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Greening Organizations through the Leaders' Influence on Positive Deviance in Corporate Environmental Reporting Practice: A Case of Malaysian Public Listed Company

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ABSTRACT

The main aim of the present study is to determine the role of environmentally expert and experience leader on positive deviance behaviour in corporate environmental reporting practices. Based on the environmental reporting index developed based on the concept of positive environmental deviance, the study measured positive deviance behaviour in environmental reporting practices of 209 Malaysian public listed companies based on 5 years panel data. It was found that environmental expert and experience board of directors have a positive significant relationship with positive deviance in environmental reporting practices. Nevertheless it has been found that there were no significant relationship between environmentally expert and experience CEO and its interaction effect with environmentally expert and experience board of directors on positive deviance behaviour in environmentally reporting practices. This study conceptualized positive deviance behaviour in environmental reporting practices as the strategic behaviour of the corporations to improve the impact of environmental sustainability practices beyond the required regulations by disclosing set of information regarding to their proactive management practices and performance which: (1) exceed minimal norms; (2) deviate from others within the field; (3) go beyond what is required by regulation; and (4) associated broader scale changes.

Keywords: Positive Deviance Behaviour, Environmental Reporting, Environmental Experience, Corporate Governance.

1. INTRODUCTION

The inconsistencies of the extent and the nature of the corporate environmental reporting practices worldwide has led various stakeholders to become hesitant with the credibility and values of the reporting

practices as well as perceived the practice just as a company's green washing mechanism to receive legitimacy (Bebbington & Larrinaga, 2014; Tuppura, Toppinen, & Puumalainen, 2015). Greenwash encompasses "a range of communication that mislead people into adopting positive beliefs about an organisation's environmental performance, practices, or products" (Lyon & Montgomery, 2015; p.3). Greenwash has received substantial attention from environmental activists, concerned citizens, policy makers, and scholars. Previous literature revealed that corporate actors or leader are the primary committers of greenwash (Kim & Lyon, 2014; Matejek & Gössling, 2014). This corporate actor used greenwash to maintain or preserve existing positions of power through green rhetoric and symbolic actions (Borel-Saladin & Turok, 2013). Greenwash may also be exercised by companies and actors who are attempting to maintain or preserve existing position of power green rhetoric and symbolic actions (Millar, Hind, & Jones, 2012). As the previous study finds conflicting results over whether cleaner firms issue more corporate environmental disclosure or not (Cho & Patten, 2007; Clarkson, Li, Richardson, & Vasvari, 2008; Kim & Lyon, 2011) it is imperative to investigate companies' behaviour in respond to various institutional pressure related to corporate environmental reporting practices.

Although corporate responsibility reporting including corporate environmental reporting practices has becomes the norms driven by regulation and stakeholders for 4500 companies from 45 countries all over the worlds, nevertheless, the extent, the depth and the quality of those reporting practices varied heterogeneously. KPMG (2013) revealed that almost all Fortune Global 500 (G250 companies) issued CSR and sustainability reports, but the extent and quality of reporting are inconsistent. While, KPMG (2015) report which focus on the quality of carbon reporting among the world's 250 largest company revealed that there was a lack of inconsistency in the carbon information disclosed by those company in their annual report or corporate sustainability report. The considerable variation in the extent, depth, and quality of corporate responsibility reporting including corporate environmental reporting may stemming from a wide variety of institutional actors which exert convergent and divergent institutional pressures on organisations in the organisational field (Yang & Farley, 2016). Furthermore, the business decision-makers also play a role in shaping firm reporting behaviour in response to institutional pressures related to various environmentally sustainable practices whether to comply (Albertini, 2013a) or deviate positively (Toppinen, Li, Tuppura, & Xiong, 2012) or deviate negatively (Pedersen, Neergaard, Pedersen, & Gwozdz, 2013). In other word, besides confirming to environmental sustainability institutional pressures by showing compliance reporting behaviour, business can give substantive and symbolic response in their reporting behaviour (Rodrigue, Magnan, & Cho, 2013). As the substantive reporting behaviour has been accused as business green washing mechanism (Hoffman & Georg, 2013), it is important to examine the role of environmentally expert and conscious business decision makers in influencing business positive deviance behaviour in environmental reporting practices. It is because recent study argue that positive deviance behaviour can actively be stimulated by business decision makers (Mertens & Recker, 2017) and the green washing behaviour also can actively be motivated by business decision makers (Marquis, Toffel, & Zhou, 2016). The majority of study on corporate environmental reporting practices world has been focused on word counts; sentence counts (summed page proportion); frequency of disclosure; and higher disclosure rating (Chaklader & Gulati, 2015) rather than the measurement related to firm reporting behaviour or strategy (Bakhtiar Alrazi, de Villiers, & van Staden, 2015).

This study attempt to unpack oscillating view regarding to business decision maker and business environmental reporting behaviour through an empirical study of positive deviance environmental

reporting behaviour under the regime of environmentally expert and conscious business decision makers. This study aim to find out whether environmentally expert and conscious decision makers do indeed stimulate the emergence of positive deviance environmental reporting behaviour. This study choose corporate environmental reporting practices from public listed company from Malaysia because Malaysia has been regarded as one of the country with the highest corporate responsibility information in the annual reports due to the regulatory institutional pressure by Malaysia Stock Exchange (KPMG, 2015). Bursa Malaysia (the Malaysia stock exchange) has required all publicly listed companies to publish corporate responsibility information the annual report by describing how material, economic, environmental, and social risks and opportunities are managed in their business operation (Bursa Malaysia, 2012). Malaysia also have introduced Malaysian Code on Corporate Governance in 2012 which emphasized that internal governance member such as CEO and Board of Directors obligation to ensure the company conduct itself in compliance with laws and ethical values (MSWG, 2012). Thus, the Malaysian institutional context offers an insightful setting to investigate positive deviance reporting behaviour (Scott, 2002).

The first objective of this article is to investigate the relationship between environmentally expert and conscious CEO and positive deviance environmental reporting behaviour. CEO is the highest ranking executive in a corporation whose main responsibilities include: (1) developing and implementing high-level strategies; (2) making major corporate decisions; (3) managing the overall operations and resources of a company; and (4) acting as the main point of communication between the board of directors and the corporate operations (Investopedia, 2015). CEO will often have a position on the board, and in some cases is even the chair (Westphal & Zajac, 2013). The second objective of this article is to examine the relationship between environmentally expert and conscious Board of Directors and positive deviance environmental reporting behaviour. Board of directors are the group of individuals that are: (1) elected as, or elected to act as, representatives of the shareholders to establish corporate management related policies; (2) formulating organizational strategy; and (3) disseminating information and advice to CEOs (Carpenter & Westphal, 2001; Daily, Dalton, & Cannella, 2003; Kim & Ozdemir, 2014; Westphal & Zajac, 1997). The third objective of this article is to investigate the interaction effect of both environmentally expert and conscious CEO and Board of Directors and positive deviance environmental reporting behaviour. The interactions between specific human and social capital bases CEO and Board of Director has been proven to provide understanding on board governance effectiveness (Sundaramurthy, Pukthuanthong, & Kor, 2014; Westphal & Fredrickson, 2001).

Theoretically, the finding of this study contributed to knowledge by establishing the measurement and conceptualization of positive deviance environmental reporting behaviour as well as its determinants. Moreover, this study shows that environmentally expert and conscious board of directors can incite firms to deviate positively in environmental reporting practices. Practically, this study provide a conceptual overview of positive deviance in corporate social responsibility and sustainability practices and its possible manifestations; and increases the understanding of the positive deviance corporate environmental reporting practices and its distinction with green wash or symbolic reporting behaviour. This study also postulate that firm with positive deviance behaviour in environmental reporting practices should retained environmentally experts and conscious leader in their firm.

