

Towards a model for measuring prominence of web-based corporate social responsibility disclosures

By

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Abstract

Purpose

The purpose of the paper is to explore whether industry affiliation still has a significant impact on the prominence of web-based CSR disclosures given the potential benefits for all companies to use the internet as a channel for stakeholder communication.

Design/methodology/approach

To measure the prominence of web-based CSR disclosures, a four-dimensional model is constructed using the locations, sources, accessibility and extent of CSR disclosures. The sample for the study were 65 companies listed on the NZX with market capitalisation of over NZD 150 million.

Findings

The findings of the paper show, firstly, that listed companies in New Zealand are utilising their web-sites for communicating CSR information to stakeholders, regardless of their industry affiliation and the size of their market capitalisation. However, industry affiliation still has a significant impact on the prominence of web-based CSR disclosures in New Zealand, with 'sensitive' industries namely mining & construction, energy and transport industries, registering above average score for all four dimensions of the prominence measurement. Interestingly, several 'less sensitive' industries such as the financial services, and media & telecommunications, are found to demonstrate growing emphasis by making their CSR disclosures more prominent via their corporate websites.

Practical implications

Companies need to recognise that web-based CSR disclosures are increasingly becoming not only an important method for companies to communicate with their stakeholders, but also a significant platform for them to strategically manage their image and identity.

Originality/value

The paper complements earlier descriptive studies on CSR disclosures by constructing a model to measure prominence of web-based CSR disclosures.

Introduction

Amid the complex, competitive and evolving business environment, companies are using various strategies to persevere. One of these strategies is through the disclosure of social and environmental information to appease stakeholders. Baron (2003) argues that corporate social responsibility (CSR) reporting could be an efficient and proactive management strategy and an effective marketing tool to create and sustain competitive advantage. This is further supported by Margolis and Walsh (2003) and Orlitzky, Schmidt, and Rynes (2003) who found that the market rewarded enterprises' social activities. Werther and Chandler (2006) came to the conclusion that the strategic use of CSR reporting, especially to the external stakeholders has been perceived as increasingly important to the economic viability of the business. Thus, in order to cope with the stakeholders' expectations, corporations are spending a great amount of resources to disclose information on their social and environmental performance.

Disclosure via the internet has become one of the most important methods of disseminating information globally and has dramatically changed the landscape of social and corporate communication behaviour (Hunter & Bansal, 2007). Increasingly, stakeholders are using corporate websites to obtain information about the companies' social and environmental practices and performance. The significance of disclosure via the internet is highlighted by Lodhia (2000) and Oren, Aerts, and Cormier (2010) who argued that companies that use web-based communication are able to reduce their marginal costs of information and that it also enhances accessibility and timeliness. Campbell, Craven, and Shrivs (2003) asserted that web-based CSR disclosures is, in essence a powerful legitimation strategy that would build, maintain and repair the relationship or implied contract between the business and its constituencies.

Industry affiliation has been identified to be a major determinant of the level of CSR disclosure. Branco, Delgado, Sa, and Sausa (2014), through an extensive review of the literature found that the majority of studies on CSR by industry groupings have confirmed that industry membership is a key determinant of CSR disclosure. The industry to which a company belongs influences stakeholder pressures and political costs (Brammer & Millington, 2006; Verrecchia, 1983). For example, companies that have high environmental impact will most likely be under the scrutiny of the environmental lobby groups, and these groups will punished firms with poor environmental performance by influencing the politicians and general public to impose costs

on them. Particularly, metals, chemicals, mining and construction sectors are often considered as having high social and environmental impacts and thus are perceived as sensitive industries, and would disclose more CSR information (Brammer & Pavelin, 2004; Evengelinos & Oku, 2006; Khlif, Guidara, & Souissi, 2015), as compared to services, food and commercial sectors that are considered as less sensitive industries.

However, with the increasingly globalized business environment and advancement in information technology, business practices in general, irrespective of which industries they belong to and how far away they are conducted from their home markets, are subject to intense scrutiny by customers, employees, suppliers, shareholders, governments, NGOs and activist groups upon whose support the business relies (Knox, Maklan, & French, 2006). Given the potential benefits of web-based reporting, in particular the low cost, it is likely that firms that are deemed to be less 'sensitive' may also provide social and environmental information to get 'buy in' from stakeholders, in particular customers and equity providers. Pollach (2003) and Wanderley, Lucian, Farache, and de Sousa Filho (2008) argued that despite the growth of corporate communication via the internet, web-based CSR disclosure is still a very much under investigated area of research. Specifically, there has been limited research on the utilization of the internet by listed New Zealand companies for web-based CSR disclosure, in particular relating to the prominence of such disclosures, and whether industry affiliations is still a strong determinant.

The purpose of this paper is to explore web-based CSR disclosure practices of sixty-five New Zealand listed companies from eleven industries, specifically to analyse whether there is an existence of dependency between the prominence of web-based CSR disclosures and the industry sector the firm is affiliated with. Presently, overseas studies are not conclusive as to which industries are deemed as sensitive and less sensitive in relation to CSR disclosure, and the industry membership-web based CSR disclosures nexus is still under-investigated in New Zealand. Specifically, this paper seeks to examine whether industry sensitivity matters any more to the diversity and uniqueness of web-based CSR disclosures of New Zealand companies in view of the globalisation of business environment and the advancement of internet technology. In addition, the paper investigates the current CSR disclosure practices of listed New Zealand companies and analyses how well these companies are utilizing technology to communicate CSR information to stakeholders.

