ENVIRONMENTAL DISCLOSURES AND EARNINGS MANAGEMENT : REVIEW AND SYNTHESIS

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Abstract
This paper discusses the theoretical concept of environmental disclosures and earnings management. Two theories are used in the framework, namely: legitimacy theory and political costs theory. According to legitimacy theory, firms will disclose environmental information to their stakeholders in order to maintain legitimacy. On the other hand, political Cost theory asserts that politically visible companies (e.g. large, high profit), are vulnerable to political costs and hence will attempt to reduce the possibility of adverse political attention. In doing so, these firms may convey environmental campaigns through voluntary disclosure and, lobby the politicians by managing earnings. Previous studies have revealed consistency with the arguments above. Studies on environmental disclosures found that firms disclose environmental information to maintain legitimacy. Other studies showed that environmental disclosure is associated with size and industry sector, as the proxies for political costs. Recent investigations also found that firms engaged in earnings management in order to reduce political costs derived environmental litigations, potential environmental regulations and poor environmental performance. It is concluded that more empirical studies are needed to refine the environmental-related earnings management area, whereas research methodology may be focused on the environmental disclosure area.

Keywords: *environmental disclosure, earnings management, legitimacy theory, political cost theory.*

INTRODUCTION

The purpose of this paper is to discuss the theoretical concept of environmental disclosures and earnings management. Using two interpretive lenses, the political costs theory and legitimacy theory, this paper attempts to explain firms' motivation to disclose environmental information and manage earnings in relation to environmental issues. While legitimacy theory has been widely used to discuss issues in environmental disclosures, political cost theory can offer explanation for the issues of environmental disclosures and environmental-related earnings management.

According to legitimacy theory, firms will disclose environmental information to their stakeholders in order to maintain legitimacy. This theory argues that a firm needs to comply with the norms and terms defined by the society for its survival and growth. This perspective is adopted in several studies by arguing that firms tend to disclose only favourable environmental information or increased voluntary environmental disclosure as an attempt to legitimize their environmental management (Patten, 1991; Deegan and Rankin, 1996; Deegan and Gordon, 1996) Walden and Schwartz (1997), Cormier and Gordon (2001) and Cormier and Magnan (2003).

On the other hand, political cost theory asserts that politically visible companies (e.g. large, high profit), are vulnerable to political costs and hence will attempt to reduce the possibility of adverse political attention. In doing so, these firms may: convey social responsibility campaigns, lobby the politicians, or lower reported profit (Watts and Zimmerman, 1978). Empirical studies using political costs approach show that environmental disclosures are associated with size and industry sector (proxies for political costs), but it is not associated with environmental performance. In relation to earnings management, some studies also revealed that and firms with poor environmental performance tend to manage earnings downwards in order to reduce political costs.

In order to understand this topic better, understanding of the proper terminology for each issues is very important. The following section provides definitions and brief explanations of environmental disclosure and earnings management.

2. Terminology

Corporate environmental disclosure has been defined as *the set of information items that relate to a firm's past, current and future environmental management activities and performance* (Berthelot et al. ,2003). Environmental disclosure encompasses various items such as expenditures for pollution control equipment and facilities, rehabilitation and restoration costs, potential litigations, compliance status, environmental polices and management systems, and environmental audits. Some studies suggest that environmental disclosure may be the result of regulatory effects (Blacconiere et al, 1994; Gray et al., 1995; Kouhy et al, 1995; Buhr, 1998), while others indicate that it may be linked to the efforts to legitimize corporate actions (Hogner, 1982; Guthrie et al., 1989; Campbell, 2000; Deegan, 2002; Deegan et al, 2002)

Earnings management has been specifically defined as "the purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain" (Schipper, 1989). Healy and Wahlen (1999) suggest that earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers". When confronted by environmental pressures, management has the incentives to manage earnings in order to avoid political attention (Hall et al, 1997; Patten et al., 2003; Elbanan, 2003).

The proponents of political cost theory argue that environmental disclosures increased following environmental accidents and political pressures from potential litigations or regulations arising from the events (Hogner, 1982; McComiskey, 1985; Ness and Mirza, 1991; Blacconiere et al, 1994; Deegan, 1996; Patten, 2002; Elbanan, 2003). These findings appear to be consistent with political cost hypothesis that specific socio-political events, such as prosecution and lobby group pressures, do affect firms' decisions to disclose environmental information and to manage earnings.