2. REVIEW OF LITERATURE

Background

Positive deviance describes behaviour that (1) deviates from the norms of reference group (2) is positive in terms of intention or effects; and (3) conforms to hypernorms (i.e., is not harmful for other groups or society as a whole (Mertens, Recker, Kohlborn, & Kummer, 2016; Vadera, Pratt, & Mishra, 2013). In corporate environmental management practices, positive deviance can be described as the strategic behaviour of the corporations to improve the impact of environmental sustainability practices beyond the required regulation, which may lead to elevation of organisations and industry norms with the association of broader scale changes (Walls & Hoffman, 2013). Positive deviance can be deemed as more sustainable corporate environmental management practices and related to more sustainable behaviour such as appreciates; attuned; benevolent; caring; endures; positioned; and reciprocating; normal behaviour can be described as social responsible corporate environmental management practices and related to less unsustainable behaviour such as complies with the law; adheres to business norms; and does what is required; while negative deviance is related to non-compliance corporate environmental management practices and related to unsustainable behaviour such as over-consumes; apathetic; indifferent; harming; greedy; arrogant; ignorant (Dossa & Kaeufer, 2014; Sadler-Smith, 2013). Corporate environmental reporting practice is referred to the mean (or set of means) used by different companies to reveal their environmental practices to their stakeholders, which simultaneously serve as a decision-making tool for interested stakeholders (Rosa, Lunkes, Hein, Vogt, & Degenhart, 2014, p. 250). Its consist of information regarding environmental management practices, environmental performance, and legal and financial aspect (Rosa, Guesser, Hein, & Lunkes, 2013) as well as have been regarded as an important aspect in the measurement of corporate environmental management practices of certain company along with environmental performance (Albertini, 2013b). Business used environmental disclosure to inform shareholders; regulators; and other stakeholders of the environmental impact of their activities have and of nay initiatives to mitigate the impacts; as well as to create and maintain a socially responsible image (Bakhtiar. Alrazi, De Villiers, & Van Staden, 2016).

In this study, we conceptualized positive deviance environmental reporting behaviour as “the strategic behaviour of the corporations to improve the impact of environmental sustainability practices beyond the required regulations by disclosing set of information regarding to their proactive management practices and performance which (1) exceed minimal norms; (2) deviate from others within the field; (3) go beyond what is required by regulation; and (4) associated broader scale changes” (Sadler-Smith, 2013; Spreitzer & Sonenshein, 2004; Walls & Hoffman, 2013). Previous study has affirmed that there were some firms with positive deviance behaviour in environmentally sustainability practices that produced exceptional reporting practices. Toppinen et. al., (2012) on their study of corporate sustainability disclosure practices of 66 companies from forest related industry worldwide demonstrated that there were 12 companies has deviated positively from their peers by producing extraordinary sustainability management practices including their sustainability reporting practices. International Paper, Stora Enso, P&G and so on were among the companies that show positive deviance behaviour in corporate environmental reporting practices by having advances reporting practice based on GRI framework as well as showing explicitly their commitment in sustainable development by incorporating numbers of social issues including (1) employees’ health safety and general well-being; (2) training and development opportunities; and (3) strategic partnership with local community in their business practices. Their proactive endeavours have been framed in their extraordinary reporting

practices. Secondly, Albertini (2013a) on his longitudinal study of corporate environmental disclosure of the 55 largest French industrial corporations found that there were proactive French's company such as Alstom, Bouygues, Danone and so on which addressed their environmental issues extraordinarily in their environmentally practices. These company deviate positively from norms in their environmental reporting practices by providing their company sustainability solution which integrated and coordinated different kind of stakeholders including environmental teams and engineering; production; marketing and distribution managers. These companies have shown the materiality of their environmental practices and have been considered as an expert in some "green" product market. Moreover this positively deviate companies in environmental reporting practices has exhibited their investment plan for green innovation in their business process such as progressive improvement of fuel efficiency in their transportation system; substitution of their conventional material with eco-friendly material and design of biodegradable products. Thirdly, P. Møller Mærsk Group, Danish firm in transportation industry have provided high quality sustainability disclosure by demonstrating their huge investment in sustainability innovation which focus on environmental improvement, delivering better services, cost effectiveness and safety (KPMG, 2013). Similar with A.P. Møller Mærsk Group, Vale which is Brazilian mining company with high sustainability reporting quality has shown their commitment in improvement on materiality process by continued to develop technological solutions to balance excellence in operational and financial performance with sustainability, as well as generating opportunities for social and economic development for the communities where it operates (KPMG, 2013).

Leadership and Positive Deviance Behaviour

Leadership can best enable the emergence of positive deviance (Mertens & Recker, 2017). In the context of environmental sustainability, leaders own transformational leadership behaviour such as individualised consideration, intellectual stimulation, inspirational motivation and idealised influences which can influence environmental sustainability practices within organisations (Robertson & Barling, 2013). Leader power in term of environmental expertise (Walls & Berrone, 2015); leaders' value and environmental attitudes (Carballo-Penela & Castromán-Diz, 2014; Ervin, Wu, Khanna, Jones, & Wirkkala, 2013; Papagiannakis, Voudouris, & Lioukas, 2014); leaders' interlocked with pro environmental stakeholders; and leader's past environmental related experiences (Walls & Hoffman, 2013) have been found among the factors which influences firms' positive deviance behaviour in environmentally sustainability practices. Nevertheless, there was scarce study that focused on the influence of leaders in positive deviance in environmental reporting practices. As the leaders has been found as the primary committers of "greenwash" practices (Kim & Lyon, 2014; Matejek & Gössling, 2014), leader may stimulate the emergence of positive deviance behaviour in environmental reporting practices. As environmental reporting practices worldwide has been dominated by public listed company because of the regulation of stock exchange requirement (KPMG, 2015), the leadership of CEO and Board of Directors play importance roles in positive deviance behaviour in environmental reporting practices. Based on the CSR and sustainability reporting survey conducted on 4100 corporations across 41 countries worldwide in 2013, 24 percent of the company has highlighted that board of directors have responsibility on reporting practices while 27 percent of the company designating a specific individual on the boardroom either the CEO or another board member in non-sustainability function and sustainability functions (KPMG, 2013). This show that CEO and Board of directors have strong influence on the firm's behaviour toward CER practices.

CEO and Board of Directors are both important actors in corporate governance mechanism. Nevertheless they have different role in corporate governance mechanism whereby, CEO main responsibility include: (1) developing a implementing firm's high-level strategy; (2) making major corporate decisions; (3) managing the overall operations and resources of firms; and (4) acting as the main channel of communication between the board of directors and the corporate operations (Walls & Berrone, 2015); while, board of directors are (1) the representatives of the shareholders to establish corporate management related policies; (2) formulating organizational strategy; and (3) disseminating information and advice to CEOs (Kim & Ozdemir, 2014). In fact, Shabana and Ravlin (2016) argue that environmental reporting practices as a governance-management duality because governance aspect focus on stakeholder's desire to monitor and asses environmental performance while management aspect concerned with the management of a company's relationship with its stakeholders. So, CEO and board of directors may have different interest in deviating themselves and the organization towards positive deviance behaviour in corporate environmental reporting practices. It is important to understand whether CEO or board of directors or their cooperation or interaction may play important role in deviating organization in their environmental reporting practices.

Neo-Institutional Theory, Corporate Governance and Corporate Environmental Practices

Neo-institutionalism has produced new strands of theorizing such as related to determinism, agency and institutional logics perspectives (Greenwood, Oliver, Sahlin, & Suddaby, 2008). Determinism views that institution as the sole explanatory factor over organization by neglecting underlying constellations of strategic interaction (Oliver, 1991). While, agency views that organizations are not passive and are able to configure social meaning in order to influence the institutional pillars and thus create conditions favourable to them in the long term (Greenwood, Oliver, Sahlin, & Suddaby, 2012). While, institutional logics can be described as the beliefs and practices that recipes for action such as they shape rational, mindful behaviour, and individuals (Thornton, Ocasio, & Lounsbury, 2012). In real world, there are multiple of institutional logic in a single institutional context (Geng, Yoshikawa, & Colpan, 2015). This kind of multiple logics unavoidably generate challenges and tension for organizations exposed to them (Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011). Moreover this multiple logics can lead to diversity in practice by enabling variety in cognitive orientation and contestation over which practices are appropriate (Lounsbury, 2008). Under those circumstances, recent studies have focused on the role of human agencies in explaining this tensions (Fini & Toschi, 2015; Geng et. al., 2015; González-González, Zamora-Ramírez, & García-Hernández, 2015; Hans & Sten, 2015; Qian, Burritt, & Chen, 2015; Yin, 2015).

