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Research article

Determinants of voluntary carbon disclosure in the corporate real estate sector of Malaysia

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A B S T R A C T

Corporate real estate management holds the tent that risk which is not understood cannot be measured or managed. The effect of global warming on real estate investment and need for climate change mitigation through disclosures by companies of carbon emission information has becomes a sine-qua-non for the management of companies' carbon footprint and reducing its overall effect on global warming. This study applied the structural equation modeling technique to determine the determinants influencing Carbon Disclosure in Real Estate Companies in a developing economy. The analysis was based on 2013 annual reports of 126 property sector companies listed in Malaysia stock exchange market. The model was validated through convergent validity, discriminant validity, composite reliability and goodness of fit. The result reveals that social and financial market were critical determinant factors for carbon disclosure while the economic and institutional factors did not achieve significant effect on voluntary carbon disclosure. The result is consistent with legitimacy theory and agency theories. The implication of this finding is that increase in public education and awareness will enhance community demand for disclosure from companies and they will increase level of disclosure; also as financial institutions consider sustainability practice as a viable investment and term for credit financing, companies will be motivated to increase disclosure.

1. Introduction

There is a strong correlation between emission of carbon dioxide (CO_2) and other greenhouse gases (GHG) with the challenge of climate change (Freedman et al., 2015). Global warming has taken an increasing importance in governmental and corporate establishments for most nations. The call for all and sundry mitigation against the challenge of climate change is well justified. A significant aspect of the climate change mitigation is the need for corporations to measure, disclose and reduce their level of carbon gas emission.

The reason behind carbon disclosure is that awareness on the level of the emission leads to environmentally friendly policy-making (Bae Choi et al., 2013). Disclosure of carbon emissions is a quite new notion; the wider subject of environmental reporting has been studied in diverse settings. In the US, Hogner (1982) looked at annual report of US steel company and the effect of social performance, and UK, Gray et al. (1995) survey the social reporting rules of UK firms. Similarly, in Germany, Cormier et al. (2005) examined the environmental reporting of large companies, while Larrinaga et al., (2002) examine Spanish environmental disclosure standards. In Australia the environmental reporting practices of companies were studied in (Burritt and Welch, 1997; Deegan et al., 1995; Frost and Wilmshurst, 2000; Trotman and Bradley, 1981).

Due to voluntary nature of environmental disclosure of which carbon disclosure is included, studies on the motivator for companies to make such a disclosure has been on the increase (De Villiers and Van Staden, 2006; Deegan, 2002; Peters and Romi, 2014; Rankin et al., 2011). As (Hoffman, 2004) argued, the motives for making voluntary carbon mitigation are as diverse as the businesses that are undertaking it. While most for this studies focused on the developed economies the determinants for companies within the developing economies remain scarcely studied, though they are responsible for a significant portion of the carbon emission and contributes to substantially global warming. Prior

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studies have inferred that corporate reporting of environmental information in emerging economies is still at an early stage of implementation, and is generally inadequate in terms of the level and worth of the disclosed information relative to the developed world. Liu and Anbumozhi, (2009) reported that the disclosure level of corporate environmental information disclosure appeared to be marginal. Disclosure appears to be significantly associated with a government's climate change mitigation programs. This study is of the opinion that since the extent and content of carbon and environmental information disclosure is low, there is a quest by governments and policy makers for understanding on how to create an enabling environment to increase corporate carbon disclosure and meet pledged reduction quota. Hence the need for an understanding of the various determinant-factors that motivate voluntary corporate carbon disclosure is necessary. This study tends to examine the determinant factors that influence corporate real estate companies to make the decision for voluntary carbon disclosure in a developing economy of Malaysia.

2. Literature review

The developed economies have an uneven share of interest on carbon disclosure, though in developing economies carbon disclosure is predominately voluntary. There are increasing studies examining the multiple factors motivating voluntary disclosure of carbon information in developed countries, the propensity to disclose carbon information in developed ansd developing countries remains an unexplored area (Luo et al., 2013). This is due to the quest by developing countries to enhance economic development and performance; and expand their commercial activities; environmental sustainability in most cases is not given priority (Azizul Islam and Deegan, 2008; Hassanien, 2011). As a result, there are serious environmental issues in some developing countries (Luo et al., 2013). Evidence from literature shows that potential factors that can enhance voluntary carbon information disclosure in the corporate sector could be encapsulated into: social factor, financial market factor, economic pressures, and institutional/corporate ownership pressure.

