The Factors Influencing Sustainability Reporting in a Developing Nation: An Empirical Test of Theory of Planned Behaviour

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Abstract

Drawing upon Ajzen’s (1985) Theory of Planned Behaviour (TPB), this study examines the influence of managers’ attitude and other psychological factors on corporate sustainability reporting (SR) behaviour from a developing country perspective (Sri Lanka). This study also investigates the suitability of the TPB in an organizational context.

A survey was conducted among 948 top and middle level managers of listed and non-listed companies in Sri Lanka. 233 usable responses were used to test the hypotheses using a Partial Least Squares (PLS) model. The findings of this study indicate that psychological variables influence managers’ intention to engage in SR and ultimately corporate SR behaviour. Whilst managers have intention to engage in SR, the majority of companies have not taken the next step towards SR. It was found that due to lack of sufficient degree of actual control by managers over the SR process, managers’ intention to engage in SR was not translating into SR behaviour. Finally, the results suggest the suitability of the TPB in corporate settings and show that managers’ psychological factors are important in determining SR behaviour in companies.

This study indicates the need for Sri Lankan companies to devise more effective strategies and to design programs to promote SR by considering the role of psychological variables in the SR process. The strategies and programs could be aimed towards providing managers with a sufficient degree of actual control over the SR process. This could precipitate the creation of enabling organizational cultures which contribute towards the improvement of sustainable development and foster a new reporting culture, exhibiting a greater transparency and accountability amongst companies.

Key words: Sustainability Reporting; Sri Lanka; Theory of Planned Behaviour
1. Introduction

The majority of prior studies in environmental, social and sustainability accounting area investigate the information content of environmental, social and sustainability disclosures. Some studies examine the factors that motivate organizations in their decisions for environmental, social and sustainability disclosures. It is important to understand the factors that influence disclosure in order to improve social and environmental accountability (Adams, 2002). However, insufficient research attention has been paid to “either organizational influences on its practice, or the impact of the practice of social and environmental accounting on organizations and their participants” which is necessary for organizational change towards greater accountability (Adams and Larrinaga-González, 2007, p.337). Adams and Whelan (2009, p.120) state that “future research into changing patterns of corporate social disclosure needs to: be more concerned with the interrelationship of multiple factors that could potentially give rise to change; identify and understand the ways in which different managerial attitudes and cultures will result in different factors being more likely to give rise to a felt need for change.” Schaltegger and Burritt (2006) highlight the need for sustainability accounting and reporting research to move towards behavioural change and the importance of research links between mind sets, actions, attitudes and behaviours of managers.

Although the literature offers insights into the factors motivating organizations in their decisions for environmental, social and sustainability disclosures much remains to be done in terms of exploring and explaining the extent to which different factors give rise to change towards greater accountability (Adams, 2002; Adams and Larrinaga-González, 2007; Adams and Whelan, 2009; Mathews, 2004; Schaltegger and Burritt, 2006). Further, there is a lack of research empirically testing the behavioural models of decision makers in SR. Adams (2002) argues that theories on how and why companies report have been developed without giving due reference to internal corporate variables, reporting processes and the attitude of the key players. Further, Adams and Whelan (2009) called for corporate social disclosure research utilising theories and methods which engage organizations and its stakeholders to examine change at individual, organizational and institutional levels.
This paper is concerned with an understanding of the influence of managers’ attitude and other psychological factors on corporate SR behaviour. It aims to explore and analyse the extent to which psychological factors affect managers’ decision to engage in SR. In pursuing the above aim, this study applies Ajzen’s (1985) TPB to integrate decision makers’ psychological factors towards SR in order to explain how these factors would influence corporate SR behaviour. Therefore, the study seeks to address the following research question: “what are the effects of psychological factors on managers’ SR behavioural intention and SR behaviour in Sri Lankan companies”? In doing so, this study extends prior research that examine factors influencing organizations’ decision for environmental, social and sustainability disclosures by integrating psychological variables not previously considered, and by considering a behavioural perspective of individual decision makers (managers). As such, this study seeks to contribute to the call for studies to develop our understanding of the multiple factors that could give rise to changing patterns of corporate disclosures (Adams, 2002; Schaltegger and Burritt, 2006; Adams and Larrinaga-González, 2007; Adams and Whelan, 2009).