3. Legitimacy Theory and Environmental Disclosures

Legitimacy is defined as: *a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions* (Suchman, 1995, p.574). This theory asserts that organizations continually seek to ensure that they operate within the bounds and norms of their respective societies, that is, they attempt to ensure their activities are perceived by outside parties as being 'legitimate' (Deegan, 2000). It has been widely acknowledged that organizational legitimacy does not arise from solely making profit and complying with the regulations, but also being compatible to the prevailing norms and values held by the society (see for example Matthews, 1993).

In legitimacy theory, it is posited that businesses are bound by the social contract in which the firms agree to perform various socially desired actions in return of approval of its objectives and other rewards, and this ultimately guarantees its continued existence (Guthrie and Parker, 1989). If a company fails to operate within the boundaries set by the social norms, the society may revoke its contract and prevent it continuing its operations (Deegan and Rankin, 1996). In a contrary, firms that successfully manage communication and win reputation from the society will survive well and grow. As far as companies are concerned, it is important that society recognises the compatibility of their behaviour with its ethical values (Dowling and Pfeffer, 1975).

As environmental awareness is growing in many societies, there is a dramatic change in environmental norms and values held by societies. Firms are expected to give benefits, rather than be harmful, to the environment. In communicating their environmental commitments or concerns, firms may disclose their environmental performance and activities through various media, such as the press, websites and corporate reports. The disclosure of social information becomes a response to environmental factors (Preston and Post, 1975) and is used as a means of legitimising corporate actions as well as projecting their values and ideas (Dierkes and Antal, 1985; and Deegan, Rankin and Voght, 2000). Through environmental disclosures, organizations communicate to the relevant stakeholders that they are complying with the prevailing norms and values. These norms and values are not fixed, and so legitimacy theory is said to be a very dynamic concept (Lindblom, 1994).

Previous research documented that environmental disclosure has been used to improve the image of poor environmental performance. For example, Deegan et al. (2000) revealed that Australian companies will only provide information which is favourable to their corporate image. He also found significant increase in the reporting of favourable environmental information surrounding environmental prosecutions. The worse the firm's environmental performance, the more environmental information the firm discloses. Likewise, a study in the USA also found significant difference in the extent to which environmental performers disclose environmental information. It is the poor performers who make the most disclosures (Hughes et al. 2001) and corporate pollution propensity have a positive impact on corporate disclosure decisions (Li; 1995) A negative environmental-performance–environmental-disclosure relation appears to be consistent with Verrecchia's (1983) discretionary disclosure model. He argues that firms may retain some information deliberately if its disclosure can cause a decrease in cash flow.

However, some studies show inconclusiveness (Ingram et al., 1980; Wiseman, 1982, Freedman & Wasley (1990). They suggest that environmental performance is not related to environmental performance. Some other studies suggest that environmental performance is positively associated with environmental disclosures (Al-Tuwaijri, 1998; Al-Tuwaijri et.al, 2003). Their findings are supported by the argument that, if environmental performance is good news for investors, firms with good environmental performance should disclose more environmental information (in quantity and quality) than should firms with poorer environmental performance. However, they did not recognize that environmental disclosures is not merely about environmental performance, but covers other items such as environmental commitments, programs and charity, that can be used by corporations to compensate for the actual environmental performance.

4. Political Cost Theory and Environmental Disclosure

Political Cost Theory has been used to address issues related to environmental and financial reporting, such as: (1) why firms disclose environmental information?, (2) do firms manage earnings when confronted by environmental pressures?, and (3) whether firm's decision to manage earnings in relation to environmental issues is associated with its existing environmental disclosure strategy.

According to political cost theory, politically visible companies (e.g. large, high profit), are vulnerable to political costs and hence will attempt to reduce the possibility of adverse political attention. In doing so, these firms may: convey social responsibility campaigns, lobby the politicians, or lower reported profit (Watts and Zimmerman, 1978).