Literature Review

Traditional and Contemporary Approaches to CSR

CSR was traditionally developed based on the two broad principles of philanthropic and paternalism, whereby corporations were obligated to operate ethically and that they are effectively a public trustee who has a responsibility towards all stakeholders (Frederick, Post, & Davis, 1992). Brown (1990) suggested that ‘to speak of organisation as a moral community allows us to acknowledge the moral significance of the human interactions and relations within the organisations’ and this heralded the evolution of accountability and discretionary focus on social issues in the accounting literature.

The traditional model of companies making decision about its CSR activities have been evolving to one whereby stakeholder consideration is taken into account in the decision making process of the company (Rolland & O’Keefe Bazzoni, 2009). Palazzo and Basu (2007) concluded that there are three fundamental approaches that drive CSR for companies; stakeholder driven approach which is a reaction to the demand of external stakeholders and thus is assumed as cosmetic; performance driven approach whereby it is perceived the organisation’s CSR efforts could be for financial gain; and lastly, motivation driven approach whereby motive for CSR activities may either be extrinsic such as improving corporate image, avoiding legal penalties and managing risk, or intrinsic such as moral ethics.

Werther and Chandler (2006), viewed CSR as a concept with a “means and an end” in motivation. Means refers to the manner in which business is conducted with the view of economic gain and the end is maintaining its legitimacy to operate in the society. They further observed several interesting contemporary trends in the business environment that has directly or indirectly affected the communication of CSR; firstly, the increased affluence among consumers who are willing to pay more for products they perceived as ethical; secondly, changing social expectation among consumers due to the lack of trust and confidence as a consequence of corporate scandals; thirdly, globalisation and free flow of information whereby the internet has enabled information flow between countries, organisations and individual, and allows non-traditional corporate stakeholders such as activists to disseminate their messages and to quickly coordinate any subsequent collective action; fourthly, increased awareness of

ecological sustainability whereby individual or activists groups tend to criticise or give negative publicity to companies that do not respond to environmental and social responsibilities.

Consequently, increased societal awareness and concern about business operations has become additional motivations that complement the traditional motivations for CSR which are internally generated (Rolland & O'Keefe Bazzoni, 2009). Golob and Bartlett (2007) further suggested that the modern version of CSR is a 'participative social process where communication has a central role'. Thus, CSR disclosure has clearly become a critical part of the process of corporate accountability to the relevant stakeholders.

CSR and Industry Membership

According to Campbell et al. (2003), the nature of the industry and the firms' business activities drive their CSR activities and disclosures. Various existing CSR literature supported the findings that industry affiliation is a strong determinant of the companies' CSR disclosures, with environmentally or socially sensitive sectors disclosing more as compared to less sensitive sectors (Brammer & Pavelin, 2004; Hackstone & Milne, 1996; Khlif et al., 2015). Other terminologies such as "high/low impact", "high/low risks" and "sinful/less sinful" have been used to describe the level of sensitivity of the industries to which the firms belong to (Campbell et al., 2003; Patten, 1992; Wilmshurst & Frost, 2000). Campbell et al.(2003) suggested that industry sensitivity is the extent to which companies are exposed to criticism or concern on CSR issues and would vary among sectors, by company and over time.

Hackstone and Milne (1996) replicated the study of Patten (1991) and carried out research on CSR disclosures practices of New Zealand companies based on the number of pages and sentences of CSR disclosure. Their findings were consistent with Patten's (1991) study of US companies which found that company size and industry affiliation were highly correlated with CSR disclosures. In a later study, Adler and Milne (1997) conducted on CSR disclosures on social media of 122 New Zealand companies of different sizes it was found that size and industry membership were significantly related to the amount of disclosure, which were consistent with previous studies in US and Europe.

Sensitive or high impact industries have often been perceived as utilizing more societal resources and have higher probability of generating negative externalities that are paid by the society than less sensitive industries (Adelopo, Moure, Preciado, & Obalola, 2012). Consequently, the societal expectation placed upon these sensitive industries would be higher

and the likelihood of being scrutinised by the public would be unavoidable. Adelopo et al. (2012) argued that thus these firms would have a higher incentive to manage their CSR disclosures and would be expected to actively adopt strategies such as using the web to communicate their CSR activities or performance to the stakeholders so that they could sustain their continual utilization of societal resources for their future business activities.

Prior research analysing the relationship between the degree of CSR disclosures and industry sensitivity showed that corporations that belong to industries whose manufacturing activities have negative influence to the environment such as metals, mining, oil and gas, construction and chemical industries, tend to disclose and report considerably more information than corporations in other industries (Adams, Hill, & Roberts, 1998; Brammer & Pavelin, 2004; Chan & Welford, 2005; Clarke & Gibson-Sweet, 1999; Jenkins & Yakoleva, 2006; Khlif et al., 2015; Line, Hawley, & Krut, 2002). As for the industries that are perceived as having lower sensitivity, societal expectations are believed to lower and thus there would be lower incentive to manage their CSR communication.

According to Line et al. (2002), and Brammer and Pavelin (2004), corporations within the finance and service industries disclose very little information on social and environmental issues, and if there is such information, it will be focused on social issues and philanthropically deeds, while mining, oil, and chemical companies have a leading position regarding such reporting. Interestingly, Morhardt (2010) argued that even though companies in sensitive industry are more active in online CSR communication, it is unclear whether such effect exists on industry level or on the level of single firm, as he found substantial intra-industry difference in CSR disclosures. Cuganesan, Guthrie, and Ward (2010) further reiterated that they found no significant difference between the sub-sectors of the food industry, but a large variance within each sub-sector. In Campbell et al. (2003)'s study, companies from retail, brewing and tobacco sectors were sampled and they found no difference among the three sectors in terms of their level of CSR information disclosed.