A survey was conducted among 948 top and middle level managers of listed and non-listed companies in Sri Lanka generating 233 usable responses. Empirical findings, based on a PLS model, suggest that due to lack of sufficient degree of actual control by managers over the SR process, managers’ intention to engage in SR was not largely translating into SR behaviour. Finally, the results suggest the suitability of the TPB in corporate settings and show that managers’ psychological factors are important in determining SR behaviour in companies.

The remainder of this paper is organised as follows. Section 2 provides the background for the study by outlining the developing country context with particular focus on Sri Lanka. In Section 3, a literature review and the conceptual framework will be presented. Section 4 provides arguments for each of the hypotheses formulated in this study. Section 5 outlines the research method. Section 6 presents the results of the study. This will be followed by a discussion in Section 7. Finally, the concluding remarks will be presented in Section 8.
2. Sri Lanka as a Developing Country Research Context

Numerous studies have been undertaken to examine environmental reporting and disclosures and there has been a growing interest in sustainability accounting in the last eight years (Burritt et al., 2009). Current research attention has largely been directed at approaches to environmental, social and SR in developed rather than developing nations (O'Dwyer and Owen, 2005; Bebbington et al., 2008). Research on SR from the developing country’s perspective remains limited.

Many developing countries have inadequate legislation and resources to improve environmental and social protection (Adams and Zutshi, 2004). With continued rapid progress in development activities of developing countries, the protection and management of the environment became a major concern. It is widely accepted that a systematic and constructive alternative is necessary for the uncritical economic growth that has endangered the planet and its inhabitants, humans, animals and nature (De Silva, 1998).

The predicament facing developing countries in balancing economic growth with prudent sustainable development has important implications for corporate behaviour, particularly towards employees, environment and the community. Therefore, it is imperative that SR practices be promoted in developing countries to create a greater transparency, accountability and awareness of the role of corporations in promoting sustainable development. Prior research reveals that SR is still in its infancy and the level of environmental and social disclosures are inadequate and of a poor standard in developing countries (e.g. ACCA, 2005). For example, some Bangladeshi companies did not meet even the mandatory requirements for disclosures, exhibiting the ineffectiveness and inadequacy of the regulatory framework (Belal, 2001; Belal and Cooper, 2011). There was no uniformity of disclosures by Indian companies and environmental/social/sustainability reports were unsystematic, varied in content and character and non-comparable (Singh and Ahuja, 1983; Sahay, 2004). It is important to promote SR of companies in developing countries in order to balance their economic growth with sustainable development. Therefore, it is necessary to undertake more SR research in developing countries. Further, Lamberton (2005) states that innovative research projects from different cultural
perspectives are needed to increase coverage, depth and quality of sustainability accounting information.

This study focuses on Sri Lanka as the research context. Sri Lanka is a nation classified as a developing country, despite its ascendance to the level of a lower middle-income category in 2009. Following the end of a 30 year conflict in 2009, the nation is now largely viewed as one on the threshold of precipitate economic growth. Sri Lanka’s Gross National Income per capita was US$ 1990 in the year 2009 and is significantly higher than that of other economies in the region. The low and middle-income level of South Asian region is US$ 1082, whereas the world’s lower middle-income was US$ 2316 in 2009 (TWB, 2011). Sri Lanka reported a Human Development Index of 0.658 which is above the regional average in 2010; this gives the country a rank of 91 out of 169 countries with comparable data (HDR, 2010).

