Trotman and Bradley, 1981; Jaggi and Zhao 1996, Ingram and Frazier 1980, Deegan and Rankin 1996). The results of the studies, summarized by Belkoui and Karpik (1989), shows partial support for each hypothesis, i.e. no correlation, U-shaped correlation, positive correlation and spurious correlation.

The final type of study examines the potential relationship between environmental disclosure and economic performance with the hypothesis that environmental disclosures reduce investors’ information uncertainty and is correlated (positively or negatively) with economic performance. The hypothesis that social disclosures reduce investors’ information uncertainty examines the relationship between social environmental and economic performance based on market variables (Belkoui, 1976; Ingram 1978; Jaggi and Freedman, 1985; Shane and Spicer, 1983). The second hypothesis examines the relationship between environmental disclosure and economic performance based on accounting variables (Abbot and Monsen, 1979; Bowman, 1978; Bowman and Haire, 1975; Freedman and Jaggi, 1982a; Fry and Hock, 1976; Ingram and Frazier, 1983; Preston, 1978). In these studies, the results vary from negative correlation to positive correlation as well as a U-shaped correlation.

This study will be categorized under the third type which will examine the potential relationship between environmental disclosure and economic performance that is whether size, profitability and other variables influences the amount of disclosure. In addition to that this study will establish whether
the type of audit firm (big five or non-big five), leverage level, assets-in-place and ownership may have an influence on the disclosure amount.

### 2.4.1 Corporate Profitability Variables

Empirical research to date in the profitability corporate social reporting relationship also shows very mixed results. Belkaoui and Karpik's (1989) findings are more intriguing. They report a significant positive pairwise correlation, yet an insignificant, negative regression coefficient for return on assets and disclosure. While Roberts (1992) has found evidence for a positive relationship between lagged profits and social disclosure, Patten (1992) fails to find any relationship between profitability and social disclosure when multiple measures of profitability including lagged profits are used.

The choice of accounting-variables to proxy financial performance was provided by the literature, mainly the work of Freedman and Jaggi (1988) and Hackstone and Milner 1996. Accordingly, the accounting ratios employed are as follows:

- Return on assets (ROA) = Net income/Total assets and
- Return on equity (ROE) = Net income/Owners' equity

Return on assets (ROA) and return on equity (ROE) were important ratios for consideration because they relate to "owners' investment in the firm and/or total investment of the firm" (Jaggi and Freedman, 1992). Based on previous studies it is initially hypothesized that the higher the financial performance, the more likely that the company will disclose environmental information.

### 2.4.2 Firm Size

Various studies suggest a positive relationship between firm size and corporate social and environmental disclosure (Trotman and Bradley, 1981; Belkaoui and Karpik 1989, Patten, 1991). According to the agency theory of Watts and Zimmerman (1978), social responsibility disclosure campaigns can be used to reduce political costs which otherwise could reduce management wealth. As the magnitude of political costs is highly dependent on firm size, it
is inferred that there will be positive size corporate social environmental disclosure relationship. Roberts (1992) found no relationship with a US sample nor did Davey (1982) and Ng (1985) with a sample from New Zealand. Cowen et al. (1987) argues on the other hand, that larger companies may have more shareholders interested in corporate social activity and are more likely to use formal communication channels to relate results of social endeavors to interested parties.

2.4.3 Financial Leverage Percentage

Creditors control access to financial resources that may be essential for continued operation of a corporation. The greater the company depends on debt financing, the greater the degree to which corporate management would expect to respond to the creditor expectations concerning the corporations role in social responsibility activities (Ullman 1985).

This study will try to establish the potential relationship between the proportions of debts to ratio with the level of environmental disclosure. As Watts and Zimmerman suggest that proportion of debt in the capital structure is higher for large firms, Bradbury (1992) goes on to argue that larger firms will disclose more information to reduce potential information asymmetry and conflicts among managers, shareholders and debtholders. Hosain and Adams (1995) have demonstrated that there exist a positive relationship between the extent of voluntary disclosures and leverage. However, these findings are not supported by Chow and Wong-Boren (1987) in their study on voluntary financial disclosure by Mexican corporations.

2.4.4 Proportion of Assets in Place

Empirical evidence reported that the value of firm comprises mainly by two components, namely assets-in-place and growth opportunities (Myers, 1970). Myers reported that the companies with assets-in-place are likely to have high leverage and therefore are likely to disclose more to reduce the incentive conflicts between managers and shareholders. Voluntary disclosure
is therefore inversely related to assets-in-place. However studies by Bradbury 1992 does not support this notion.

2.4.5. Type of Audit Firm

It is needless to say that auditors play an important role for a company's accounting policy, especially in initiating new accounting practices. Moreover it is believed to be an important responsibility of auditors to recommend their client companies to practice socially responsible accounting policies. For fair and impartial audit opinions, the auditor independence is crucial. Larger audit firms are less subject to the influence from clients then one could argue that larger audit firms are in a position to exercise more discretion over accounting policies of their client firms. It is thus hypothesized that companies under the contract with larger audit firms are likely to disclose more environmental information.

2.4.6 Ownership Diffusion

A stakeholder is defined as any group or individual who can affect or is affected by the achievement of the firm's objective. (Freeman 1984). Stakeholders of the firm include stockholders, creditors, employees, customers, suppliers, public interest groups and governmental bodies. The stakeholder theory as initiated by Ansoff (1965) contends that the major objective of the firm is to attain the ability to balance the conflicting demands of various stakeholders in the firm, a dynamic implication of which had been further developed by Freeman (1983). Ullman (1985) proposed a conceptual model for studying corporate social responsibility activities in a stakeholder framework, concluding that stakeholder theory provides an appropriate justification for incorporating strategic decision making into studies of corporate social responsibility activities. Based on the stakeholder theory, one could argue that if social responsibility activities are part of a strategic plan for managing stakeholder relationship.

Keim (1978) argues that as the distribution of ownership of a corporation becomes less concentrated the demands placed on the
corporation by shareowners becomes broader. Disperse corporate ownership, especially by investors concerned with corporate social activities increases pressure for management to disclose corporate ownership, the better the corporation’s social responsibility disclosures.

2.4.7. Industry Membership

Watts and Zimmerman (1986), in their study, suggest that a firm’s accounting policy choice may influenced by the sensitivity of the industry to which a firm belongs. Resource based industry (e.g., oil and gas and mining) is commonly used in prior overseas research as an industry membership hypothesis.

Paten (1991) argues that industry, similar to company size "influences political visibility and this drives disclosures to ward off undue pressure and criticism from social activists". A particular industry may have the tendency to disclose more social information for specific reasons. According to Dierkes and Preston (1977), companies whose economic activities may modify the environment, like extractive industries, are more likely to disclose information about their environmental impacts that are companies in other industries. Similarly, Cowen et al. (1987) argued that costumer-oriented companies can be expected to exhibit greater concern with demonstrating their social responsibility to the community as this will likely to enhance their corporate image and influence sales.

2.5 Conclusion

Various prior studies have advocated that economic incentives exist in relation to disclosure of environmental information. Economic variables which have been identified in the literature as potential factors motivating disclosure of financial and environmental information include firm size, financial leverage, proportion of assets-in-place, earnings volatility, ownership diffusion, industry membership, and type of audit firm. This chapter provides a review of related accounting literature, both overseas and local. Chapter Three outlines and justifies the methodological framework.

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