

FIRM CHARACTERISTICS AND ENVIRONMENTAL DISCLOSURE PRACTICES: AN EMPIRICAL INVESTIGATION OF MALAYSIAN PUBLIC LISTED COMPANIES

CHAPTER 1

AN OVERVIEW OF RESEARCH

1.1 INTRODUCTION

During the past 20-30 years there has been growing public awareness of the role of corporations in society (Hackstone and Milner, 1996). Many of the firms, which have been credited with contributing to economic and technological progress, have been criticized for creating social problems. Pollution, resource depletion, waste, product quality and safety, the rights and status of workers and the power of large corporations are issues which have become the focus of increasing attention and concern (Gray *et.al.*, 1987). Environmental accounting has been defined by Gray *et. al.*, (1993) as:

“...it can be taken as covering all areas of accounting that may be affected by the business response to environmental issues, including new areas of eco accounting”.

In Malaysia, although there is no specific accounting standard for environmental reporting, information on the environment has to be disclosed if the information is considered relevant in decision making process. Paragraph 9 of the MASB Paper 1 states:

“Many enterprises present, additional statements such as environmental reports and value added statements, particularly in industries where environmental factors are significant. Enterprises are encourage to present such additional statements if management believes they will assist users in making economic decisions.”

The decision to disclose environmental information depends upon the discretion of the companies. Verrenchia (1983) suggested that companies will disclose certain information if the disclosure will increase the companies'

value. Companies are reluctant to disclose certain information if they feel the information is not relevant or the disclosure will have negative implication in companies social and financial performance (Verrenchia, 1983). Therefore the majority of negative environmental information was not reported. Companies provide positive environmental information mentioning that the company is concern with environment and take into account this issue in their operation (Deegan and Rankin, 1996).

There is also increasing concern for the environment and the possibly harmful long-term impacts of economic growth (Roberts, 1991). Research findings in the United States, New Zealand and United Kingdom have shown that since 1987 the volume of voluntary environmental disclosure by companies in their annual report has increased (Roberts, 1991).

The importance of environmental information to various interest groups has been well documented (Tilt, 1994). These interest groups needs specific information on company's environmental performance and relate this information to its financial performance. One way to examine the likelihood of environmental disclosure is to examine the existing disclosure practice. If some companies are disclosing such information voluntarily, then the demand for additional disclosure is likely to succeed (Roberts, 1991). Investors may interpret extensive environmental disclosures as positive signal of a firm managing its exposure to future regulatory costs and this can be seen in the case of chemical firms after the Union Carbide's leak in Bhopal (Patten, 1994).

1.2 BACKGROUND

Studies cited an increase in the quantity and quality of environmental disclosures contained in annual reports but this is puzzling as we observe the small number of environmental disclosure and commentary in the annual reports especially since the Exxon Valdez incident in 1989 (Gamble *et.al.*, 1996).

Past studies has been conducted on the level of information disclosed based on the quantity or quality of the reporting (Deegan & Rankin, 1996 and

Teoh *et al.*, 1998) and found it is difficult to rely upon the information reported in the annual reports because the information is biased and not complete (Deegan & Rankin, 1996; Romlah, 2001). The research findings shows that quality of disclosure is poor and lack of consistent information disclosure regarding the environment expenditures and liabilities of the companies operating in sectors with significant environmental impact (United Nation 1992).

In Singapore with rapid industrialization, with high-technology export manufacturing, concern about environmental issue has gained momentum. Moreover due to the forest fires, which brought haze, conditions with adverse economic consequences especially in the hospitality industry increased the concern about environment (Teoh *et. al.*, 1998).

Though there have been attempts to examine social reporting as a whole in Malaysia, to date not much research has been published specifically on environmental disclosures in the annual reports of Malaysian companies (Nik Nazli, 2001). This is despite the fact that environmental issues are emerging issues of concern. It would not be appropriate to generalize the results of studies done in industrialized countries to developing countries as the stage of countries development may be an important influence shaping corporate social and environmental reporting practices (Tsang, 1998). Thus there exist a need for environmental study of Malaysian companies to serve as the foundation for further research.

1.3 OBJECTIVES OF THE STUDY

This study has been drawn on prior empirical research studies of Choi (1998), Romlah (2001) and Hackston and Milne, 1996. The main objective is to provide an up-to-date description of environmental disclosure practices in Malaysia together with the nature and extent of environmental reporting practices in the light of documented overseas' studies. Particularly, the study will establish the way the companies disclose their environmental information i.e. the quality and quantity of environmental information made available as well as the areas emphasized. This will be done by looking at

the extent of disclosure in the number of pages as well as categorizing the disclosures in terms of nine content categories.

The second objective will be to examine the characteristics of Malaysian companies listed on the Kuala Lumpur Stock Exchange such as whether size and profitability of companies, audit firm, ownership diffusion, proportion of asset and the industry are determinants of environmental disclosures in Malaysian companies.