Several factors can be broadly cited as the key differentiators for uniqueness of Sri Lanka in the choice of research context. The most important are the role of Buddhism in environmental preservation, historical perspectives shaped by Buddhism, cultural and societal norms, environmental legislation and the adoption of international covenants and initiatives. Further, the Association of Chartered Certified Accountants’ survey of top 100 Sri Lankan companies on environmental and social disclosures in annual reports found that though many Sri Lankan companies have taken an initiative to report on sustainability related issues, the quantity and quality of content is well below the international non-financial reporting guidelines (ACCA, 2005).

From the ancient times Sri Lankan society and culture has followed and continues to closely follow, the Buddhist tradition of conservation, a practice that dates back over 2,600 years. This is evidenced by the declaration of a number of UNESCO World Heritage Sites related to Buddhism and the preservation of the natural habitat in 15 National Parks and Strict Natural Reserves which account for 13 per cent of Sri Lanka’s landmass out of a mere total area of 65,610 square Kilometres. This is all the more significant in that Sri Lanka is a country with one of the highest population densities in the world - 318 inhabitants per square Kilometre (UNWPP, 2010).
As a predominantly Buddhist country, Sri Lanka’s appreciation of the environment and the inculcation of sound environmental values have been promoted from ancient times due to Buddhist teachings. Its culture is fashioned and influenced by Buddhism and teachings of the Buddha from the time Buddhism was introduced to Sri Lanka. “Among the world religions Buddhism has great promise as a basis for an environmental ethic, because it teaches a concern for the other animals and nature as well as our fellow humans” (Gunn 1998, p.13). De Silva (1998), in his work ‘Environmental Philosophy and Ethics in Buddhism’ has attempted to create a Buddhist diagnosis of the human domination of nature, constructing a Buddhist orientation towards the non-human world. He explored an ethic of sustainability in green economics and Buddhist economics. He also pointed out that the self and the transformation of nature go together. “Buddhism reiterates that other than homo sapiens our planet is inhabited by a countless number of living beings of different forms, shapes and sizes. It emphasises the intrinsic value and contribution of our planet and animal life in the preservation of ecological integrity and biodiversity. Further, it highlights the interrelationships and interdependencies between and among different ecosystems in maintaining the natural equilibrium so essential for environmentally sound and sustainable development” (Wijayadasa 2007, p.4).

Sri Lanka’s historical, religious, archaeological, literary, sociological and anthropological evidence and mythology, legends and folklore are abounding with examples of environmental concern. Sri Lanka’s ancient irrigation systems were associated with good land use practices; town planning included pleasure gardens and water gardens. The declaration of sanctuaries for wild life by ancient kings and the location of Buddhist monasteries and other religious sites provide ample evidence of a longstanding concern for the environment (Swan 1987). These concerns have been prominently portrayed in ancient literary works written in Ola leaf manuscripts and in ancient rock inscriptions.

From the ancient days writers of both prose and verse included descriptions of nature and many elements of the environment in their literary works. Thus, forests, rivers, mountains, the dawn of the day, sunset and nightfall were treated artistically in describing the beauty of nature. The best example for such a work is Pansiya Panas Jataka Potha or Jataka Tales (stories of Lord Buddha’s previous births) (Godakumbura 1996).
Furthermore, Sri Lankan culture is designated as a collectivist, oriented to high power distance and security, and is deemed to be concerned with spiritual and family values (Weathersby 1993). Thus, when comparing similar traits with other western countries, Sri Lanka sits virtually on the opposite end of the work related values that are hallmarks of developed western cultures – individualism, moderate power distance and risk taking, achievement and materialism. Sri Lanka’s national and work culture is therefore, more attuned towards a concept of social empathy. The significance of this research is paramount in laying the foundation for the exploration of SR in a scenario wherein social responsibility is a part and parcel of a nation’s way of life.