From the institutional perspective, corporate governance can be regarded as an institutional logic which contain culturally resonant "social prescription" and "organizing principles that equip guidelines to actors as to how to behave" (Greenwood & Suddaby, 2006; Westphal & Zajac, 2013). There are multiple logics of corporate governance such as "corporate logic", "agency logic", "neo-corporate logic" (Geng et. al., 2015; Westphal & Park, 2012; Zajac & Westphal, 2004). Agency perspective of corporate governance is the one of prominent logic of corporate governance (agency logic) which views that corporate governance systems as governance and control mechanism for protecting shareholders' interest from self-serving manager (Fama, 1980; Fama & Jensen, 1983). On the other hand, neo-corporate logic based on resource dependence perspective which views that corporate governance systems as a critical resource for catering advice, counsel, legitimacy, and social capital as well as network resources to a firm (Daily & Dalton, 1994;

Haynes & Hillman, 2010; Salancik & Pfeffer, 1978; Zajac & Westphal, 1994). Based on these perspective or logic (agency and resource dependence perspectives) there are vast past studies which either examine board composition (e.g. size, insider/outsider ratio, demographics/diversity, functional specialists); board leadership (whether unitary or duality); board compensation and incentives to be the factors that predict firm effectiveness (usually measured in terms of firm performance) (Esa & Zahari, 2014, 2016; Sur, 2014).

Nearly all recommendations on composition as well as compensation for board members are related with both agency and resource dependence perspectives such as higher number of outside independent directors will provide better monitoring as per the agency perspective, while outside directors will enable access to greater resources as per the resource providing "service" perspective (Brauer & Schmidt, 2008). Nevertheless, most management related recommendations, such as unitary leadership, in that way the CEO and chairman of the board is the same individual, stand in direct contradiction as per the two perspectives. Based on the agency perspective, unitary leadership is akin to putting somebody in charge of a position, when they have a conflict of interest (Jensen, 1993) while based on the resource dependence perspectives, unitary leadership removes ambiguity in process and outcomes, motivate greater co-ordination, and result in higher performance (Donaldson, 1990; Finkelstein & D'aveni, 1994). As discussed above, agency logic of corporate governance prescribes monitoring functionality, while neo-corporate logic prescribes a resource providing functionality of internal governance mechanism. Recently, some researchers also has argue for an integrated functionality model for internal governance members such as boards, wherein board members provide both agency prescribed monitoring function (i.e. control related or passive) functions as well as resource dependence based service (i.e. active or strategic counsel related) functions (Haynes & Hillman, 2010; Hillman & Dalziel, 2003).

Institutional logics stress on how beliefs and practices shapes the cognition and behaviour of leader towards environmental reporting practices (Thornton et. al., 2012). Institutional logic is a shared interpretive scheme of organization's actors, which determines what is acceptable, how to implement and evaluate strategies and routines (Parent, Kristiansen, Skille, & Hanstad, 2015). Key governance leader such as CEO and board of directors have been found to have significant influence on environmental reporting practices worldwide (KPMG, 2013; PwC, 2013) which highlight their prominent role as the key agent that determined the strategic direction of organization's environmental reporting practices in response to the change in the institutional environment. Business initiative to disclose environmental sustainability disclosure in order to respond to various environmental pressure such as climate change, fossil fuel scarcity, and environmental pollution has become widely accepted as institutional logic for business society worldwide (Hoffman & George, 2013). Furthermore there were some competing institutional logic regarding to environmental reporting practices including just disclosed environmental information for the legitimacy purpose rather than to improve environmental performance (Marquis et. al., 2016). Neo-Institutional Theory also covers cognitive level of leader by providing explanation how leader make sense of the situation for which environmental reporting practices are designed and implemented (Athanasopoulou & Selsky, 2015). Neo-Institutional Theory also through the normative and cognitive pillars (informal frame), has recognized the influence of experience and skills of leader in filtering information retrieval and interpretation of various institutional pressures (Walls & Hoffman, 2013).

Leader's Past Experience and Positive Deviance Behaviour in Environmental Reporting Practice

Past experiences shape leader thinking and mental models (Huff, 1982), and permit them to develop specific skills and procedural knowledge regarding to how a specific management practices such as environmental reporting practice operates (Becker, 1993; Harris & Helfat, 1997; Nahapiet & Ghoshal, 1998). Past experience can be obtained by leaders from their (1) educational background (Finkelstein, Hambrick, & Cannella, 2009); (2) occupational background (Golden & Zajac, 2001; Kroll, Walters, & Wright, 2008; Stearns & Mizruchi, 1993; Westphal & Fredrickson, 2001); and (3) internal and external social capital (Barroso-Castro, del Mar Villegas-Periñan, & Casillas-Bueno, 2015). Leader obtained experience through external social capital by their: (1) employment on a full-time basis; (2) seats on the board of other firms; and (3) social capital in the form of their personal relationships, affiliations, and social standing (Johnson et. al., 2012 ; Kim, 2005) while leader obtained experience through inter social capital by interpersonal relationship between themselves on the boards and specific committees (Barroso-Castro et. al., 2015; Tian, Haleblian, & Rajagopalan, 2011). The vast experiences reflect on the expertise of the leader (Lines, 2007). With regard to leader's experiences on environmental issues, their past environmental related experiences has been identified as an important antecedent of individual environmental behaviour (Dietz, Stern, & Guagnano, 1998). It has been proved that individual's environmental experience connects individual's environmental values to action (Hines, Hungerford, & Tomera, 1987). Within company, environmental experiences and values shape organizational behaviour and managerially driven initiatives (Bansal & Roth, 2000; Cordano & Frieze, 2000; Delmas & Toffel, 2008; Ervin et. al., 2013; González-Benito & González-Benito, 2006a; Schneider & Meins, 2012; Sharma, 2000). Environmentally experience leader has expertise to foster company strategic changes in environmentally sustainability practices and coordinate firm to substantive approach of environmental governance rather than symbolic approach of environmental governance (Peters & Romi, 2013; Walls & Berrone, 2015; Walls & Hoffman, 2013). In substantive environmental governance, reports aiming to educate corporate stakeholders about changes in environmental performance and those aiming to change their perceptions about its environmental performance are substantive. Environmental disclosure is substantive, because it implies actual, concrete changes in organizational actions to conform to prevailing social norms" (Rodrigue et. al., 2013, p. 109). On the contrary, environmental reports aiming to manipulate the perception of corporate stakeholders and mislead them are symbolic. They are decoupled from the company's environmental performance, and help the company appear "to conform to social norms without actually transforming organizational activities" (Rodrigue et. al., 2013, p. 109).

CEO's Past Environmental Related Experiences

For CEO and managerial level, Peters and Romi (2013) exhibited that: (1) CEO's education background (e.g. environmental engineering or sciences or an MBA in environmental affairs) and (2) their prior positions in an environmentally-related fields or disciplines are among the important determinants of CEO environmental related experience and has positive influence on firm's environmental reporting practices. While, Walls and Berrone (2015) classify CEO's environmental experiences into two types such as: (1) content-based experience and (2) process-based experience. Content-based experiences includes, (1) the extent of CEOs involvement in environmental activities at non-corporate organizations such as foundations, NGOs, government bodies, and local communities; and (2) any honours or award that CEOs received for their environmental activities. While process-based experience comprise: (1) CEO's previous occupations, directorships, and other corporate appointments based on their official environmental responsibilities in

previous post; and (2) prior membership in board sub-committees dedicated to serving environmental matters. Walls and Berrone (2015) found that CEO's past environmental experiences has positive significant effect in reducing firm environmental sustainability performance.