Xiao, Yang, and Chow (2004) argued that information technology industry is more likely to use web-based disclosure for its CSR activities due to their internet expertise. However, Tagesson et al. (2009), found that information technology companies tend to disclose relatively less social information than companies in other industries. The situation is reversed in the case of consumer goods industry, which tends to disclose relatively more ethical information than other industries. In fact, past studies on CSR disclosures of close-to-market companies show

that firms selling their goods directly to the customers tend to be more active in communicating their CSR engagement than contract manufacturers (Haddock-Fraser & Tourelle, 2010; Sommer, Klink, Janssen, & Hartmann, 2013; Tang & Li, 2009). In recent years, ethical investors and consumers have started to put pressure on other less regulated or lower profiled industries as well to report on the implicit effects of investment decisions, amongst other things (KPMG, 2005; Line et al., 2002). Hence, it would appear that globally, industries differ vastly in regard to the level of social and environmental disclosures.

CSR Communication and Web-Based CSR Disclosures

CSR communication is defined as the process of providing information to discharge social accountability (Gray, Kouhy, & Lavers, 1995; Kavitha & Anita, 2011). Businesses have been using a variety of communication vehicles to achieve their CSR objectives, as evidenced by Snider, Hill, and Martin (2003) who observed that web pages and brochures have been filled with CSR reporting in response to stakeholders demand. Sen and Bhattacharya (2001) found that communication about CSR activities does not necessarily reflect positively on a company. However, other studies show that companies that communicate their social and environmental activities tend to have a socially responsible image that is viewed positively and trusted more by the public (Campbell et al., 2003; Oren et al., 2010; Othman & Ameer, 2009). Interestingly, according to Jahdi and Acikdilli (2009), firms that highlight their CSR performance tend to be scrutinised more than companies that do not do so.

Increasingly, the internet has become the primary communication channel for the twenty-first century (Isenmann, 2006). Specifically, the internet is not only a dynamic and versatile tool to create and maintain a particular organisation image, it is also a useful communication channel to develop, enhance and sustain stakeholder and societal relationships, instead of the conventional relationship between the organisation and its stakeholders (Clarkson, 1995). The advantages of the internet as compared to the conventional mass media include reduction in reporting cost, capability to disseminate unlimited quantity of information to multiple distant stakeholders (Beattle & Pratt, 2003; Pollach, 2003), engagement of stakeholders on a global scale (Wheeler & Elkington, 2001), and availability of real time information (Ashbaugh, Johnstone, & Warfield, 1999; Debreceny, Gray, & Rahaman, 2002; Jones, 1999).

Web-based reporting is the dissemination of both financial and non-financial information using internet technologies (Ashbaugh et al., 1999; Cormier, Ledoux, & Madnan, 2009). Pollach (2003) argued that the internet is replacing all traditional media as the “medium” of self-

presentation for companies, with the exception of the annual report. Hunter and Bansal (2007) suggested that websites are more superior compared to annual reports, which is often criticised for providing less timely information. Rolland and O'Keefe Bazzoni (2009) state that corporate web site is a significant and influential platform for companies to present their CSR commitment and to provide two-way communication with its stakeholders, and thus enable the companies to strategically manage its image and identity.

Although, there has been considerable growth in corporate communication using the internet in recent times, in particular web-based reporting, it is still very much an under investigated area of CSR disclosure (Pollach, 2003; Wanderley et al., 2008). Recent studies have found an increasing use of the internet by companies to communicate CSR information (Branco, Delgado, & Sausa, 2014; Fifka, 2012). Fifka (2012) found that stand-alone CSR reports and CSR communication on the internet has been increasing in recent times. This is supported by the findings of Branco, Delgado, and Sausa (2014) that show strong evidence in the last two decades that stand alone CSR reports and web-based CSR disclosures has become more widely used in corporate reporting practice.

CSR Reporting Practices in New Zealand

According to a global survey, only 16% of the companies in New Zealand reported on CSR compared to the global average of 31%, which ranked the country as the fourth lowest out of 45 countries surveyed (GrantThornton, 2013). This may be due to the nature of New Zealand economy which consisted of mainly small and medium sized businesses. In another survey of CSR reporting by New Zealand's top 100 companies (by revenue) in 2013 it was found that only 17% of the companies reported on their CSR activities (KPMG, 2013). In addition, De Villiers and Van Staden (2012) found that most stakeholders are positive towards CSR disclosures and have urged companies to make the information compulsory and to be audited and published in the annual report and company website.

Research Aim and Questions

The study seeks to provide further insights of the industry sensitivity-CSR disclosure nexus by investigating current web-based CSR disclosure practices of listed New Zealand companies with the aim of answering two main questions:

1. How well are listed New Zealand companies utilising internet technology to provide web-based CSR disclosures?

2. Does industry affiliation have an impact on the prominence of web-based CSR disclosures of listed New Zealand companies?

Methodology

Sample

The sample for the study were 65 companies listed on the New Zealand Stock Exchange (NZX). The companies selected were those with market capitalisation above NZD150 million. The approach of studying the larger companies is adopted in many empirical literature on CSR disclosure because it is evident that firms that make voluntary CSR disclosures tend to have larger market capitalization, and some of the motivations for engaging in CSR disclosure might only be relevant to larger companies (Brammer & Pavelin, 2004; Cowen, Ferreti, & Parker, 1987; Gray et al., 1995; Hackstone & Milne, 1996). The companies are classified into eleven main industry groups: (1) energy; (2) mining & construction; (3) agricultural & fishing; (4) property; (5) transport; (6) healthcare; (7) leisure & tourism; (8) media & telecommunication; (9) technology; (10) financial services; and (11) consumer. The list of the sixty five New Zealand companies and their affiliated industries is presented in Appendix A.

