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A study of Environmental Disclosures by Thai listed Companies on Websites

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Abstract

This study aims to investigate environmental disclosures on websites by companies in the Stock Exchange of Thailand (SET), and test for a possible relationship between the amount of disclosures and a variety of factors. Findings indicated that 88 percent of sampled Thai listed companies provided environmental information on their websites, and there was a relationship between the amount of disclosures and type of industry, ownership status, and audit firm.

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Key words: *Environmental disclosures; Websites; The Stock Exchange of Thailand*

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1. Introduction

Economic development generates environmental impacts. Many corporations take responsibility for their environmental impacts, a responsibility reflected in their willingness to make public disclosures of behaviour with environmental implications. A significant increase in the number of companies providing environmental disclosures in their annual reports and other communication media in the last two decades has been reported (Deegan and Gordon, 1996). After the oil spill in Alaska in 1989 by the sea vessel Exxon Valdez, firms in the petroleum industry and many firms in other environmentally sensitive industries both dramatically increased and improved disclosure of environmental information in annual or environmental reports (Ahmad et al., 2003). In this way, corporations are reflecting growing social expectations and concerns. This notion of corporate environmental responsibility can be explained by legitimacy and stakeholder theories which attempt to reason why corporations accept certain responsibilities. Developments in theories explaining voluntary disclosures have been accompanied by the development of models that facilitate social and environmental disclosures such as triple bottom line reporting, the global reporting initiative and social and environmental management systems (O'Dwyer, 2002).

While annual reports have been much researched, companies have many other communication media to inform their stakeholders such as stand-alone reports, and websites. Website reporting can present real-time information to the multiple distant stakeholders at very low cost (Joshi and Gao, 2009, Othman and Ameer, 2009, Wheeler and Elkington, 2001). While a number of studies have documented the practices of internet environmental reporting (Tagesson et al., 2009, Allam and Lymer, 2002, Williams et al., 1999), there is a

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scant literature on such reporting in developing countries. This study aims to fulfil that gap by investigating the narrative disclosures of environmental information on websites of companies listed on the Stock Exchange of Thailand (SET), and testing whether these companies share the same relationships between levels of environmental disclosures and a variety of characteristics used in previous studies based on more developed countries. There are two main questions: how are environmental disclosures provided on Thai corporate web-sites; and what are the characteristics influencing the levels of environmental disclosures on Thai corporate web-sites. The paper begins by some background information on Thailand. The literature review precedes the research questions. Study design and method are outlined, followed by the findings, conclusions and limitations.

2. Background

Developing countries and environmental degradation are intertwined. The long term economic development of developing countries is threatened by environmental catastrophe. In line with the competitive advantage argument, the Asian Development Bank argues that protecting the environment is not at odds with pursuing economic growth and development (Kazmin and James 2001). The vast Asian market could determine the future of the planet. While substantial economic growth in Asia has resulted in an overall reduction of poverty, growth has placed considerable strains on the environment. Large economic projects in developing countries bring employment, services and infrastructure that their governments cannot afford, whereas in developed countries such as Australia there are alternative sources of public investment and income as well as a safety net of social services. Projects are thus welcomed for the benefits they may deliver so that campaigns about environmental destruction are most vociferous when projects causing the degradation are closing (Macintyre 2007).

Although Thailand has changed from an agricultural, self-sufficient economy into an industrialising nation, it is still considered a developing country. Its government has promoted Thailand as one of the rapidly industrialising nations of Asia (Kuasirikun, 2005) despite having faced a financial crisis known as “Tom-Yum-Goong Crisis” in mid of 1997. During that time, many domestic companies had to quit their businesses, lots of labourers were not employed and the Thai government did not have enough money to manage the country. Since then and until the Global Financial Crisis (GFC), the Thai economy’s growth was about seven percent per year (NESDB, 2003) making it one of fastest growing economies in South and South East Asia. Post GFC, its growth rate has fallen to about three percent annually. Thailand’s economic growth, led by the growth in the manufacturing sector (Mukhopadbhay 2006), created environmental problems, particularly air, noise, traffic and water pollutions, deforestation and land erosion (Warr, 2007). Thailand’s protest movements have won some victories. Authorities have been forced to crack down on illegal logging. Large scale infrastructure projects have been resisted by local communities determined to protect their way of life (Kazmin and Kynge, 2001).