Based on the perspective of Neo-Institutional Theory, specialized and environmental knowledge as well as environmental related work experience among CEO allow organization to break away from established institutional logics or norms related to environmental reporting practices (Lewis, Walls, & Dowell, 2014; Peters & Romi, 2013). Previous study revealed that: (1) environmental awareness of CEO's (González-Benito & González-Benito, 2006b); (2) CEO's attitudes toward sustainable development (Ervin et. al., 2013); (3) CEO's different perceptions, attitudes and motivations regarding environmental pressures (Schneider & Meins, 2012); and (4) CEOs with relevant environmental experience (Walls & Berrone, 2015), have been recognized as strong predictor for business proactive environmental management practices. From the corporate governance perspectives, CEO with past environmental related experience and expertise will leveraged their formal influence and power over other key governance member including board of directors in order to deviate positively in corporate environmental reporting practices (Rodrigue et. al., 2013; Walls & Berrone, 2015).

H1: CEO's past environmental related experiences is positively associated with firm's positive deviance behaviour in environmental reporting practices.

Board of Director's Past Environmental Related Experiences

Among the aspects of board of director's past environmental experience that has been underlined by previous study including (1) the number years of work experience in environmental-related roles; (2) awards and honours directors received; (3) directors' membership, advisory, or management role of environmental activities in local community events, foundations, and institutions such as NGO; (4) director's historical board position to identify if directors had been members of a board's sub-committee with environmental goals; and (5) number of years of experience directors had on environmental sub-committees (Walls & Hoffman, 2013). Similarly, Rodrigue et. al., (2013) described the director environmental experience can be obtained through previous job in environmental organizations; and familiarity with context and related environmental issues of the industry in which the firms operate. Ortiz-de-Mandojana, Aragón-Correa, Delgado-Ceballos, and Ferrón-Vílchez (2012) revealed that board of directors interlocking with environmental green equipment supplier and with firms that providing knowledge-intensive services, acquired vast amount of past environmental related experience that have positive association with firm's adoption of proactive environmental strategies. Board of director have significant role in organizational interpretation and responses to various institutional pressures related to environmentally sustainability practices including environmental reporting practices (PwC, 2013). Based on the perspective of Neo-Institutional Theory, specialized and environmental knowledge and environmental experience among board of directors allow company to break away from established institutional logics or norms related to environmental reporting practices (Walls, Berrone, & Phan, 2012; Walls & Hoffman, 2013). From the corporate governance perspectives, board of directors with past environmental related experience will influence others key governance actors such as CEO and senior executive to direct firms to substantive approach in environmental governance practices in order to deviate positively in corporate environmental reporting practices (Arena, Bozzolan, & Michelon, 2014; Mallin, Michelon, & Raggi, 2013; Walls & Hoffman, 2013).

H2: Board of director's past environmental related experiences is positively associated with firm's positive deviance behaviour in environmental reporting practices.

Interactions Effect of CEO's and Board of Director's Past Environmental Related Experiences

Previous study revealed that the interaction between specific human and social capital bases of the board and the CEO, can be regarded as one of the indicator of board governance effectiveness (Sundaramurthy et. al., 2014; Westphal & Fredrickson, 2001). From the perspective of Neo-Institutional Theory, the interaction effects of CEO's and board of director's past environmental related experience will make the environmental governance mechanism process become more smoother because both CEO and board of directors may share same perception and knowledge pertaining to environmental sustainability-related issues, as well as increase the implementation and evaluation process in corporate environmental reporting practices which subsequently lead to positive deviance behaviour in environmental reporting practices (Rodrigue et. al., 2013; Westphal & Zajac, 2013). Although the CEO and the board of director share similar set of past environmental related experience and expertise, they may have different kinds of institutional logics in their corporate governance practices. The competing institutional logic of CEO and board of directors may cause by self-serving incentives (Geng et. al., 2015). Nevertheless, as they share same set of environmental experience and expertise, so they will share same long-term environmentally sustainable oriented goal which will outweigh their self-serving incentives which subsequently can lead their company deviate positively in their corporate environmental reporting practices. Hence:

H3: The interaction effect of the CEO's and board of director's past environmental related experience will increase the likelihood of firm's positive deviance behaviour in environmental reporting practices. That is, when both CEO and board of director possessed same set of past environmental experience, the likelihood of positive deviance behaviour in environmental reporting practices will be stronger.

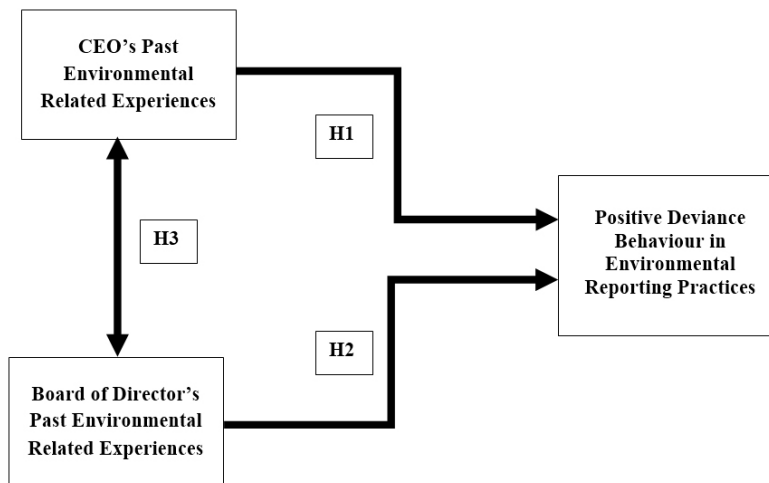


Figure 1: Conceptual Framework of Positive Deviance Behaviour in Corporate Environmental Reporting Practices and its Determinants

3. RESEARCH METHODOLOGY

To investigate the manifestation of positive deviance behaviour in environmental reporting practices, this study chooses Malaysia as an institutional setting. The reason behind this is Malaysian has been regarded

as one of the highest country in the world with highest Corporate Social Responsibility (CSR) reporting rate along with India, Indonesia, and South Africa due to CSR mandatory requirement (KPMG, 2015). Despite that fact, the number of inconsistencies in term of environmental reporting practice which is one of the dimension of CSR practices in term of extent and quality of this practices are very apparent. Various studies and reports of corporate environmental reporting practices in Malaysia show that (1) the extent and quality of corporate environmental reporting practices was low or average or incomplete or incomprehensive; descriptive and in qualitative forms; and only focus on environmental compliance categories compared to the disclosure level of companies in more developed countries (Ahmad & Haraf, 2013; Ahmad & Mohamad, 2013; Amran, Ooi, Nejati, Zulkafli, & Lim, 2012; Darus, Yusoff, Azhari, & Khadijah, 2013; Fatima, Abdullah, & Sulaiman, 2015; Iatridis, 2013; Jaffar, Adinehzadeh, & Rahman, 2015; Mojilis, 2013; Mokhtar & Sulaiman, 2012; Rahman, Ishak, & Ramali, 2012; Said, Omar, & Abdullah, 2013; Sallehuddin & Fadzil, 2013; Samuel, Agamuthu, & Hashim, 2013; Haslinda Yusoff, Darus, Fauzi, & Purwanto, 2013; Haslinda. Yusoff, Othman, & Yatim, 2013); (2) the quantity and quality of environmental disclosure for environmentally sensitive firms were poorer than less environmentally sensitive firms where some firms which disclosed extraordinary and superior corporate environmental practice were generally from less environmentally sensitive firms (Ong, Tho, Goh, Thai, & Teh, 2016); and (3) there were some Malaysian companies that have produced exceptional environmental disclosure beyond what is required by regulation (ACCA, 2014; Iatridis, 2013; Fatima, Abdullah, & Sulaiman, 2015; Mokhtar & Sulaiman, 2012); and (4) around 13 percent of public listed companies from 800 registered with Bursa Malaysia in 2015 has participated in ACCA Malaysia Sustainability Reporting Awards (MaSRA) in 2015 (ACCA Malaysia, 2015). Moreover the latest Malaysian Code on Corporate Governance introduced in 2012, which focused on the independence of board of director (e.g. separating and establishing an independent chair of the board and the increase of proportion of independent director of the board) compare to the human and social capital aspect of key governance leader such as CEO and Board of Directors (MCCG, 2012). As the positive deviance behaviour can actively be stimulated by leader (Mertens & Recker, 2017), Malaysia is suitable setting to study the effect of CEO and Board of Director in deviating their environmental reporting practices compare to their peers. According to Malaysian stock exchange holding company Bursa Malaysia, there were 791 companies listed in main market in 2016 which their sector covering 69 economic activities (Bursa Malaysia, 2016). This study is distinctive from other previous study that investigate on the determinants of positive deviance behaviour as it use secondary data and positive deviance index in environmental practices compare to quantitative and qualitative survey that has been employed before (Galperin, 2012; Kura, Shamsudin, & Chauhan, 2016; Mertens & Recker, 2017; Mertens et. al., 2016).