Data Collection, Analysis and Validity

The web sites of the 65 companies were accessed and the sections devoted to the disclosure of CSR information were examined to determine the various sources that contained CSR related information. The extent of CSR disclosure was measured using the content analysis method as used in previous studies (Gray et al., 1995; Wanderley et al., 2008). Most of the disclosure was either on the home page or under the investor relations/shareholder information section of the companies' web-site. The reliability of the collected and analysed data has been checked by multiple researchers. Data collected was analysed using descriptive statistics, with mean scores calculated to measure prominence of CSR disclosure. The model for measuring prominence is described in more detail in the next section.

Measurement of Prominence of Web-based CSR Disclosures

For the measurement of prominence of web-based CSR disclosures, past studies have used prominence of the placement of CSR information on the homepage versus other sections of the corporate website, with mixed results. For example, Guziana and Dobers (2013) found that having primary link to CSR information on the homepage indicated the importance of the

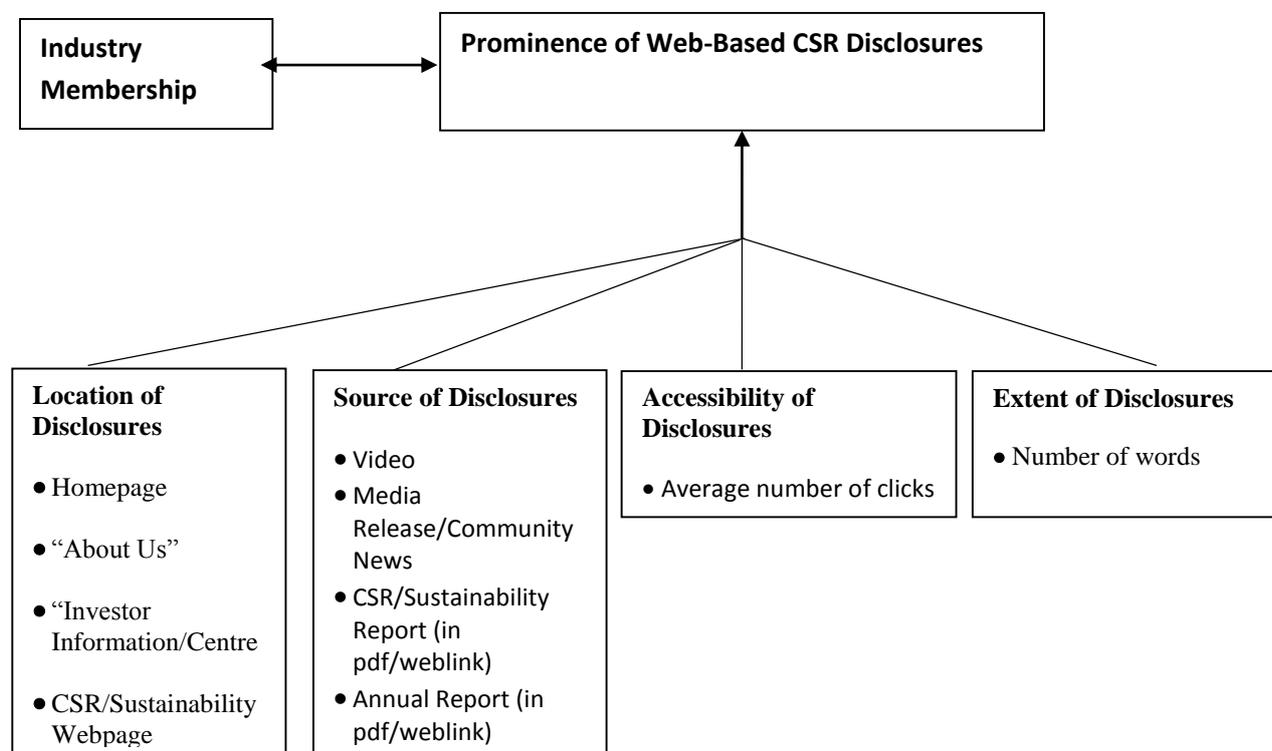
presentation of company's CSR activities, whereas Pollach (2003) argued that the sections presenting the company, such as "About Us" section is more prominent in terms of self-presentation. For the purpose of this study, a four-dimensional approach of the location, sources, accessibility and extent of disclosures was constructed to determine the level of prominence in web-based CSR disclosures, based on the adaptation of the studies of Branco et al. (2014), Adelopo et al. (2012), Chaudhri and Wang (2007) and Dincer and Dincer (2010), so that characteristics that were not captured in the past studies could also be screened and subjected to analysis.

For the location of the web-based CSR disclosures, four locations in the company web-site are identified, namely the "Homepage", "About Us", "Investor Information/Centre" and a separate "CSR/Sustainability" web page. Companies are given a score of 1 if CSR information is found on any of the four locations and a score of 0 if there is no such disclosure. As for the source of the web-based CSR disclosures, special CSR/sustainability reports (in pdf format or web link provided), annual reports (in pdf format or web link provided), videos and media releases/community news are considered. A score of 1 was awarded to the company if CSR information is reported in any of the four sources, and a score of 0 for non-disclosure of CSR information in any of those sources.

For the measurement of accessibility of the web-based CSR disclosures, according to Davey and Homkajohn (2004), the number of clicks remains a key measure of access to required information on a web site. In view that this study is concerned about the structured access to information on the company's website, and that the homepage is commonly the first point of contact between the company and its stakeholders (Adelopo et al., 2012), the number of clicks required in navigating from the homepage to pages where CSR information is being disclosed will be used as web access measure. As for the extent of web-based CSR disclosures, content analysis of the corporate websites was carried out. Content analysis is used to generate a numerically based summary of the data, and past literature has suggested that content analysis provided valid results for CSR reporting research (Gray et al., 1995; Guthrie & Parker, 1990; Wanderley et al., 2008). Figure 1 shows the framework/model used to examine and measure the level of prominence of web-based CSR disclosures.