As a result, in 1999, Thai listed companies were asked by SET to promote and build corporate governance practices into their annual reports (Ratanajongkol et al., 2006). The practices included social and environmental disclosures in corporate annual reports, but disclosure was voluntary so few listed companies revealed social and environmental information in their annual reports. A revised version of the principle of good corporate governance was published in 2006 (Lint, 2009) which suggested that board of directors should set clear policy on social and environmental issues. Companies should disclose social and environmental policies as well as the implementation conditions of such policies. As well, voluntary reporting was changed to a “comply or explain” approach. The new principle has been used by Thai listed companies since 2007. The new principle does not apply to environmental disclosures on Thai corporate websites so that web based disclosures are still voluntary. Notably, Thailand is ranked 23rd in the world by number of users with internet access (CIA, 2009).

3. Literature Reviews

Traditionally, an annual report has been the primary means for the dissemination of information to stakeholders with early studies of websites showing that electronic versions of the hard copy were offered (Campbell and Beck, 2004). As the advantages of websites (cheap, fast information dissemination with a lack of legal prescriptions and volume constraints and thereby flexibility) became obvious, alternate reporting media were recognised as better sources of information (Frost et al., 2005). Having become the medium of choice for most stakeholders seeking company information (Campbell and Beck, 2004), companies now use their web-sites for a variety of purposes including the provision of financial and non-financial information to stakeholders (Oyelere et al., 2003). For research purposes, websites have a major disadvantage. Data captured one day may be removed the next day, rendering replication problematic (Campbell and Beck, 2004). Despite this disadvantage, companies are increasingly using their websites to reveal environmental information about their actions and activities (Adams and Frost, 2004) and researchers are analysing the disclosures.

For example, Joshi and Gao (2009) looked at the web pages of 49 multinational companies for environmental disclosures, finding that those companies with a strong equity base and in a good financial condition had a propensity to voluntarily disclose more environmental information than other companies. Tagesson et al. (2009) examining the extent and context of environmental disclosures on 267 Swedish listed companies' websites found a positive relationship between environmental disclosures and size and profitability with government companies disclosing more environmental information than private companies. In a comparative study, Allam and Lymer (2002) examined, among other disclosures, social and environmental disclosures on websites of 50 companies from five countries (USA, UK, Canada, Australia and Hong Kong). They found that 44 percent of the US companies, 86 percent of UK companies, 42 percent of Canadian, 48 percent of Australian, and 24.5 percent of Hong Kong companies disclosed social and environmental information on their websites. In a later paper Rowbottom and Lymer (2009) exploring which user groups access online sustainability information, found that the majority of requests for online sustainability information originate from within the reporting company suggesting an inward focus to sustainability reporting. Evidence about environmental reporting on corporate websites in developing countries such as Thailand is scant.

There are only five papers examining environmental disclosures by companies in Thailand, with all investigating disclosures made in annual reports. William (1999) analysing 28 corporate annual reports, found that culture and the political and civil system were determinants of the quantity of disclosures. Kunsirikun et al. (2004) investigated corporate environmental disclosures in annual reports of 63 Thai firms in 1993 and 84 firms in 1999, finding a slight increase in narrative disclosures from 44% to 45%. Using a sample of 120 Thai listed companies' annual reports to test relationships between environmental reporting and market valuation and corporate accounting performance, Connelly and Limpaphayon (2004) found that there was a significant positive correlation between market valuation and disclosures. There was no significant relationship between environmental reporting and Thai corporate accounting performance. Ratanajongkol et al. (2006) examined trends in corporate environmental disclosures by utilising content analysis of the disclosures of the 40 largest Thai firms in 1997, 1999, and 2001. Environmental disclosures decreased over the study period. Rahman et al. (2010) studied a sample of 37 Thai listed companies in 2006 to examine the relationship between environmental disclosures and financial performance finding that financial performance had no relationship with environmental disclosures. In summary, the above studies of Thai companies did not explore whether environmental information was provided on Thai corporate websites, nor did they explore the possible reasons of the disclosing companies in placing environmental information on their websites. This absence of information about corporate environmental disclosures on Thai companies' websites raises two main questions: what is the extent of environmental information on Thai corporate websites, and what characteristics influence the amount of environmental disclosures on Thai corporate websites. Therefore, the research questions are derived from characteristics previously cited in the literature, thus allowing for comparisons to be made with previous studies. Not all of these studies recognise the need for reporting companies to be perceived as socially legitimate, even though to be seen as a 'good corporate citizens' by