This study examines corporate environmental reporting practices behaviour of Malaysian public listed company from environmentally sensitive industry and its determinants from year 2010 to 2014. The year 2010 to year 2014 was chosen because of the significant of normative and cognitive institutional pressures that has been initiated by Malaysian government and Malaysian stock exchange including (1) Bursa Malaysia's Business Sustainability Program as well portal of Powering Business Sustainability – A Guide for Directors in 2010; (2) Corporate disclosure guide in 2011; (3) The second edition of the Corporate Governance Guide: "Towards Boardroom Excellence" touched on board responsibilities in ensuring sustainability of the company launched in 2013; (4) My Carbon reporting Programmes, a voluntary reporting mechanism launched in 2013 (Bursa Malaysia, 2014; Economic Planning Unit, 2015; Esa & Anum Mohd Ghazali,

2012; Kweh, Alrazi, Chan, Abdullah, & Lee, 2017). To determine whether company from environmentally sensitive industry or otherwise, this study uses purposive sampling techniques. North American Industry Classification System (NAICS) codes of environmental sensitive industries and guidelines by Department of Environmental of Malaysia was used to determine whether the firm fall within environmentally sensitive industries or otherwise (Buniamin, Alrazi, Johari, & Rahman, 2010). The NAICS is the standard used by United States federal agencies to classify business establishments. This study is based on environmentally sensitive industries list (e.g., oil and gas extraction, mining, chemical manufacturing, transportation equipment manufacturing, or computer and electronic product manufacturing) that was developed by the Small Business Administration based on this NAICS codes (Philippe & Durand, 2011). While based on Department of Environmental of Malaysia, firms can be considered as highly environmental sensitive if they involved in operations such as mining; chemicals; transportation; oil and gas; wood and timber; utilities; agriculture; construction and properties; and manufacturing (Buniamin et. al., 2010). Based on purposive sampling techniques, this study identified there were 458 Malaysian public listed companies fall within environmental sensitive industries, nevertheless only 209 firms were chosen because the others still not listed during year 2010 and still not publish 2014 annual report during this study data collection period in June, 2015. The sample is considers sufficient as it present 46 percent of total population of 458 Malaysian public listed companies from environmentally sensitive industry. This study uses secondary data from firm's published annual reports, stand-alone sustainability report, company website and OSIRIS (databases for listed and unlisted companies worldwide). The interpretative approach of content analysis has been employed to all sample firm's annual reports; stand-alone sustainability report; and company website to measure the positive deviance behaviour in environmental reporting practices and its determinants which expected number of observations over the five-year period for this study is 1045 firm-years (209 firms × 5 years = 1045).

Measurement of Variables

Dependent variables – Positive deviance behaviour in corporate environmental reporting practices (POSDEVSCORE). To measure the behavioural patterns of Malaysian public listed firm from environmentally sensitive industries in corporate environmental reporting practices, this study follow structured procedures that based on the level of firm's environmental strategies (Albertini, 2013a) and positive organizational scholarship continuum (Dossa & Kaeufer, 2014; Sadler-Smith, 2013). The score has been given based on the level of environmental strategy reported by firm in their environmental disclosure. The final score will be calculated based on the environmental disclosure index developed by Rupley, Brown, and Marshall (2012) based on Global Reporting Initiatives (GRI) Framework (Refer Table 1) as well as based on Positive Organizational Scholarship Theory. This index has fifteen indicators which represent different aspect of environmental management practices. The scoring method use in this study can be considered as a proxy of environmental strategy which is related to firm's behaviour in response to various institutional pressure related to environmental sustainability practices such as (1) non-conformance behaviour (e.g. non-conformance to external pressures related to environmental sustainability practices); (2) compliance behaviour (e.g. compliance to external pressures related to environmental sustainability practices); and (3) beyond-compliance (e.g. firms voluntarily go beyond regulations in their environmental sustainability practices).

Table 1
The Corporate Environmental Reporting Practices Index Based on Indicators of Environmental Management Practice

<i>No.</i>	<i>Indicators of Environmental Management Practices</i>
1	Material: Materials input into the production process from internally or externally supplied recycled materials/ Sales of materials formerly discarded.
2	Energy: Consumption of Energy (joules, BTUs, or similar measures)/renewable resources.
3	Water: Use of water/Rehabilitation of water, put back into watershed/Reused water, for additional processes.
4	Atmospheric Emissions: (1) Total waste created and/or disposed, disposal sink not specified or all sinks aggregated; (2) Emission of ozone-depleting substances; (3) Emission of other significant gasses; and (4) Carbon offsets.
5	Total waste (Include: Hazardous, toxic, radioactive): Total waste created and/or disposed, disposal sink not specified or all sinks aggregated, treated, recycled, and/or reused.
6	Biodiversity: (1) Sensitive lands impacted by activities and operations; and (2) Impacts on endangered species due to activities and operations.
7	Products: Take back or reclaimed products or components/'Green' products/Environmental impacts due to use of green products made by company.
8	Process: Life Cycle Analysis (LCA)/Design for Environment (DfE)/Environmental Management System (EMS).
9	Environmental Expenditures: Environmental expenditures, total/by type.
10	Other Accounting/Scoring Systems: Environmental Accounting/Green Balanced Score Card.
11	Employee Training: Environmental Training, Hours; Environmental Training, Monetary Value (\$); Percentage of employees receiving environmental training.
12	Certification: Environmental Process and Product certifications.
13	Stakeholder Engagement: Communities/NGOs/Government/Consumers/Employees/Suppliers/Shareholders.
14	Environmental Policy: Environmental Policy or program audit/Structure of environmental responsibility.
15	Reporting: Published CER according to established standards (GRI standard)/Report verification.

Figure 2 show the measurement process of corporate environmental reporting practices which based on the level of firm environmental strategy. This study had set the score of -1 (non-compliance score) for firms that did not provide any environmental management practices in their corporate environmental reporting practices in accordance to the CSR mandatory listing requirement by Bursa Malaysia in 2007. This score is related to non-compliance or deny aspect which explains that the firms have not developed any environmental policy and failed intentionally or by default to address the requirements of environmental regulation and social pressure particularly in Bursa Malaysia CSR mandatory requirement (Albertini, 2013a; Nadler, 1999; Roome, 1992). The score of 0 (compliance score) is given for firms that disclosed the environmental management practices or indicators to comply with the environmental regulation or implemented the “end-of-pipe” environmental solution that is corrective in minimising the risk, liabilities, and cost

(Walls, Phan, & Berrone, 2011) as well as providing corporate environmental reporting practices in accordance to the CSR mandatory requirement by Bursa Malaysia. The score of 1 (beyond-compliance score) is an indication that the firms disclosed their environmental management practices or indicators to minimise emissions and waste related to their operating activities (pollution prevention), minimise life-cycle cost of the product (product stewardship), and minimise the environmental burden of firms' growth (sustainable development). The beyond-compliance score is given for firms that provide corporate environmental