1.4 LITERATURE REVIEW

Environmental reporting was previously part of social reporting and studies providing a theoretical framework explains social and environmental disclosures, included a stakeholder approach (Roberts, 1992), of a legitimacy of organizations approach (Deegan & Gordon, 1996; Deegan & Rankin, 1996), and political-economy perspective (Guthrie and Parker, 1989).

Environment reporting was positively related to financial performance (Teoh *et al.*, 1998; Choi, 1998) and market performance (Belkoui, 1976; Blacconiere & Patten, 1994, Blacconiere & Nortcutt, 1993). Companies providing greater social responsibility disclosures were larger in size and had higher systematic risk and placed stronger emphasis on the long run. Studies also showed that environment reporting was negatively related to actual environment performance (Jaggi & Zhao, 1996; Deegan & Rankin, 1996).

There was increasing trend in environment reporting (Trotman, 1979). This can be seen from the studies conducted in Australia, United Kingdom and Singapore (O'Donovan & Gibson, 2000; Gray *et al.*, 1995; Tsang, 1998). The increase in environment legislature and occurrence of environment related accidents, increased environmental reporting by companies (Lemon & Cahan, 1997; Patten, 1992, Gamble *et al.*, 1996).

As can be seen from these studies of the general increase in the level of environmental disclosures in different countries all over the world, it would be timely and interesting to examine if a similar pattern is emerging in Malaysia.

1.5 RESEARCH METHODOLOGY AND DATA COLLECTION

1.5.1 Hypothesis and Variables

This section studies the relationship between environmental disclosure and corporate characteristics. Multiple sample tests and a variety of regression models are adopted to test association between relevant variables and quantity of environmental information (Romlah, 2001; Deegan and Gordon, 1996).

Many of the previous studies such as Gray 1995, Choi 1998, Hackstone and Milner 1996, Tsang 1998 on the determinants of corporate social and environmental disclosure, identify at least four groups of corporate characteristics as having certain degree of relationship with corporate social and environmental disclosure. These are corporate financial performance, firm size, stakeholder power and audit firm. These motivators groups however, may not necessarily be mutually exclusive nor completely free from ambiguity.

1.5.2 Corporate Financial Performance

The relationship between social performance and economic performance, with the hypothesis that social performance and economic performance can be correlated in three ways: positively, negatively and association between extreme levels (Alexander and Bucholz, 1978; Bowman and Haire, 1975; Bragdon and Marlin, 1972; Chen and Metcalf, 1980; Cochran and Wood, 1984; Fogler and Nutt, 1975; Trotman and Bradley, 1981; Cowen *et al.*, 1987). The indicator of economic performance in all these studies include (a) measures of stockholder return, (b) measures of rate of return in either equity, assets, sales or capital, (c) measures of earnings per share, (d) measures of income and (e) measures of price-earnings ratio. 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.

Some argue that there are significant additional costs and foregone profit opportunities to being especially responsible, and thus profitability is

depressed (Ullman, 1976). On the other hand many 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). Bowman and Haire (1975) report significant differences for a five-year average return on equity between disclosing and non-disclosing companies. Preston (1978) also finds a higher single year return on equities for high disclosures than others. Cowen *et. al.*, (1987) failed to support any profitability corporate social and environmental disclosure relationship. Belkaoui and Karpik's (1989) findings are more intriguing. They report a significantly positive pairwise correlation, yet an insignificant, negative regression coefficient for return on assets and disclosure. While Roberts (1992) had found evidence for a positive relationship between lagged profits and corporate social and environmental disclosure, Patten (1991) fails to find any relationship between profitability and corporate social and environmental disclosure when multiple measures of profitability including lagged profits are used.

This study will follow Hackstone and Milner (1996) study on New Zealand companies and is categorized under the third type of study 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. This study will also establish whether the type of audit firm (big five or non-big five) and leverage level, assets-in-place and ownership influence the disclosure amount.

It is initially hypothesized that the higher financial performance, the more likely the company will disclose environmental information (Hackstone and Milner, 1996). The choice of accounting-variables to proxy financial performance was provided by the literature, mainly the work of Freedman and Jaggi (1988). Accordingly, the accounting ratios employed are as follows:

Return on assets (ROA) = Net income/Total assets

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).

Hence the first hypothesis is:

H_{1profitability}: There is significance difference in the financial performance of the company and the extent of environmental disclosures.

1.5.3 The Size Hypothesis

A number of empirical studies indicated that the size of the firm and disclosures of social information are positively related (Cowen *et al.*, 1987; Patten, 1991; Hackston *et al.*, 1996). As in the Malaysian context, (Teoh and Thong, 1984; Lau, 1994 and Tan *et al.* 1990) confirmed that "corporate size is relevant in reflecting the degree corporate social involvement". Following Hackston and Milne (1996) study, for the measures of size market capitalization will be used. Several explanations were presented in various studies in explaining this relationship.