their stakeholders appears to be important to the disclosing companies (Deegan and Gordon, 1996). The resulting hypotheses use the following commonly cited characteristics: company size, industry membership, ownership status, country of origin, audit type, age, business type, risk (debt ratio) and profitability.

4. Methodology

This study investigates website disclosures of environmental information by companies listed on SET. From this population, the top 50 listed companies (out of over 500) which have websites are sampled. Data on a number of relevant variables such as sales, net profit, total debt and equity, auditors, age, and environmental-related information were collected from the websites of these Thai listed companies (www.set.or.th/set/commomlookup.do). Content analysis is used to quantify environmental disclosures on web-sites of the sampled listed companies during June-July, 2011. The content analysis used word count as the measurement tool. The dependent variable, environmental disclosures on Thai corporate websites, is measured by word count using a checklist divided into 22 different themes adapted from previous studies by Deegan and Gordon (1996).

There are nine independent variables. Size of company is measured by sales (Belkaoui and Karpik, 1989, Hackston and Milne, 1996). As previously mentioned, type of industry is classified (Choi, 1999, Hackston and Milne, 1996) where 1 = high profile companies and 2 = low profile companies. Dummy variables were used for ownership status (where 1 = government companies and 2 = private companies), country of origin (1 = international companies and 2 = domestic companies), audit (1 = Big4 and 2 = Non-Big4), business type (1 = family business and 2 = non-family business). Age was measured reported corporate age; risk by the debt/equity and profitability by reported net profit.

5. Empirical Investigation: Main Results

Of the top 50 Thai listed companies during June-July 2011, 44 companies (88%) provided environmental disclosures on their websites. Disclosures averaged 984 words of environmental information per company (see Table 1 which also indicates location of disclosures, and non-narrative forms of environmental disclosures). Commonly environmental disclosures were found in sections labelled “corporate social responsibility” following by other sections in order: “corporate governance”, “awards”, “CEO report”, “environmental policy”, “sustainability”, “vision” and “mission”. The most common form of non-narrative environmental disclosures was the photograph. Overwhelmingly, only good environmental news was disclosed on the websites.

Table 1. Environmental disclosures.

Topics	No. of companies	Percentages
Number of companies having environmental disclosures on web-sites (984 words)	44	88
Locations of environmental disclosures		
Corporate social responsibility	37	74
Corporate governance	12	24
Awards	11	22
CEO reports	8	16
Environmental policy	7	14
Sustainability	6	12
Non-verbal form of environmental disclosures		
Photograph	35	70
Graph	2	4
Table	2	4
Chart	1	2
News of environmental disclosures		
Good news	44	88
Bad news	1	2

What was disclosed (themes) by the Thai companies (see Table 2) were itemized by counting the number of words in environmental disclosures. The three most common themes were environmental spending

and activity, waste management, and environmental policy. Four environmental themes listed earlier were not disclosed; they are environmental audit, land rehabilitation and remediation, rehabilitation costs, and environmental cost accounting.

Table 2. Themes of environmental disclosures.

No.	Themes of environmental disclosures	Mean (words)
1.	Environmental spending and activity	417.70
2.	Waste management	97.80
3.	Environmental policy	91.56
4.	Input- Energy management	58.94
5.	Water effluent	42.76
6.	Environmental management system	39.18
7.	Sustainability development reports	34.30
8.	Awards	34.26
9.	Education and training	25.30
10.	Air emission	24.72
Total of words in environmental disclosures		983.54

To investigate whether there are differences between each independent variable, independent-samples T-test was used. The analysis supports statistically significant differences between high and low profile companies (significance level 0.001) as well as government and private companies (significance level 0.01). Significant differences in terms of country of origin, audit type, and business type were not supported. Although SET divides listed companies eight different business groups, only seven of those groups were represented, the exception being the consumer product group. To test for statistically significant differences between the groupings, one-way ANOVA was used (see Table 3). That there are statistically significant differences between business groups was supported.