Even though they do not refer specifically to corporate annual reports as a media of social responsibility campaigns, it is reasonable to widen the variety of media for such campaigns to the annual reports. Several authors have asserted that corporate annual report is an effective tool to disclose environmental information in attempts to improve corporate image (Hogner, 1982; Deegan, 2000), reduce political pressures (Ness and Mirza, 1991; McComiskey, 1985;), and reduce the likelihood of regulatory actions (Patten et al., 2003).

However, there is considerable variation in the extent of information provided in these disclosures. Some companies provide no environmental disclosures, others include only qualitative disclosures indicating there are no material economic impacts from environmental regulations, while still others provide more extensive (e.g., financial and quantitative) disclosures relative to environmental compliance (Freedman et al., 1991). These conditions may be explained by the firms' incentives to disclose environmental information in their annual reports.

The incentives of manager to provide discretionary disclosure have been discussed in the literature. Verrecchia (1983) finds that a 'threshold level' of disclosure exists where the increase in firm value associated with providing a signal is greater than the proprietary costs of the disclosure. Al-Tuwaijri et al. (2003) argue that, if we assume that good environmental performance reduces the firm's exposure to future environmental costs, disclosure of this information should be perceived as good news by investors. On the other hand, Li et al., (1997) assert that if greater disclosure provides information that may be used in litigation against the disclosing firm (presumably by third parties with political or social agendas), firms might elect to minimize such disclosure. Studies by Deegan et al. (1996a, 1996b) indicate that firms surrounding environmental prosecutions tend to disclose good news (favourable environmental information).

Similarly, Blacconiere et al (1994) argue that firms with 'good news' concerning their environmental efforts would have incentives to include environmental disclosures in their financial reports, and the absence of such disclosures could signal a higher level of exposure to environmental risk and future regulatory costs. To test this argument, they examined the market reaction of chemical firms other than Union Carbide following the catastrophe [1]. Their finding indicates that firms with more extensive environmental disclosures in their financial report *prior* to the chemical leak experienced a less negative reaction than firms with less extensive disclosures.

Moreover, Patten (1992;2002) argues that the level of social disclosure is a function of the exposure a company faces to the social/political environment. His studies appear to be consistent with this argument. The first study in 1992 documents that firm specific changes in environmental disclosure are significantly related to firm specific levels of toxic releases as reported in the Toxic Releases Inventory by US-EPA. The second study, on the effect of the Exxon Valdez oil spill on the environmental disclosures, indicates that petroleum firms other than Exxon showed a significant increase in environmental disclosures following the incident. Most of these studies are conducted in circumstances where environmental disclosures are done on voluntary basis.

In the case of mandatory disclosure, firms are bound with standards and regulations set by the accounting bodies and securities markets regulators. Accounting standards and regulations are made in response to the requests of various stakeholders. They can also be used to alleviate information asymmetry among the investors. However, the process of such standard and regulatory setting is too political and interested parties taking part in the process are driven by their own interest to improve well-being (Watts and Zimmerman, 1979, 1986; Scott, 2003). Therefore, there could be conflict of interests among the stakeholders involved in the political process.

For example, investors and lenders may support standards that enable them to assess firms' environmental risks by favouring high disclosure. On the other hand, they may also want to avoid proprietary costs attached to such high disclosure (e.g. information for competing rivals). Consequently, their involvement in such political process will be greatly affected by how significant the changes in the regulations may affect their well-being.

2.3. Political Cost and Environmental-related Earnings Management

As mentioned above, beside political campaigns, the other concern of Watts and Zimmerman's argument was the "high profits" and its association to monopoly power. Watts and Zimmerman (1978) went on by suggesting:

> *.... By avoiding the attention that "high" profits draw because of the public's association of high reported profits and monopoly rents, management can reduce the likelihood of adverse political attentions and, thereby, reduce its expected costs (including the legal costs the firm would incur opposing the political actions). (p 115).*

[1] Union Carbide's chemical leak in Bhopal, India during December 1984 resulted in approximately 4,000 deaths and 200,000 injuries

Previous investigations confirmed that companies manipulate discretionary accruals in periods of heightened political scrutiny (Jones, 1991; Cahan et al., 1992; Na'im et al., 1996; Hall et al., 1997; Han and Wang, 1998). Other studies revealed that earnings management is associated with firm political visibility, such as size, industry group and leverage (Dechow et al., 1996; Jiambalvo, 1996; Bauwhede et al.,2003).