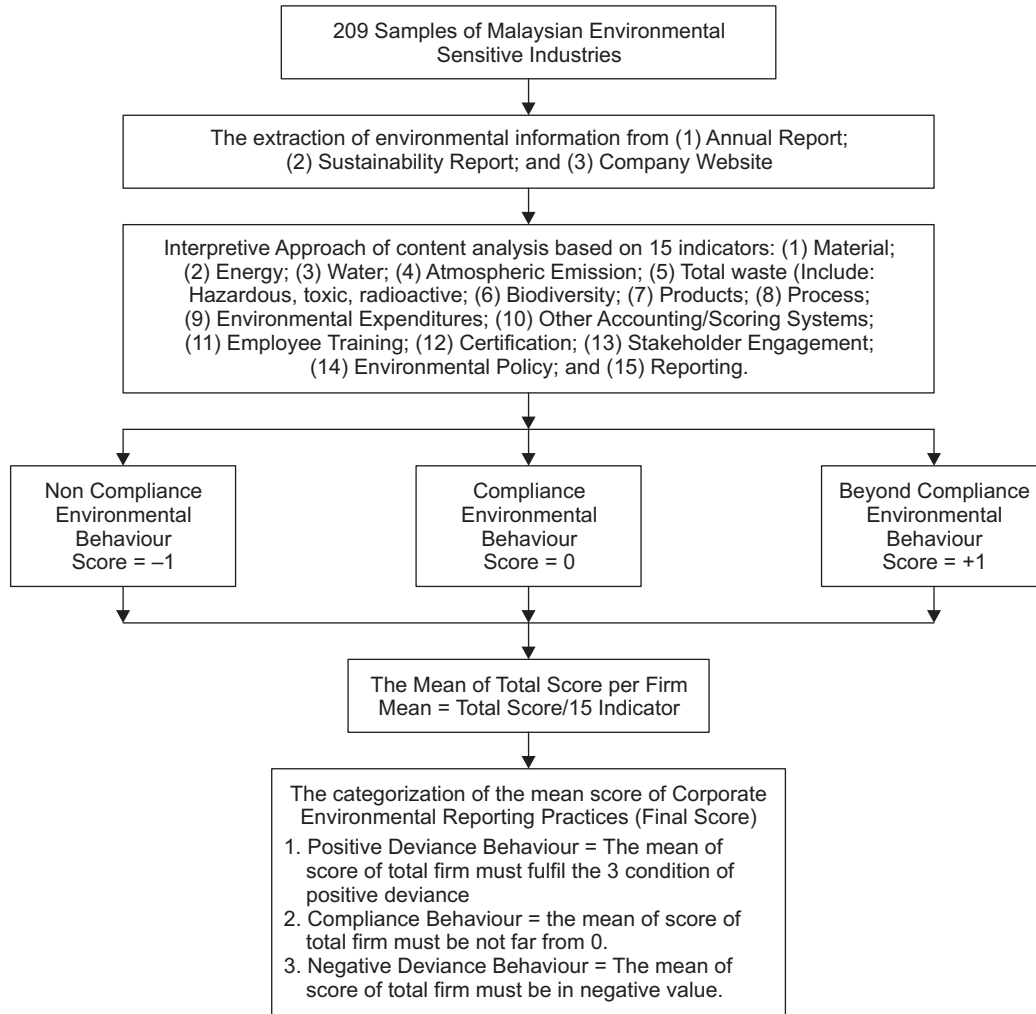


Figure 2: The Measurement Process of Corporate Environmental Reporting Practices Based on the Level of Firm Environmental Strategy

reporting practices related to their environmental strategies to reduce the environmental impact as well as managing the interface between business and nature beyond the imposed compliance (Aragón-Correa, Martín-Tapia, & Hurtado-Torres, 2013; González-Benito & González-Benito, 2006a; Sharma, 2000). This study had aggregated the total score for all of the firms' corporate environmental reporting practice from all score set for 15 index indicators. Then this study calculated the mean of total score of corporate environmental reporting practice per firm. The final phase of the measurement of corporate environmental reporting practices based on environmental strategically-framed index is the categorization of overall score of corporate environmental reporting practices based on the firm behaviour in corporate environmental reporting practices (e.g. (1) Positive Deviance Behaviour; (2) Compliance Behaviour; and (3) Negative Deviance Behaviour). To determine whether the final score of corporate environmental reporting practices fall within the score of positive deviance behaviour, the score must fulfil the four condition of positive deviance including (1) the behaviour of the organisation must be statistically different from the average or norm score; (2) exist alongside with the negative deviance behaviour; and (3) intentional behaviours that depart from the norms of a referent group in honourable ways (Mertens et. al., 2016; Sadler-Smith, 2013;

Spreitzer & Sonenshein, 2004; Walls & Hoffman, 2013). While to determine whether the final score of corporate environmental reporting practices fall within compliance behaviour, the mean of final score of 209 firms must be not far from 0. While to measure whether the final score of corporate environmental reporting practices fall within negative deviance behaviour, the final score of 209 firm must be in negative values.

Mertens et. al., (2016) argued that all the deviance behaviour and deviance outcome must significantly depart from norms. To determine norms, this study used strategic norms as based line of norm (Arnold & Hartman, 2005). So this study finds the standards or norms in corporate environmental reporting practices based on the fifteen indicators of environmental management practices which represent as the element of corporate environmental reporting practices by identifying which mean score of the indicators that has significantly depart from norm. Based on Table 2, this study find that the mean score of seven indicators of corporate environmental reporting practices including: (1) environmental management related to environmental policy (mean 2014 = 0.3451); (2) environmental management related to the acquisition of environmental certification (mean 2014 = 0.1053); (3) environmental management related to process (mean 2014 = 0.1005); (4) environmental management related to stakeholder management (mean 2014 = -0.0144); (5) environmental management related to material used in the production process (mean 2014 = -0.0287); (6) environmental management related to energy used in the business operation (mean 2014 = -0.0813); and (7) environmental management related to waste (mean 2014 = -0.0813); are very close to compliance value which is 0. So this study considers that it becomes a norms or standards for 209 companies to publish environmental information related to this seven indicators of environmental management practices. Therefore, this study finalised the score of positive deviance behaviour score must above than 0.5 (the firm must disclosed more than base line indicators which is 7 indicators in beyond-compliance ways). For the compliance behaviour score, the score must be within the range 0 to 0.5 which not exceed the score of positive deviance behaviour. While for negative deviance behaviour score, the score must me within the range -1 to 0 as we set -1 as the non-compliance environmental strategy in corporate environmental reporting practices.

Table 2
Descriptive Statistics of Indicators of Management Practices in Corporate Environmental Reporting Practices

	2010		2014	
	Mean	Std. Deviation	Mean	Std. Deviation
Total Final Score of Corporate Environmental Reporting Practices	-.2494	.63438	-.0637	.62193
Material	-.2297	.73044	-.0287	.73976
Energy	-.2679	.71048	-.0813	.69896
Water	-.2536	.71911	-.0909	.70463
Atmospheric Emission	-.3110	.66789	-.1340	.66596
Total Waste	-.2536	.71911	-.0861	.69493
Biodiversity	-.3110	.66065	-.1531	.64711
Products	-.2488	.73072	-.0861	.70182
Process	-.0718	.81431	.1005	.79327

	2010		2014	
	Mean	Std. Deviation	Mean	Std. Deviation
Environmental Expenditure	-.3636	.59793	-.2392	.53726
Other Accounting or Scoring System	-.4115	.53084	-.2488	.53287
Employee Training	-.3445	.62479	-.2057	.58897
Certification	-.1005	.81125	.1053	.79567
Stakeholder Engagement	-.2201	.74639	-.0144	.74342
Environmental Policy	.0144	.84625	.3541	.81982
Reporting	-.2919	.66937	-.1435	.64186

Independent Variables: Two explanatory variables are chosen to address H1, H2, and H3 namely, Board of director’s past environmental related experiences (BODENVEXP) and CEO’s past environmental related experiences. Based on Table 3, this study measures the past environmental related experiences based on content and process based environmental related experiences using annual reports and OSIRIS databases (Berrone & Gomez-Mejia, 2009; Walls & Berrone, 2015; Walls & Hoffman, 2013). This study coded any information that to relevant to past environmental related experiences including: (1) content-based environmental experience (e.g. the extent of Board of Directors and CEO involvement in environmental activities at non-corporate institutions such as foundations, government organizations, and local communities; and honours or awards that they received for their environmental endeavours) and (2) process-based environmental experience (e.g. Board of Directors and CEO official environmental responsibilities in previous posts, prior membership in board sub-committees dedicated to attending to environmental matters (Walls & Berrone, 2015; Walls & Hoffman, 2013). This study aggregates each CEO’s and Board of Director’s past environmental related experience to firm level, for each year of data, by summing all content and process based environmental experiences.