Table 3. One-way ANOVA.

Business groups	Mean	Std. error	N
Resources	1993.25	457.248	10
Agricultural and food	1451.00	924.127	4
Industrials	1082.67	318.522	3
Property and contraction	892.71	326.560	8
Financial	579.80	157.199	10
Technology	348.50	113.256	4
Services	276.50	126.298	11

significance level 0.01 (0.009**)

To test for an association between the amount of disclosures and the independent variables (size of company, type of industry, ownership status, country of origin, audit type, business type, age, risk, and profitability), Multiple Regression Model (see in Table 4) was used:

$$\text{Environmental disclosures (word count)} = a_1 + b_1 \text{ Size} + b_2 \text{ Industry} + b_3 \text{ Owner} + b_4 \text{ Country} + b_5 \text{ Audit} + b_6 \text{ Business} + b_7 \text{ Age} + b_8 \text{ Risk} + b_9 \text{ Profit}$$

Table 4. Multiple Regression Model.

Model	Un-standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	8304.690	1929.678		4.304	.000**
YEAR	17.406	16.427	.150	1.060	.296
Type of en sensitive company	-969.392	317.680	-.398	-3.051	.004**
Sales	.001	.001	.224	1.068	.292
Net profit	-.002	.019	-.027	-.118	.906
Debt/Equity	-37.853	33.870	-.140	-1.118	.270
Audit type	-1239.374	519.080	-.368	-2.388	.022*
Ownership status	-1923.987	486.036	-.604	-3.959	.000**
Country origin of company	-187.271	420.079	-.052	-.446	.658
Family business	-386.545	338.068	-.137	-1.143	.260

* Significant at the 0.05 level, ** Significant at the 0.01 level

The results of the multiple regressions are indicated in Table 4. An initial finding shows that type of industry, ownership status, and audit type are significant, while size of company, country of origin, age, business type, risk and profitability are not. Therefore, there is a possible relationship between the amount of environmental disclosures on Thai corporate websites and type of industry, ownership status, and audit firm.

6. Conclusions and Future Scope for Research

This study investigated environmental disclosures on websites of companies on SET, and testing for possible relationships between the amount of disclosures and a variety of factors. Initial findings indicated that 88 percent of the sampled Thai listed companies provided environmental disclosures on their websites. The provision of disclosures on websites differed between high and low profile companies as well as government and private companies. The results contradict Othman and Ameer (2009) who speculated that websites reporting is not widespread in developing countries because very few companies located in these countries know how to use this technology to its fullest. The findings align with stakeholder theory. Thailand has active stakeholders. Their protest movements have won some environmental victories. The need to be acceptable these stakeholders is reflected in the finding that companies providing the most words of environmental information were in the resources industry category, an area with the potential to render greater environmental damage than other industry classifications such as services (the smallest word counts). Their use of websites to manage their reputations would allow these companies a rapid response to any event threatening those reputations, although the need for this was not observed in the period of study. Not surprisingly, environmental disclosures were usually made in the corporate social responsibility section of the website, but surprisingly “sustainability” was not a section favoured by the disclosing companies. The need to gain or maintain a favourable reputation among stakeholders is also reflected in the popular themes of the disclosures. The three wordiest themes were environmental spending and activity, waste management, and environmental policy. The need to manage company reputation among stakeholders resulted in good news being provided rather than bad news.

Because little is known about environmental disclosures by firms in Thailand, this study drew on previous studies that used content analysis and statistical associations with characteristics such as audit, industry, and ownership, to enable comparisons with studies of firms in developed countries. As such the study does not say anything about a disclosing firm’s commitment to the environment. Beside the above limitations, there are the usual limitations associated with the method adopted in the study: the sample, the subjectivity of the data collection method, and the quality and transience of website environmental

disclosures. Further research is needed to compare environmental disclosures of Thai listed companies between their annual reports and their websites; to ascertain why voluntary disclosures are made, and whether disclosures are related to firm performance.

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