Buzby (1979) suggested, "as the accumulation and dissemination of information is costly, smaller firms may not possess the necessary resources for collecting and presenting an extensive array of information". A similar explanation was given by Firth (1979) that large firms "are quite likely to collect information needed for corporate disclosure for their internal control". Also, agency theory and legitimacy theory contain arguments for a size-disclosure relationship. Cowen *et al.* (1987) argued that this relationship exist because of the fact that as larger companies undertake more activities, they make a greater impact on the society and have more shareholders who might be concerned with social programmes undertaken by the company, and their annual reports provide an efficient means of communicating this information. The demand for financial information by financial analyst, as argued by Schipper, 1991, large firms tend to attract more analysts than smaller ones, and may therefore be subjected to greater demand by analysts for private information. Similarly, Hosain and Adams (1995) stated that large firms have market-based incentives to disclose more

information voluntarily as the desire to reduce private acquisition of information or to protect firm value as non-disclosure may be interpreted as bad news.

However, some studies stated that there is no relationship between size and disclosure such as Roberts (1992) found no relationship in the US sample. Davey (1982) and Ng (1985) failed to support the hypothesis between company size and corporate social disclosures in New Zealand. To attest these findings, firm size will be tested to see its relationship with the level of environmental disclosure.

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. 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) stated 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.

Hence the second hypotheses is size hypothesis which is:

H_{2size}: There is significance difference between the company size and the extent of environmental disclosures.

1.5.4 The Financial Leverage Hypothesis

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). Under the assumption that creditors exhibit serious concern about the social and environmental responsibility, and Malaysian companies have a positive relationship with the level of corporate social and environmental disclosure.

Hence the third hypothesis is leverage hypothesis:

H_{3Leverage}: There is significance difference between the financial leverage of the company and the extent of environmental disclosures.

1.5.5 The Proportion of Assets in Place Hypothesis

The proportion of assets in place hypotheses is developed based on the study of Myers (1977) who considers the value of firm as comprises to two components, namely assets in place and growth opportunities. However empirical studies by Chow and Wong Boren(1987) and Bradbury (1992) do not support this notion.

Hence the fourth hypothesis is assets-in-place hypothesis:

H_{4Assets-in-place}: There is significance difference between the proportion of assets-in-place and the extent of environmental disclosures.

1.5.6 The Auditor Hypothesis

Watts and Zimmerman contended that in agency theory the primary mechanism for controlling the incentive conflict between principals and agent is the appointment of the external auditor. Firth (1979) propose that larger and well known auditors is related to higher quality audit services and encourage their clients to disclose more. Hence, the type of the external auditor employed may be a potential determinant for the voluntary disclosure practices. Also, DeAngelo (1981) argued that large accounting firms have the incentive to provide higher quality audit and according to Klein and Leffler (1981), these firms may have an incentive to maintain high quality audit in order to retain their reputation. Hossain and Adams (1995) found positive relationship between audit firm and financial disclosures.

Choi (1998) stated 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. Moving to Malaysian reporting scenario, Tan *et al.* (1990) found that the auditors have no influence with the level of voluntary disclosure. To test empirically the influence of audit firm on environmental disclosure the fifth hypothesis is:

H_{5Auditor}: There is significance difference between Big 5 audit firm and the extent of environmental disclosures.

1.5.7 Ownership Diffusion hypothesis

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 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.

Hence the sixth hypothesis is:

H_{6Ownership}: There is significance difference between companies of widely held shareholding and the extent of environmental disclosures.

1.5.8 Industry Membership

Prior studies by Patten (1991) and Hackstone and Milner (1996) found positive association between industry classification and corporate social disclosure. Consumer oriented companies can be expected to exhibit greater concern with demonstrating their social responsibility to the community, since this is likely to enhance corporate image and influence sales (Cowen *et.al*, 1987). Patten (1991) argues that industry influence political visibility and this drives disclosures to ward off undue pressure and criticism from social activists.

Hence the seventh hypothesis is:

H_{7Industry}: The tendency to disclose environmental information is associated with industrial membership.

1.6 DATA COLLECTION

1.6.1 Sample and Data Collection

This study was based on top 250 companies listed on the Kuala Lumpur Stock Exchange representing 90% of market capitalization. The annual reports for the year 2000 of these companies were analyzed. Out of the 250, 4 financial institutions were excluded from the sample as they have merged with other financial institutions and 3 other companies whose shares were suspended from trading were also excluded from this sample. Hence the sample was increased to 257 by including 14 randomly selected companies (2 companies form each industry). Annual report is used because it consistent with previous studies and it is more accessible. Furthermore annual reports are used by various groups of users to make decisions about the organization and also annual reports are reliable as to the organizations policies.