3. The Literature Review and the Framework of the Study

Although the literature (e.g. Bebbington et al., 1994; Gray et al., 1995; Deegan et al., 1996; Wilmhurst and Frost, 2001; O’Dwyer, 2002; Lodhia, 2003) contributes to our understanding of the decision makers’ attitude towards the environment, some limitations remain. The majority of accountants and senior managers have a positive attitude towards the environment. However, in most cases they were reluctant to support and be involved in environmental accounting (EA) thinking that it is not within their purview and/or they did not consider EA as an important element within the business. The majority of these studies simplified the way of understanding decision makers’ attitude by examining their overall general attitude towards the environment. This sacrifices the richness and detailed examination of decision makers’ specific attitude towards EA. However, recent studies within the context of developed countries conclude that among other factors, corporate social reporting and SR was influenced by managerial attitude to reporting (Adams, 2002). This implies that the decision to engage in SR is not necessarily driven by a single motive or interest but may be the outcome of number of factors.

Prior literature (e.g. Tilt, 1994; Belal and Owen, 2007; Islam and Deegan, 2008) also found that different stakeholders influence the environmental, social and SR. Apart from decision makers’ attitude towards environmental, social and SR; and stakeholder pressure for such reporting, other factors would facilitate or inhibit SR. A number of studies identified the necessity of legislative
intervention to satisfy the stakeholder demand for corporate environmental and social disclosures. One of the main reasons for non-disclosure was the voluntary nature of environmental accounting (e.g. Belal and Cooper, 2011).

Further, top management who places greater importance on environmental issues is likely to encourage reporting. Schaltegger et al. (2006) claim that SR needs the involvement of management and employees in setting sustainability goals of the company, data collection and communication of sustainability information. Campbell’s (2000) study demonstrates that corporate action is mostly determined by the attitude and support of top management. The doubts of the chief executive and/or senior management over the advantages of reporting is a main drawback inhibiting environmental reporting (Martin and Hadley, 2008).

Also, there was a lack of consensus regarding the objectives and measurements that can be adopted in EA. Further, the data collection effort was found to be another main impediment to environmental reporting (e.g. Martin and Hadley, 2008). The requirement for environmental training was also apparent in number of other studies (e.g. Medley, 1997; Wycherley, 1997).

Corporate characteristics and other contextual factors influence environmental, social and SR practices, such as company size, industry sector, corporate culture, ownership status and country of origin (e.g. Adams et al., 1998). In addition to the factors highlighted above Adams and Zutshi (2004) state that corporate social responsibility and reporting guidelines, awards and indices are exerting pressure and influence on companies and governments to be social responsible and accountable. Therefore, a combination of corporate characteristics, contextual factors and internal factors affect environmental and social reporting (Adams, 2002).

Despite the fact that much has been written on environmental and social reporting, theoretical-based pieces of work are still inadequate. According to Deegan and Soltys (2007), 35% of the Australasian social accounting research has focused on motivation for corporate environmental and social reporting behaviours, regardless of theoretical bases in predicting the behaviour. Adams (2002) argues that the existing social reporting theories lack explanatory power and need to be extended to consider the impact of internal organizational factors affecting corporate social
disclosures. Gray (2010, p.36) notes that, “theories that focus on the individual do not feature very strongly in the social accounting literature or particularly in the accounting literature more widely. There is probably a great deal more to be done to discover why individuals do (and do not) support and develop social accounting.” Further, Parker (2011) states that alternative and previously untried theoretical approaches can be used to study the social and environmental accounting in future. Therefore, as its theoretical foundation this study utilises the TPB in an attempt to identify the influence of managers’ psychological factors in determining corporate SR behaviour.