Table 3
The Measurement Index of CEO’s and Board of Director’s Past Environmental Related Experience

No.	Indicator of past environmental related experiences	Scores of CEO or Board of Directors per firm level. (Have = 1, Not Have = 0)
1	The extent of CEOs and board of directors involvement in environmental activities at non-corporate institutions such as foundations, NGOs, government bodies, and local communities	
2	Honours or awards that CEOs and board of directors received for their environmental actions.	
3	CEOs and board of directors official environmental responsibilities in previous corporate position.	
4	CEOs and board of directors prior membership in board sub-committees dedicated to attending to environmental matters.	
Total Score of CEO’s or Board of Director’s Past Environmental Related Experience in firm level.		

Control Variables: Firm age (AGE); Return on assets (ROA); firm size (FIRMSI); leverage (DTCR); board size (BODSI); board independence (BODIND); and institutional ownership (INTIOWN) are used as control variable in the study. The literature explains that firm’s age served as an indicator of perceived stability of firm (Liu & Anbumozhi, 2009) and, hence more likely to adopt proactive environmental strategy.

Age of the firm is measured by the number of years since the firm was listed in Bursa Malaysia as of the end of 2010 (D'Amico, Coluccia, Fontana, & Solimene, 2014). ROA is as an indicator of firm's financial performance where more profitable firms may have sufficient budget for compensating cost of CER practices (Brammer & Pavelin, 2008). ROA is measured as percentage of total net income divided by total assets (Andrikopoulos & Kriklani, 2013). Firm size has been seen as an control factor in environmental reporting study worldwide (Lu & Abeysekera, 2014) and is measured based on firm's market capitalization (Peters & Romi, 2013). Board size has been associated with group dynamic problems where large board become less participative, less cohesive and more fragmented (Barroso-Castro et. al., 2015), hence will diminished the decision on corporate environmental management practices. Board size is measured based on by the total number of members on the board (Sundaramurthy et. al., 2014). Board independent has been widely accepted to has positive significant relationship with environmental reporting practices and environmentally responsible behaviour and is measured as percentage of independent non-executive directors to the total number of directors on the board of a firm (Michelon & Parbonetti, 2012). Firm leverage is related to firm's dependence on funding from creditors which firm more likely to address creditors' expectations regarding environmental sustainability issue, and is measured the company's debt divided by its total capital (Andrikopoulos & Kriklani, 2013). Institutional ownership posits that the incentive of institutional shareholders to monitor top management behaviour in response to firm-specific risks from environmental information, and is measured as a dummy variable that equal to 1 if firm's ownership is institutional ownership or equal to 0 otherwise (Peters & Romi, 2013).

Empirical model: To test H1, H2, and H3, this study uses the following binary logistic regression model:

The econometric model used in this study is based on panel data dependence techniques. The use of panel data assists the evaluation of firm's corporate environmental reporting practices over time, by analyzing observations of the same firms over several consecutive years (Hsiao, 2014). Because the dependent variable in this study is dichotomous in nature, a logistic regression appropriate for panel data with this type of variable must be used. This logistic regression is expressed in terms of the odds ratio, which quantifies the likelihood of positive deviance behaviour taking place, according to the criteria described in the previous sections. Accordingly, the logistic model to estimate POSDEVSCORE is as follows:

$$\text{Log Prob}(\text{POSDEVSCORE}_{it} = 1) / \text{Prob}(\text{POSDEVSCORE}_{it} = 0) = \beta_0 + \beta_1 \text{CEOENVEXP}_{it} + \beta_2 \text{BODENVEXP}_{it} + \beta_3(\text{CEOENVEXP}_{it} \times \text{BODENVEXP}_{it}) + \beta_4 \text{AGE}_{it} + \beta_5 \text{ROA}_{it} + \beta_6 \text{FIRMSI}_{it} + \beta_7 \text{DTCR}_{it} + \beta_8 \text{BODSI}_{it} + \beta_9 \text{BODIND}_{it} + \beta_{10} \text{INTTOWN}_{it} + \eta_i + \mu_{it} \text{ (Equation 1)}$$

where all variables are index by i for the individual cross-sectional unit ($i = 1, i = 2, \dots, n$) and t for the time period ($t = 1, t = 2, \dots, k$). Using the random effect estimators, logistic regression controls individual heterogeneity, taking into account that the combined effect (μ_{it}), which varies from individual to individual and between time periods; and the individual effect (η_i), which is the characteristic of the firm.

4. DATA ANALYSIS

Descriptive Analysis

Table 3 provides the descriptive statistics for the variables used in the study. Panel A contains the nominal variables, whilst Panel B has the continuous variables. Based on Panel A, of the 1045 observed firms, 155(14.83 per cent) firms fall within positive deviance behaviour in corporate environmental reporting

practices, while 513 (49.09 per cent) fall within compliance behaviour score in corporate environmental reporting practices (49.09 percent), and 377 (36.08 percent) fall within negative deviance behaviour score in corporate environmental reporting practices (14.83 percent). Panel A also shows that a total of 85 firms (8.13 per cent) have institutional shareholder in places. Panel B shows that CEO with past environmental related experience (CEOENVEXP) for sample firms ranged from 0 to 1, indicating insubstantial variation across the sample. The average CEOENVEXP is 0.1301 with a standard deviation of 0.3366. Board of directors with past environmental related experience ranged from 0 to 5 with the average is 0.5598 and with a standard deviation of 0.9547. ROA has a maximum (minimum) of 70.25 (-80.89) and a mean (standard deviation) of 3.3898 (8.95714). The average firm age (AGE) 18.82, with a minimum 0, maximum of 53 and a standard deviation of 12.3546. Firm's size which is based on market capitalization has a minimum of 6 and maximum 69868, mean of 2433.38 and a standard deviation of 7360.694. The average level of leverage (DTCR) 0.2204, with a maximum (minimum) of 11 (0) and standard deviation of 0.4465. Board size (BODSI) ranged from 3 to 15, indicating substantial variation across the sample. The average BODSI is 7.4928 with a standard deviation of 1.9176. Board independence (BODIND) has a maximum (minimum) of 1 (0.14) and mean (standard deviation) of 0.4654 (0.12827).

<i>Variables</i>	<i>Frequency</i>	<i>Percent</i>			
<i>Panel A: Nominal Variables</i>					
POSDEVSCORE					
Firm which fall within positive deviance score	155	14.83			
COMPSCORE					
Firm which fall within compliance score	513	49.09			
NEGDEVSCORE					
Firm which fall within negative deviance score	377	36.08			
INTIOWN					
Firm's ownership is institutional ownership	960	91.87			
Firm's ownership is not institutional ownership	85	8.13			
<i>Variables</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Median</i>	<i>SD</i>
<i>Panel B: Continuous Variables</i>					
CEOENVEXP	0	1	0.1301	0	0.336622
BODENVEXP	0	5	0.5598	0	0.954677
ROA	-80.89	70.25	3.3898	3.52	8.95714
AGE	0	53	18.823	16	12.3546
FIRMSI	6	69868	2433.38	158.5	7360.694
DTCR	0	11	0.2204	0.18	0.44654
BODSI	3	15	7.4928	7	1.91765
BODIND	0.14	1	0.4654	0.43	0.12827

Table 4 summarises the bivariate correlations between the variables selected for analysis. The panel data correlation results show the bivariate association between the dependent variables and the predictor variables except for Leverage (DTCR). There is no indication of an unacceptable level of multicollinearity because the highest correlation coefficient between predictor variables is 0.4139. As expected, positive environmental behaviour in CER practices (POSDEVSCORE) is significantly and positively related to BODENVEXP and CEOENVEXP at the 1 percent level. POSDEVSCORE also positively correlated

with the control variables such as ROA, AGE, FIRMSI, BODSI and INTTOWN and negatively correlated to BODIND at the 1 percent level.