Figure 1

Model for measuring prominence of Web-based CSR Disclosures



Discussion of Findings

Table 1 provides an analysis of web-based CSR disclosures by industry sector and market capitalisation

Table 1

Market capitalisation, industry sector and web-based CSR disclosures

Size of Mkt Cap	Industry																					
	Energy		Mining & Construction		Property		Agricultural & Fishing		Transport		Healthcare		Leisure & Tourism		Media & Telecom		Technology		Financial Services		Consumer	
	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR	WBCSR	No WBCSR
150 - 1,000	1		4		1	1	5	2	1		4	3	1	1			1	1	4		4	2
1,001 - 2,000	1				3				2					1		2					1	
2,001 - 3,000	4								1				1		1							
3,001 - 4,000									1		1	1				1						
4,001 - 5,000	2																					
5,001 - 6,000									1						1							
6,001 and above				1																3		
Total no. of sampled firms	8		5		4	1	5	2	6		5	4	2	1	2	1	4	1	7		5	2

Notes: Figures refer to number of firms reporting CSR in the web-site; N=65; Size of Mkt Cap = size of market capitalisation; WBCSR = Web-based CSR disclosures; No WBCSR = No web-based CSR disclosures.

As shown by the table, a total of 53 (81.5%) sample firms have utilised their company website for CSR disclosures, while the remaining 12 (18.5%) sample firms did not appear to have any CSR disclosures on their website. Among the 11 industries analysed, it was found that all companies (irrespective of their market capitalisation) from four industries, namely energy, mining & construction, transport and financial services have disclosed CSR information on their website, while for the remaining seven industries, the number of companies that have web-based CSR disclosures seemed to out-numbered those companies that do not have such disclosures. Thus, the findings imply that the listed companies in New Zealand were generally reacting positively to the utilisation of their website for CSR disclosures. This is in line with Rolland and O'Keefe Bazzoni (2009)'s conclusion that corporate website is becoming an influential channel of stakeholder communication.

Table 2 provides the descriptive statistics on the measurement of the prominence of web-based CSR disclosures based on the four-dimensional approach discussed earlier.

Table 2
Descriptive statistics for measurement of prominence

Measurement of Prominence of web-based CSR disclosures	Industry Mean	Industry Minimum	Industry Maximum
Locations (Average number of locations for disclosures)	0.64	0	1.63
Sources (Average number of sources for disclosures)	1.08	0.67	1.63
Accessibility (Average number of clicks)	2.51	1.87	3
Extent (Average number of words)	2,126	415	4,304

The mean for the number of locations for CSR disclosures for each industry grouping was 0.64, with a minimum of zero and a maximum level 1.63. Four industries namely energy, mining & construction, transport and media & telecommunication utilised above average number of locations for web-based CSR disclosures, while the remaining seven industries registered a below average utilisation of locations for such disclosures. The average number of sources of disclosures for each industry grouping were found to range from 0.67 to 1.63, with the mean of 1.08. Five industries were found to be utilising more than the mean number of disclosure

sources for web-based CSR reporting. These were energy; mining & construction; transport; financial services; and consumer.

Accessibility of information has a direct bearing on the quality of internet-based information (Chatterjee & Hawkes, 2008). One way of measuring accessibility is by measuring the number of click required to access information provided on a company’s web-site. To access the sample firm’s web-based CSR disclosures for each industry grouping, an average of 2.51 clicks was required, with the most accessible industry grouping requiring 1.87 clicks and the least accessible industry registered 3 clicks. The industries that had the best accessibility as measured by the number of click were property; mining & construction; media & telecommunication; healthcare; agricultural & fishing; and consumer.

As for the extent of disclosures, the average number of words of disclosure were 2,126 with the minimum of 415 words and a maximum of 4,304. Agricultural & fishing, energy, mining & construction, leisure & tourism, consumer and transport were the six industry sectors that provided above average number of words of CSR disclosure.

Table 3

Ranking of the eleven industries based on the four-dimensional approach of measuring prominence

Ranking of Eleven Industries Based on the Four-Dimensional Approach of Measuring Prominence								
Measurement of Prominence of Web-based CSR Disclosures								
Location of Disclosures			Source of Disclosures		Accessibility		Extent	
Ranking	Industry	Average No. of Location	Industry	Average No. of Source	Industry	Average No. of Clicks	Industry	Average No. of Words
1	Energy	1.63	Energy	1.63	Property	1.87	Agricultural and Fishing	4,304
2	Mining and Construction	1.40	Mining and Construction	1.40	Mining and Construction	2.1	Energy	3,955
3	Transport	0.83	Transport	1.33	Media and Telecom	2.25	Mining and Construction	3,179
4	Media and Telecom	0.67	Financial Services	1.29	Healthcare	2.42	Leisure and Tourism	2,425
5	Property	0.60	Consumer	1.14	Agricultural and Fishing	2.5	Consumer	2,412
6	Agricultural and Fishing	0.57	Property	1.00	Consumer	2.5	Transport	2,259
7	Consumer	0.57	Agricultural and Fishing	1.00	Transport	2.67	Media and Telecom	1,762
8	Healthcare	0.33	Media and Telecom	1.00	Technology	2.75	Financial Services	1,681
9	Financial Services	0.29	Technology	0.80	Financial Services	2.76	Healthcare	539
10	Technology	0.20	Healthcare	0.67	Energy	2.77	Property	453
11	Leisure and Tourism	0.00	Leisure and Tourism	0.67	Leisure and Tourism	3	Technology	415