The TPB is an extension of the Theory of Reasoned Action (TRA) (Ajzen, 1988). The TPB seeks to overcome the limitations associated with the TRA model, which does not deal with behaviours over which people have incomplete control to exercise its power to perform the behaviour. According to the TPB, behaviour is a function of salient beliefs relevant to the behaviour. Three kinds of beliefs can be distinguished: behavioural beliefs, which are assumed to influence attitude towards behaviour, normative beliefs, which constitute the underlying determinants of subjective norm, and control beliefs, which provide the basis for perceptions of behavioural control (Ajzen, 1991). In this theory, attitude, subjective norm and perceived behavioural control determine the ‘behavioural intention,’ which reflects how motivated the individual is to perform the behaviour. Therefore, the TPB predicts and explains human behaviour in specific contexts (Ajzen 1991). Further, prior studies have demonstrated the efficacy of the TPB as a foundation for any study that investigates managerial decisions that affect the environmental performance of the organization (Cordano and Frieze, 2000; Flannery and May, 2000) and other behaviour of interests in the area of accounting (Weidman et al., 2010; Dowling, 2007; Glandon, 2003). Hence, the TPB is a useful theory that provides a foundation for behavioural research to achieve an organizational change (Cordano and Frieze, 2000). Thus, the use of the TPB for this study is deemed appropriate to determine the factors that influence managers’ decision intentions to engage in SR and corporate SR behaviour. The TPB is extended in this study by examining an

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1 In TPB, the attitude towards a behaviour is defined as “a person’s overall evaluation of performing the behaviour in question” (Ajzen, 2006a, p.5). Fishbein and Ajzen (1975, p.401) define that “a person’s subjective norm is his belief that important others think he should or should not perform a given behaviour.” Subjective norm reflects an individual’s sense of social pressure to behave in the acceptable manner. Perceived behavioural control refers to the ease or difficulty of performing the behaviour and it will reflect past experience and expected constraints or obstacles (Ajzen, 1988).
additional external variable (i.e. managers’ level of education). Testable hypotheses were developed based on the extended TPB (Figure 1).

4. Hypotheses Development

4.1 Behavioural Beliefs and Attitude towards engaging in SR

Ajzen (2006a) states that beliefs play a key role in the TPB by providing cognitive and affective foundation for attitude. It is necessary to assess a person’s salient beliefs to understand why he/she holds certain attitude towards behaviour. The behavioural belief composite (total set of salient beliefs) is the antecedent or cause of the measure of attitude (Ajzen, 2005). That is, attitude towards the behaviour is determined by the set of salient beliefs a person holds about performing the behaviour which leads to certain outcomes and by his/her evaluations of those outcomes (Ajzen and Fishbein, 1980). According to Ajzen (1991), behavioural beliefs are assumed to influence attitudes toward the behaviour. This is based on expectancy-value model of attitudes (Fishbein and Ajzen 1975). However, Ajzen (1991, p.192) notes that “there is the possibility that the expectancy-value model is an inadequate description of the way attitudes are formed and structured”. Further empirical test is therefore needed to provide more evidence about the potential relationship.

Although, prior research on the TPB has provided supportive evidence that a high, positive correlation is expected between global measures of attitude and the behavioural belief based component (Armitage and Conner, 2001) the exact form of the relationship between attitude and its underlying beliefs is still uncertain, not well understood and the magnitude of this relation has

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2 “According to expectancy-value model of attitudes, attitudes develop reasonably from the beliefs people hold about the object of the attitude. In the case of attitudes toward a behaviour, each belief links the behaviour to a certain outcome, or to some other attribute such as the cost incurred by performing the behaviour.” (Ajzen 1991, p. 191). According to Ajzen (1991), if the expectancy-value model is valid, the belief-based measure of attitude should correlate well with a standard measure of the same attitude.

3 For example, some investigators (e.g., Valiquette, Valois, desharnais, and Godin, 1998) have questioned the multiplicative combination of beliefs and evaluations in the expectancy-value model of attitude.”
sometimes been disappointing (Ajzen 1991). Therefore, it is necessary to test the relationship between behavioural beliefs and attitudes towards the behaviour⁴.

Glandon’s (2003) study found that behavioural beliefs predict executives’ attitude towards the modification of the management accounting controls after implementation of electronic data interchange. Chugh (2004; cited in Marquardt, 2010) states that attention should be focused on implicit attitude and its corresponding mental processes if it a good predictor for ethical and unethical managerial decision making.