Table 3
Descriptive Statistic

<i>Variables</i>	<i>POSDEVSORE</i>	<i>BODENVEXP</i>	<i>CEOENVEXP</i>	<i>ROA</i>	<i>AGE</i>	<i>FIRMSI</i>	<i>DTCR</i>	<i>BODSI</i>	<i>BODIND</i>	<i>INTTOWN</i>
POSDEVSORE	1									
BODENVEXP	0.5537***	1								
CEOENVEXP	0.2387***	0.3334***	1							
ROA	0.2277***	0.0685**	-0.043	1						
AGE	0.2968***	0.1789***	0.0304	0.1217***	1					
FIRMSI	0.5717***	0.4139***	0.177***	0.2187***	0.1269***	1				
DTCR	0.0427	0.0228***	0.0772**	-0.2165***	-0.0024	0.0751**	1			
BODSI	0.3548***	0.4116**	0.1187***	0.1614***	0.0718**	0.3542***	0.0094**	1		
BODIND	-0.08***	-0.0739**	0.0692**	-0.1074***	0.1752	-0.0088	-0.0104	-0.3791***	1	
INTTOWN	0.3387***	0.1409***	0.145***	0.0273	0.0907***	0.374***	0.0379	0.2851***	-0.0179	1

Notes: *** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level; variable definitions: POSDEVSORE is a dichotomous variable equal to 1 if a firm's corporate environmental reporting practices score fulfil the condition of positive deviance and 0 otherwise; BODENVEXP is the total of content based and process based past environmental related experience possessed by board of director per firm level; CEOENVEXP is the total of content based and process based past environmental related experience possessed by CEO per firm level; AGE is the natural logarithm of the number of year since the firm's listed in the Bursa Malaysia Stock Exchange; FIRMSI is the natural logarithm of the firm's market capitalization; DTCR is the leverage which is ratio of the total debt to total capital at the end of fiscal year; BODSI is the number of directors on board; BODIND is the is the number of independent directors scaled by the size of the board; INTTOWN is a dichotomous variable: a score of 1 is awarded to firm's ownership is institutional ownership and 0 otherwise.

Regression Analysis

Table 5 show the results obtained for the regression model proposed, highlighting the impact of each predictor variables. To determine the reliability of the model, a log likelihood statistical hypothesis test must be performed. This is consist of χ^2 test of the significance of the difference between the value of the log likelihood of the model with just the constant and also the full model. The null hypothesis is that the coefficients of all the variables included in the final model except the constant are equal to 0, and the alternative hypothesis is that the coefficients are significantly different from 0. If the probability χ^2 associated with the test value than 0.05, the null hypothesis must be rejected, and it must be accepted that the final logistic model is significant in econometric terms. In this study, the model is statistically significant for a confidence level of 99 per cent, and so it can be affirmed that the equation obtained is significant with regard to the factors that promote positive deviance behaviour in CER practices. Furthermore, the value of rho indicates that the model has an explanatory power of 85.75 per cent. The BODENVEXP variable, representing the board of director's past environmental related experience, has a positive impact, for a

confidence level of 99 per cent. On the probability that firm will practices positive deviance behaviour in CER practices (coefficient = 1.523795; $p = 0.007$). Therefore, the hypothesis is accepted.

Regarding the CEOENVEXP variable, representing the CEO's past environmental related experience, the impact observed is positive although the differences is not statistically significant (coefficient = 1.477355; $p = 0.155$). In view of the results, the hypothesis regarding to CEO's past environmental related experience must be rejected. Pertaining to the interaction between CEO and Board of Director with past environmental experience, the impact observed is negative although the differences is not statistically significant (coefficient = -0.2491992 ; $p = -0.25$). Regarding the control variables, those representing firm's age and firm's size have a positive effect on the dependent variables, which is statistically significant in the different models estimated, for confidence levels of 99 per cent. The variables such as ROA, DTCR, BODSI, BODIN and INTIOWN have insignificant on the dependent variable in econometric terms.

	<i>Coefficient</i>	<i>Std.error</i>	\bar{z}	$p > \bar{z} $
BODENVEXP	1.523795	0.5693046	2.68	0.007
CEOENVEXP	1.725595	1.43156	1.21	0.228
CEOBODENVEXP	-0.2491992	0.9833818	-0.25	0.8
ROA	0.0582208	0.0554383	1.05	0.294
AGE	0.1203527	0.0379659	3.17	0.002
FIRMSI	0.0008418	0.0001789	4.71	0
DTCR	3.956256	2.609023	1.52	0.129
BODSI	0.3482795	0.239323	1.46	0.146
BODIND	2.61978	3.320912	0.79	0.43
INTIOWN	2.005057	1.536549	1.3	0.192
_cons	-16.59461	3.447827	-4.81	0
/lnsig2u	2.985793	0.2541369		
sigma_u	4.449965	0.5654502		
rho	0.8575325	0.031048		
Likelihood-ratio test of rho = 0	118.25			
p-Value	0			
Log likelihood	-106.08961			
Wald χ^2	64.99			
p-Value	0			

5. CONCLUSION AND RECOMMENDATION

This study highlights that environmentally expert board of directors have a positive significant relationship with positive deviance behaviour in environmental reporting practice. This finding is in line with study such as Walls and Hoffman (2013) which highlight that the board of director with past environmental related experience can deviated firm positively in corporate environmental management practices. Moreover, this finding also in tandem with study such as Dixon-Fowler, Ellstrand, and Johnson (2017) which emphasize the important of board of director in firm's exceptional corporate environmental practices. On the other hand, this study did not find any significant relationship between positive deviance behaviour in environmental reporting practices. The environmentally expert CEO's may have less power than board of directors in

inciting firm to develop soundly environmental reporting practices (Walls & Berrone, 2015) or due less incentive-based compensation for exceptional environmental management practices (Francoeur, Melis, Gaia, & Aresu, 2017). With respect to the interaction effect between the environmentally expert board of director and CEO, this study also did not find any significant relationship with positive deviance behaviour in environmental reporting practices. This result shows that the level of board governance effectiveness of the sample firm are still low with every leader have different institutional logic (Sundaramurthy et. al., 2014).

The study extends the literature in three ways. First, it established the measurement and conceptualization of positive deviance behaviour in environmental reporting practices as well as its determinants. Second, it demonstrates that the environmentally expert and experience board of directors can incite companies to deviate positively in environmental reporting practices. Practically, this study provide a conceptual overview of positive deviance in corporate social responsibility and sustainability practices and its possible manifestations; and increases the understanding of the positive deviance corporate environmental reporting practices and its distinction with greenwash or symbolic reporting behaviour. This study also postulate that firm with positive deviance behaviour in environmental reporting practices should retained environmentally experts and conscious leader in their firm.

This study faces the following limitation and sets opportunities for future research. First, as the study observed the samples based on 5 years data, it may be considers a short time horizon. The influence of environmentally expert leaders on positive deviance behaviour in environmental reporting practices could be better explained in a broader longitudinal analysis. Second, this study focused on analysis on public listed companies in Malaysia only. This finding may not be generalizable to companies from other country. Third, this study focused in one dimension of sustainability reporting practices; environmental reporting practices. Results might be different when other specific corporate sustainability dimensions, such as corporate business ethics, are analyzed. Future research could address the issues.

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