2.1. Voluntary carbon disclosure in Malaysia

Malaysia is a developing country which is not bound by the compulsory carbon disclosure, though a rapidly industrializing economy. These development activities have resulted to several fatal landslides over the past decades; there is a significant relationship between land use and environmental quality (Tong and Chen, 2002), and many of climatic disasters have been attributed to the profit-orientated of property development companies (Yusoff et al., 2006). Amid the United Nations Climate Change Conference known as COP 15 which was held in December 2009, Copenhagen, Denmark, Malaysia pledge to voluntary initiative to realize up to 40% shrinking in emission of Gross domestic product by 2020 in view of 2005 level with conditions that technology exchange and monetary support be provided by developed countries.

2.2. Social factor

Social factors are community pressures, wielded by public opinion on a company's disposition toward the environment. Physically visible companies are subject to greater levels of social scrutiny and coverage (Al-Tuwaijri et al., 2004; Liu and Anbumozhi, 2009; Patten, 2002), the outlooks of the public on carbon mitigation leads companies to disclose carbon information so that their legitimacy is not questioned (Mobus, 2005). Likewise, stakeholder theory, considers large size companies with a greater impact on the environment, and are subject to greater stakeholders expectation that exert pressure on organizational behavior (Knox et al., 2005). Other studies have reported the existence of a positive association between the physical size of a company and carbon disclosure (Borghei-Ghomi and Leung, 2013; Dwyer et al., 2009; Luo et al., 2012, 2013; Peng et al.; Stanny and Ely, 2008). Therefore, we consider the following hypothesis:

H1. There is a significant and direct relationship between the social factor and corporate voluntary carbon disclosure.

2.3. Financial market factor

Financial Market factor represents influence exercised by investors and creditors on company management (Lee et al., 2015; Liu and Anbumozhi, 2009; Luo et al., 2012; Tang and Luo, 2011). In view of carbon mitigation it implies the demand for emissions reduction by creditors and investors of a company, which responds helps maintain acceptability (Deegan, 2002); as well as to comply with the requirements of stakeholders (Gray et al., 1996) in order to reduce agency cost. Thus, if organizations do not provide this information (Luo et al., 2012) they may be penalized by the market. Similarly, reduction in information asymmetry results in a decrease in cost of financing from institutions in the markets (Barry and Brown, 1986; Cormier et al., 2005; Francis et al., 2005; Healy and Palepu, 2001; Lang and Lundholm, 2001).

Therefore companies with greater liabilities to the financial market are subject to higher pressure to disclose carbon information (Borghei-Ghomi and Leung, 2013; Dwyer et al., 2009), and ultimately result to reduction of the information asymmetry required by suppliers of capital for making their decisions (Lang and Lundholm, 2001). Similarly, Stanny and Ely, (2008) argue that companies with higher levels of financial debt, given their more limited financial flexibility, are subject to greater scrutiny by investors and creditors, and are more likely to disclose carbon information.

2.4. Economic pressures

Scholars have argued that disclosure of environmental information depends on a trade-off between profits and expenses (Cormier et al., 2005; Luo et al., 2012). As regulations and incentives are imposed for different carbon duties, there is a considerably rise in running overheads (Chapple et al., 2013; Matsumura et al., 2011), which influences company's profit. These expenses will be assumed by companies and reflected in operational judgments. In such economic situation, apprehension for weakening profitability is a motivation toward climate change mitigation and reduction carbon emission, as well as monitoring and revealing carbon footprint to climax its achievement in curbing global warming. Organizations are inclined to proactively disclose such “good news” to hint their environmentally friendly form of trade, thus improving the corporation's reputation. Hence, we propose the third hypothesis below:

H4. There is a direct significant relationship between Economic pressure and Corporate carbon disclosure in real estate Companies.

2.5. Institutional/corporate ownership pressure

Separation of ownership and control often leads to information asymmetries, if unchecked, are exploited by managers for their own benefit at the expense of shareholders (Jensen and Meckling,