In relation to environmental issues firms' engagement in earnings management behaviour, as an attempt to reduce political costs, have also been well documented. These studies evidence firms' engagement in earnings management in response to potential political costs from environmental legislations. Hall et al., (1997) found that oil firms facing potentially large damage awards choose income decreasing non-working capital accruals relative to other firms. In the same year, a study by Cahan et al. (1997) also evidence that chemical firms took income-decreasing accruals in 1979 at the height of the Superfund debate. Han et al., (1998) analysed oil firms in a period of rapid oil price increases during the1990 Persian Gulf Crisis and found out that the oil firms expected profit from the crisis used accruals to reduce their reported earnings during the crisis. They argue that the benefit of disclosing "good news" (i.e., earnings increases) early may have been outweighed by the political costs associated with timely releases of the information.

Recent investigations also appear to be consistent with the above findings. For example, Elbanan (2003) suggest that pollution firms manage their earnings in the year a material environmental remedial expense (ERE) is recognized. These firms take income-decreasing accruals in the year -1, and income increasing accruals in the year 0 and +1. Another study by Patten et al., (2003) revealed that 40 US chemical firms under regulatory threat, following the Bhopal chemical leak occurred in India, December 1984, exhibited significant negative discretionary accruals.

So far, there has been only one study show inconsistency with the previous studies. This study of Mitra's et al. (2003) was a replication of Patten's et al (2003), using a different sample. The sample was taken from oil firms facing political costs following the Exxon Valdez oil spill occurred in March, 1989. They did not find evidence that oil and gas firms in the sample have engaged in greater abnormal accrual adjustments to reduce their reported earnings in order to minimize political costs in periods of high political scrutiny.

Patten (1992;2002) also argues that firms if corporate management believes that financial report environmental disclosure is an effective tool for reducing the likelihood of regulatory actions, it would appear that companies with higher levels of such disclosure preceding an environment-related increased political cost would have less incentive to manage their earning figures downwards.

As political cost theory has been used to explain firms' motivation to disclose environmental information and to manage earnings when confronted with environmental scrutiny, there is another issue of whether or not the two strategies (i.e., environmental disclosure and earnings management) can be linked with each other. Patten et al. (2003) argue if corporate management believes that financial report environmental disclosure is an effective tool for reducing the likelihood of regulatory actions, it would appear that companies with higher levels of such disclosure preceding an environment-related increased political cost would have less incentive to manage their earning figures downwards. Their study on 40 US chemical firms under political scrutiny following the accident in Bhopal, India, is consistent with the argument. Companies with higher levels of pre-event environmental disclosure tended to take less negative discretionary accruals.

5. Literature Review

5.1. Literature on Environmental Disclosures

The earliest study on environmental and social disclosure was probably one by Hogner (1982). Using a large American company's annual reports from 1901 to 1980, he reports that environmental disclosures appeared in the annual reports beginning in 1966. Over the past decade, environmental awareness has been increasing, so is the level of corporate environmental disclosure (Walden et al., 1997; Harte and Owen, 1991; Gamble et al., 1995, Kouhy and Lavers, 1995: Niskala and Pretes, 1995, Cormier and Magnan, 2003).

Following these, there has been extensive literature on the factors affecting corporate environmental disclosure (see for example Deegan and Rankin, 1996; Barth, et al., 1997; Brown and Deegan, 1998; Cormier and Magnan, 1999). Other topics related to environmental disclosure has also been studied extensively, such as its relation to environmental and economic performance (Al-Tuwaijri, 2003) and its value relevance (Belkaoui, 1976; Ingram, 1978;Jaggi and Freedman, 1982; Cormier and Magnan, 2001; and Magness, 2002).