Table 3 provides a ranking of each of the industry sectors based on the four dimensional approach used to measure prominence of CSR disclosures. Based on the above findings, it is evident that industry affiliation still has a significant impact on the prominence of web-based CSR disclosures of listed companies in New Zealand, despite the advancement of internet technology and the changing business environment. Mining & construction, energy and transport sectors, which conventionally have been considered as “sensitive” or high impact industry sectors in past literature (Brammer & Pavelin, 2004; Chan & Welford, 2005; Jenkins & Yakoleva, 2006; Khlif et al., 2015) have all registered above average score for prominence of CSR disclosures. Surprisingly, the information technology industry sector, which is perceived to have internet expertise and thus more likely to use web based disclosures for its CSR activities (Xiao et al., 2004) have registered below average score for all four dimensions of the prominence measurements. Another interesting finding was that several industries that are traditionally been considered as “less sensitive” such as the financial services, and media and telecommunications, were found to rank quite high on the prominence of CSR disclosures on their website which contradicts with the studies of Line et al. (2002) and Brammer and Pavelin (2004).

Conclusions and suggestion for further research

One of the aims of this study was to provide an update on the utilisation of the internet by listed New Zealand companies to present their web-based CSR disclosures. The results show that a significant number of the sample companies (81.5%) had some CSR disclosures on their website. This is much higher than that reported in the GrantThornton (2013) and KPMG (2013) surveys. One reason for this could be that this study focused on 65 of the larger companies as previous literature has suggested the market capitalisation is a strong determinant of the level of voluntary disclosure of information by companies (Brammer & Pavelin, 2004). The findings suggest that larger listed New Zealand companies were using their web-sites as an important channel for stakeholder communication.

The measure of prominence of CSR disclosures using the four dimensional model showed that four industries namely energy, mining & construction, transport and media & telecommunication utilised above average number of locations for web-based CSR disclosures. For the measure of the number of sources of disclosure, five industry sectors were utilising more than the mean number of disclosure avenues for reporting CSR information. These were

energy; mining & construction; transport; financial services; and consumer. In terms of accessibility as measured by the average number of clicks required, the companies from the property, mining & construction, media & telecommunication, healthcare, agricultural & fishing, and consumer sectors had the quickest accessibility. The results for the measure of extent showed that the industry sectors with more than the average number of words of disclosure were agricultural & fishing, energy, mining & construction, leisure & tourism, consumer and transport. This indicates that using this model the three sectors that previous literature has identified as being 'sensitive' or high impact namely mining & construction, energy and transport all had above average scores for prominence of their CSR disclosure. However two industries that previous literature has shown to be 'less sensitive' or low impact also had above average scores for prominence. These were the financial services and media & telecommunications sectors. Interesting, the technology with all the internet and web expertise scored below average in the prominence measurement.

As Fawkes & Gregory (2000) argued, one of the most prevalent implications of the internet is that it has provided the opportunity and platform to challenge and re-examine the established CSR theories and models such as legitimacy, and institutional theories. Adams (2002) and Cormier, Magnan, and Van Velthoven (2005) also contended that disclosures are a complex phenomenon that cannot be explained by a single theory. Future studies could examine CSR disclosure practices by using multi-disciplinary theories such as corporate communication, reputational risk management and signalling theories.

References

- Adams, C. (2002). Internal organizational factors influencing corporate social and ethical reporting. Beyond current theorizing. *Accounting, Auditing and Accountability Journal*, 15(2), 223-250.
- Adams, C., Hill, W. Y., & Roberts, C. B. (1998). Corporate social reporting practices in Western Europe: Legitimizing corporate behaviour? *British Accounting Review*, 30(1), 1-21.
- Adelopo, I., Moure, R. C., Preciado, L. V., & Obalola, M. (2012). Determinants of web-accessibility of corporate social responsibility communications. *Journal of Global Responsibility*, 3(2), 235-247.
- Adler, R. W., & Milne, M. J. (1997). *Media Exposure, Company Size, Industry and Social Disclosure Practices*. Otago: University of Otago.
- Ashbaugh, H., Johnstone, K. M., & Warfield, T. D. (1999). Corporate reporting on the Internet. *Accounting Horizons*, 13, 241-258. doi:<http://dx.doi.org/10.2308/acch.1999.13.3.241>
- Baron, D. (2003). *Business and Its Environment*. Upper Saddle River, New Jersey: Prentice Hall.
- Beattle, V., & Pratt, K. (2003). Issues concerning web-based business reporting: An analysis of the views of interested parties. *The British Accounting Review*, 35, 155-175.
- Brammer, S., & Millington, A. (2006). Firm size, organizational visibility and corporate philanthropy: an empirical analysis. *Business Ethics European Review*, 15(1), 6-18.
- Brammer, S., & Pavelin, S. (2004). Voluntary social disclosures by large UK companies. *Business Ethics: A European Review*, 13(2/3), 86-97.
- Branco, M. C., Delgado, C., Sa, M., & Sausa, C. (2014). Comparing CSR communication on corporate web sites in Sweden and Spain. *Baltic Journal of Management*, 9(2), 231-250.
- Branco, M. C., Delgado, C., & Sausa, M. (2014). Comparing CSR communication on corporate web sites in Sweden and Spain. *Baltic Journal of Management*, 9(2), 231-250.
- Brown, M. T. (1990). *Working Ethics: Strategies for Decision Making and Organisational Responsibility*. San Francisco: Jossey Bass.
- Campbell, D., Craven, B., & Shrivies, P. (2003). Voluntary social reporting in three FTSE sectors: a comment on perception and legitimacy. *Accounting, Auditing and Accountability Journal*, 16(4), 558-581.
- Chan, C. J., & Welford, R. (2005). Assessing corporate environmental risk in China: an evaluation of reporting activities of hong Kong listed enterprises. *Corporate Social Responsibility and Environmental Management*, 12(2), 88-104.
- Chatterjee, B., & Hawkes, L. (2008). Does Internet reporting improve the accessibility of financial information in a global world? A comparative study of New Zealand and Indian companies. *Australasian Accounting Business and Finance Journal*, 2(4), 1-26.
- Clarke, J., & Gibson-Sweet, M. (1999). The use of corporate social disclosures in the management of reputation and legitimacy: A cross sectoral analysis of UK top 100 companies. *Business Ethics European Review*, 8(1), 5-13.
- Cormier, D., Ledoux, M., & Madnan, M. (2009). The use of web sites as a disclosure platform for corporate performance. *International Journal of Accounting Information System*, 10(1), 1-24. doi:<http://dx.doi.org/10.1016/j.accinf.2008.04.002>
- Cormier, D., Magnan, M., & Van Velthoven, B. (2005). Environmental disclosure quality in large German companies: economic incentives, public pressures or institutional conditions? *European Accounting Review*, 14(1), 3-39.
- Cowen, S. S., Ferreti, L. B., & Parker, L. D. (1987). The impact of corporate characteristics on responsibility disclosure: a typology and frequency-based analysis. *Accounting Organisation Society*, 12(3), 111-122.
- Cuganesan, S., Guthrie, J., & Ward, L. (2010). Examining CSR disclosure strategies within the Australian food and beverage industry. *Accounting Forum*, 34(3-4), 169-183.