1.6.2 Measurement of Environment Information

Studies on social and environmental disclosure (Guthrie and Mathews 1985; Guthrie and Parker 1990, Hackston and Milne 1996, Tsang 1998) used content analysis to analyze annual reports. The information collected will be

based on quality, quantity and type of reporting. The quality of reporting is assessed using two indicators. The first indicator is based on the categories of specific environmental issues (Teoh *et al.*, 1998). The themes are analyzed and given score based on three types of reporting. Type of reporting is based on whether in information reported is monetary, non-monetary or general information. The five broad themes used in this study are statement of environmental policy, financial data, product and service related, sustainability activities and audit (Gray *et al.* 1995).

The other indicator will be the location of environmental information in annual reports (Unnerman 1996). Different reporting location are given different quality of weight as certain locations are more likely to be read, audited or indicates the importance attached to the issue being reported (Gray *et al.* 1995). Reporting in financial statements is given higher weight since it is audited, objective, relevant and material. Reporting in separate Environment Policy statement is given higher weight since it is important issue to the company. Reporting in the Review of the Operation section and the Yearly Event section are given lower weight because it is perceived the information is less important and the reporting involve a lot of subjectivity (Gray *et al.* 1995).

Environmental information can be found in many locations in the annual report. Since quality of the reporting is calculated based on the location and themes of reporting, the total score will be the combination scores from different locations in annual report.

Quantity of reporting is measured based on the number of pages used to report environmental information in annual reports (Deegan and Rankin, 1996). The recent trend of reporting in the Annual reports shows that more and more organizations are using pictures and graphs and charts. This measurement scheme enables figures, charts, graphs and pictures to be included in the analysis. Pictures and graphs can be easily read and are considered as better communications tools compare to sentences or words. Words are sometimes very technical and difficult to understand. Therefore, for measuring quantity of reporting based on number of pages is considered more relevant to using number of words or sentences. Following the

procedures used by Hackston and Milner (1996) measure using number of pages we need to use gridlines to measure. A standard A4 size plastic sheet is divided into 100 unit using gridlines of 10x10. Page margin for this sheet is fixed at 2.5 cm all around, top, bottom, left and right. Each unit represents 1% (1/100) of pages from reporting page. The plastic sheet is placed over a body of text to measure the number of units of reported information.

1.6.3 Analysis of Data

The study used both univariate and multivariate tests to examine the hypotheses. The univariate test was conducted to examine whether independent variables had influence on the environmental disclosure. In addition, a cross tabulation was carried out between the dependent and independent variable. A dichotomous dummy variable, which identifies disclosing firms as 1 and non-disclosing firms as 0, was used for the dependent variable.

Multiple regression methods are used to analyze the relationship between company size, and financial performance. Quantity of environmental disclosure is then regressed with environmental information.

1.7 CONTRIBUTION OF THE STUDY

This paper also provides a more up-to-date description of such environmental practices by Malaysian companies and used sampling and measurement techniques, which are consistent with those, used in other studies; hence, this paper allows some comparisons with surveys from other countries. It is hoped that the findings of this study will yield valuable information and insights into the improvement in the quality of financial reporting, especially in the aspect of environmental reporting by public listed companies in Malaysia.

This study provides a benchmark of Malaysian companies' disclosures in annual report. It is crucial that empirical research first establishes the existence of environmental disclosures in annual reports, before an attempt to examine reasons for disclosure and non-disclosure of environmental

information can be undertaken. Another contribution of the study related to the methodology as the study will help to further refine and develop the content analysis method in accounting and finance.

1.8 LIMITATION OF THE STUDY

This study is subject to certain limitations. Due to time and cost factors in relation for data collection, this study is based on 257 companies only rather than all the companies listed on the listed on the Kuala Lumpur Stock Exchange; the conclusion should not be used to generalize to all the companies.

Second limitation is, it is only an examination of the extent of environmental disclosures in annual reports and the relationship between certain firm characteristics and environmental disclosures. The reason for disclosure and non-disclosure is not analyzed.

1.9 ORGANISATION OF THE STUDY

The project will be presented in five chapters as follows:

Chapter One: An Overview of the Research Project

Chapter Two: Literature Review

Chapter Three: Research Methodology and Methods

Chapter Four: Research Findings

Chapter Five: Conclusion and Recommendations for Future Research.

1.10 CONCLUSION

The above research proposal intends to study environmental disclosure of Malaysian companies in their annual reports and the determinants of the firm characteristics. The size and industry of the firm and corporate financial performance and audit firm influence, is selected to examine whether there is an association between these determinants and the propensity to disclose environmental information.

Further studies and fieldwork will be undertaken in the future to examine the accountant's perception on the importance of environment reporting as well as on their role in the development of environmental reporting in Malaysia.