The literature on voluntary disclosure is focused on firm's decision to disclose information and the costs associated to it, and the value relevance of such information. Firms may disclose private information if it is beneficial for them to do so (Grosmann, 1981; Dye, 1985; Verrechia, 1983). The followings are some of the examples. Deegan and Rankin (1996) revealed that firms tend to disclose only favourable information in the annual reports. Brown and Deegan (1998) found that higher levels of media attention are associated with higher levels of environmental disclosure. Neu et al. (1998) found that voluntary environmental disclosure is negatively associated with firm's profitability and criticisms by environmentalists and is positively associated with media exposure of fines incurred under environmental legislation. Cormier and Magnan (2003) suggest that firm size, proprietary costs, information costs and media visibility determine corporate environmental reporting.

In contrary, firms hesitate to disclose information if this actions will lead to political costs imposed by third parties through the political processes. Empirical evidence indicates consistency to this argument. Li, Richardson and Thornton (1997) found that firm facing environmental litigations due to ecological incidents is less likely to disclose information about the accidents.

Dye (1985) argues that external groups' uncertainty about information withheld by a firm determines its decisions to retain information. Studies in support to this argument showed that when a firm's environmental performance is revealed by the media, therefore decreasing outside uncertainty, firms will tend to release information about environmental incidents (Berthelot, 2003; Wiseman, 1982).

Studies on environmental disclosure have used different approaches in building the conceptual framework to describe the phenomenon. For example, some authors used legitimacy approach (Hogner, 1982;, Guthrie and Parker, 1989; Patten, 1991;1992, Deegan and Rankin, 1996; Walden and Schwartz, 1997; O'Donovan, 2002). The others used political cost theory to approach the issue (Patten, 2000; Hall et al, 1997; Mitra; 2003). Still some authors combined together them as two elements to address one issue or inconclusive about which theory explains the phenomenon better than the other (Gray et al, 1995; Burh, 1998, Savage et al, 1999).

5.2. Literature on Environmental-related Earnings Management

There has been little study on the relations of environmental issues to earnings management. Started only in 1997, Cahan et al. hypothesize that chemical firms with high cost exposure to Superfund were more likely to take larger income-reducing discretionary accruals. An empirical study is conducted by Hall et al. (1997) to oil firms facing potentially large damage awards. The study indicates that the managers of these firms choose income decreasing non-working capital accruals relative to managers of other oil firms.

Following this, Elbanan (2003) used 118 US firms designated as potentially responsible parties to estimate the discretionary accruals around the event of remediation expense recognition. He suggests that firms manage earnings in the year a material environmental remediation expense is recognized.

Patten et al. (2003) conduct an analysis to a sample of 40 US chemical firms under regulatory threat following the chemical leak at Union Carbide's Bhopal, India plant in 1984. The study revealed that these firms exhibited significant negative discretionary accruals for 1984. Furthermore, the study also suggests that companies with higher levels of pre-event environmental disclosures in their 10-K reports tended to take less negative discretionary accruals.

Han et al (1998) used a sample of US oil firms to detect earnings management during a period of rapid gasoline price increases during the 1990 Persian Gulf crisis. The results show that oil firms that expected to profit from the crisis used accruals to reduce their reported quarterly earnings during the Gulf crisis. This finding suggests that the benefit of disclosing "good news" (i.e., earnings increases) early may have been outweighed by the political costs associated with timely releases of the information

In this limited number of studies, however, inconclusiveness was found. A study by Mitra et al (2003) revealed inconsistency with the previous study by Patten et al (2003) and Hall et al (1997). Their study showed no evidence to support the hypothesis that oil and gas firms in the sample have engaged in greater abnormal accrual adjustments to reduce their reported earnings in order to minimize their political costs in periods of high political sensitivity relative to other time-periods.

6. Conclusion

Based on the theoretical concept discussed above, there are two major propositions that can be expanded further in empirical research. First, firms will disclose environmental information when they become environmentally visible or receive environmental pressures from stakeholders. This can be a result of mass media coverage, poor environmental performance, or simply because of their size and membership of environmentally sensitive industry. Second, firms may lower their reported profit when confronted by environmental litigations, publication of poor environmental performance or become the target of certain environmental regulations. While there has been extensive literature available on the former argument, so far, there has been little research done on the latter one. More empirical studies are needed to refine the environmental-related earnings management area, whereas research methodology (e.g. content analysis) may be focused on the environmental disclosure area.

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