- Davey, H., & Homkajohn, K. (2004). Corporate internet reporting: an Asian example. *Problems and Perspective in Management*, 2, 211-227.
- De Villiers, C., & Van Staden, C. (2012). New Zealand shareholder attitudes towards corporate environmental disclosure. *Pacific Accounting Review*, 24(2), 186-210.
- Debreceeny, R., Gray, G. L., & Rahaman, A. (2002). The determinants of internet financial reporting. *Journal of Accounting and Public Policy*, 21, 371-394.
- Evangelinos, I. K., & Oku, M. (2006). corporate environmental management and regulation of mining operations in the Cyclades, Greece. *Journal of Cleaner Production*, 14(3-4), 262-270.
- Fawkes, J., & Gregory, A. (2000). Can existing communication models apply to internet? *Journal of communication Management*, 5(2), 47-77.
- Fifka, M. S. (2012). The development and state of research on social and environmental reporting in global comparison. *Journal Fur Betriebswirtschaft*, 62, 45-84.
- Frederick, W. C., Post, J. E., & Davis, K. (1992). *Business and Society: Corporate Strategy, Public Policy, Ethics*. New York: McGraw-Hill.
- Golob, U., & Bartlett, J. (2007). Communicating about corporate social responsibility: a comparative study of CSR reporting in Australia and Slovenia *Public Relations Review*, 33(1), 1-9.
- GrantThornton. (2013). *Global survey finds 16% of New Zealand business issue CSR and sustainability reports*. Retrieved from <http://grantthornton.co.nz/Press/2013-press-releases/global-survey-finds-16-percent-of-new-zealand-businesses-issue-csr-and-sustainability-reports.html>
- Gray, R. K., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing and Accountability Journal*, 8(2), 78-101.
- Guthrie, J. E., & Parker, L. D. (1990). Corporate social disclosure practice: A comparative international analysis. *Advances in Public Interest Accounting*, 3, 159-176.
- Guziana, B., & Dobers, P. (2013). How sustainability leaders communicate corporate activities of sustainable development. *Corporate Social Responsibility and Environmental Management*, 20, 193-204.
- Hackstone, D., & Milne, M. J. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing and Accountability Journal*, 9(1), 77-108.
- Haddock-Fraser, J. E., & Tourelle, M. (2010). Corporate motivation for environmental sustainability development: exploring the role of consumers in stakeholder engagement. *Business Strategy Environment*, 19(8), 527-542.
- Hunter, T., & Bansal, P. (2007). How standard is standardised MNC global environmental communication? *Behaviour & Information Technology*, 26(1), 135-147.
- Isemann, R. (2006). Internet-based communication. In J. Jonker & M. de Witte (Eds.), *Management Models for CSR* (pp. 247-256). Berlin: Springer.
- Jahdi, K. S., & Acikdilli, G. (2009). Marketing communications and Corporate Social Responsibility (CSR): marriage of convenience or shotgun wedding? *Journal of business ethics*, 88(1), 103-113. doi:10.1007/s10551-009-0113-1
- Jenkins, H., & Yakoleva, N. (2006). Corporate social responsibility in the mining industry. Exploring trends in social and environmental disclosure. *Journal of Cleaner Production*, 14(3-4), 271-284.
- Jones, M. T. (1999). The institutional determinants of social responsibility. *Journal of Business Ethics*, 20(2), 163-179.
- Kavitha, W., & Anita, P. (2011). Disclosures about CSR practices: a literature review. *Journal of Corporate Governance*, 10(1), 45-55.
- Khelif, H., Guidara, A., & Souissi, M. (2015). Corporate social and environmental disclosure and corporate performance. *Journal of Accounting in Emerging Economies*, 5(1), 51-69.
- Knox, S., Maklan, S., & French, P. (2006). Corporate social responsibility: exploring stakeholder relationships and programme reporting across leading FTSE companies. *Journal of business ethics*, 61(1), 7-28.

- KPMG. (2005). *International Survey of Corporate Social Responsibility Reporting 2005*. Amstelveen: KPMG International.
- KPMG. (2013). *Survey of Corporate Responsibility Reporting 2013: New Zealand Supplement*.
- Line, M., Hawley, H., & Krut, R. (2002). The development of global environmental and social reporting. *Corporate Environmental Strategy*, 9(1), 69-78.
- Lodhia, S. K. (2000). Social and environmental reporting in Fiji: a review of recent corporate annual reports. *Social and Environmental Accounting*, 20(1), 15-18.
- Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: rethinking social initiatives by business. *Administrative Science Quarterly*, 48, 268-305.
- Morhardt, J. E. (2010). Corporate social responsibility and sustainability reporting on the internet. *Business Strategy and the Environment*, 19, 436-452.
- Oren, R., Aerts, W., & Cormier, D. (2010). Web-based non-financial disclosure and cost of finance. *Journal of Business Finance & Accounting*, 37(9/10), 1057-1093.
- Orlitzky, M., Schmidt, F., & Rynes, L. S. (2003). Corporate social and financial performance: a meta-analysis. *Organization Studies*, 24(3), 403-441.
- Othman, R., & Ameer, R. (2009). Corporate social and environmental reporting: Where are we heading? A survey of the literature. *International Journal of Disclosure and Governance*, 6(4), 298-320. doi:10.1057/jdg.2009.7
- Palazzo, G., & Basu, K. (2007). The ethical backlash of corporate branding. *Journal of Business Ethics*, 73, 333-346.
- Patten, D. M. (1991). Exposure, legitimacy and social disclosure. *Journal of Accounting and Public Policy*, 10, 297-308.
- Patten, D. M. (1992). Intra-industry environment disclosures in response to the Alaskan oil spill: a note on legitimacy theory. *Accounting, Organisation and Society*, 15(5), 471-475.
- Pollach, I. (2003). *Communicating Corporate Ethics on the World Wide Web: A Discourse Analysis of Selected Company Web Sites*. Frankfurt: Peter Lang Publishing.
- Rolland, D., & O'Keefe Bazzoni, J. (2009). Greening corporate identity: CSR online corporate identity reporting. *Corporate Communications: An International Journal*, 14(3), 249-263. doi:10.1108/13563280910980041
- Sen, S., & Bhattacharya, C. B. (2001). Does doing good always lead to doing better? Consumer reaction to corporate social responsibility. *Journal of Marketing Research*, 38.
- Snider, J., Hill, R. P., & Martin, D. (2003). Corporate social responsibility in the 21st century: a view from the world's most successful firms. *Journal of Business Ethics*, 48(2), 175-187.
- Sommer, F., Klink, J., Janssen, D., & Hartmann, M. (2013). CSR Communication on firm and brand level Symposium conducted at the meeting of the 2nd CSR Communication Conference, Aarhus.
- T., T., Blank, V., Broberg, P., & Collin, S. O. (2009). What explains the extent and content of social and environmental disclosures on corporate websites; a study of social and environmental reporting in Swedish listed corporations. *Corporate Social Responsibility and Environmental Management*, 16, 352-364.
- Tang, L., & Li, H. (2009). Corporate social responsibility communication of Chinese and Global corporations in China. *Public Relations Review*, 35(3), 199-212.
- Verrecchia, R. E. (1983). Discretionary disclosure. *Journal of Accounting and Economics*, 5, 179-194.
- Wanderley, L. S. O., Lucian, R., Farache, F., & de Sousa Filho, J. M. (2008). CSR information disclosure on the web: a context-based approach analysing the influence of country of origin and industry sector. *Journal of Business Ethics*, 82, 369-378.
- Werther, W. B., & Chandler, D. (2006). *Strategic Corporate Social Responsibility: Stakeholders in a Global Environment*. London: Sage.
- Wheeler, D., & Elkington, J. (2001). The end of the corporate environmental report? Or the advent of cybernetic sustainability reporting and communication. *Business Strategy and the Environment*, 10(1), 1-14.

- Wilmshurst, T. D., & Frost, G. R. (2000). Corporate environmental reporting: a test of legitimacy theory. *Accounting, Auditing and Accountability Journal*, 13, 10-19.
- Xiao, J. Z., Yang, H., & Chow, C. W. (2004). The determinants and characteristics of voluntary internet-based disclosures by listed Chinese companies. *Journal of accounting and Public Policy*, 23(3), 191-225.

Appendix A

Sixty five New Zealand companies and their affiliated industries

No	Industry	Company name
1	Energy	Contact Energy Genesis Energy Meridian Energy Mighty River NZ Refining Co. Trust Power Vector Z Energy
2	Mining & Construction	Fletcher Building Nuplex Industries Steel & Tube NZ Oil & Gas Skellerup
3	Agricultural & Fishing	Fonterra Sharhids Unts PGG Wrightson Sanford Delegat's Scales Corp. Synlait Milk Ltd (NS) A2 Milk
4	Property	Prop. For Ind Precinct Prop NZ Kiwi Property Group Goodman Prop Tst Argosy
5	Transport	Auckland Int. Airport Air NZ Freightways Infratil Mainfreight Port Tauranga
6	Healthcare	Abano Healthcare Melifecare Ryman Healthcare Summrst Grp Hld Ltd Fishr & Paykl Health Orion Health Vital Healthcare Arvida Group Green Cross Health

7	Leisure & Tourism	Millennm & Cophrn SKYCITY Ent Grp (NS) Tourism Holdings
8	Media & Telecommunications	Chorus Limited Sky Network TV Spark NZ
9	Technology	EBOS Group Trade Me Group Limited Xero Pacific Edge Diligent
10	Financial Services	Heartland NZ LTD NZX Limited Tower Westpac ANZ AMP Turner Limited
11	Consumer	Briscoe Group Hellenstein Glasson Michael Hill Int. Restaurant Brands NZ Warehouse group Kathmandu Hellaby