Drawing on the above reasoning, it is predicted that the underlying set of behavioural beliefs regarding SR will determine the managers’ attitude towards SR. Therefore, it is hypothesised that:

\[ H1 - There \ is \ a \ positive \ relationship \ between \ managers’ \ behavioural \ beliefs \ regarding \ SR \ and \ their \ attitude \ towards \ engaging \ in \ SR. \]

**4.2 Normative Beliefs and Subjective Norm**

According to the TPB, subjective norm is a function of normative beliefs. That is, a person’s subjective norm is determined by his/her beliefs that specific salient referents (individual or group whose beliefs may be important to the person) think he/she should (or should not) perform a given behaviour and by his/her motivations to comply with those referents (Ajzen and Fishbein, 1980). Normative beliefs play a key role by providing cognitive and affective foundations for subjective norm. The normative beliefs are the antecedent or cause of the measure of subjective norm (Ajzen, 2002a). Prior studies found that the correlations between the global measures of subjective norm, and its underlying beliefs, although significant (Armitage and Conner, 2001), were of only moderate magnitude (Ajzen, 1991). According to Ajzen (1991),

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⁴ “Theoretically, attitudes are based on behavioural beliefs, subjective norms on normative beliefs, and perceived behavioural control on control beliefs. However, these propositions are subject to empirical test. The validity of the belief composite measures is typically tested by correlating each composite with the direct measure of the corresponding construct” (Ajzen 2012, http://people.umass.edu/aizen/faq.html -accessed 16/03/2012).
the role of normative beliefs as the foundation of subjective norm has been only partly known and not well understood.

However, based on Ajzen’s TPB literature, it is predicted that the underlying set of normative beliefs regarding SR will determine the managers’ subjective norm to engage in SR. Therefore, it is hypothesised that:

**H2- There is a positive relationship between managers’ normative beliefs regarding SR and their subjective norm to engage in SR.**

**4.3 Control Beliefs and Perceived Behavioural Control**

Ajzen (2006a) further states that as in the case of behavioural beliefs and normative beliefs, control beliefs also play a key role in the TPB by providing cognitive and affective foundation for perceived behavioural control. A person’s perceived behavioural control is determined by his/her perception of the availability of skills, resources and opportunities and by his/her assessment of the importance of those skills, resources and opportunities to perform a given behaviour (Mathieson, 1991). That is, beliefs about the presence or absence of factors that facilitate or impede performance of behaviour (Ajzen, 2005). If a person believes that he/she possesses more resources and the opportunities, and anticipates fewer obstacles or impediments, the person should have greater perceived behavioural control over the behaviour (Ajzen, 1991; 2005). The control beliefs are the antecedents or causes of the measure of perceived behavioural control (Ajzen, 2006b). According to Ajzen (1991), as in the case of behavioural beliefs and normative beliefs the role of control beliefs as the foundation of perceived behavioural control has been only partly understood. That is, the exact form of the relationship is still unclear.

Nevertheless, based on Ajzen’s TPB literature, it is predicted that the underlying set of control beliefs regarding SR will determine the managers’ perceived behavioural control to engage in SR and the following hypothesis is developed:

**H3- There is a positive relationship between managers’ behavioural control beliefs regarding SR and their perceived behavioural control to engage in SR.**
4.4  Attitude towards SR and Intention to Engage in SR

Ajzen (2006a) suggests that understanding why people hold certain attitude, subjective norm and perceived behavioural control is useful for addressing behavioural issues. Prior research states that out of the three predictors of intention (attitude, subjective norm and perceived behavioural control), attitude towards the behaviour is the significant predictor of intention (Cordano and Frieze, 2000). This means that in some circumstances personal considerations are more influential than social pressures when determining the intentions (Ajzen, 1991).

Issues relating to attitudes have been examined in prior EA research. For example, previous studies emphasise managers’ attitude to engage in environmental, social and SR (Adams and McNicholas, 2007). Adams (2002) found that social reporting is influenced by managers’ attitude. The findings of the above mentioned studies highlight the potential effect of attitude on reporting behaviour. Further, Weidman et al. (2010) found that intention to accrue and disclose environmental liabilities are positively related to executives’ attitude.

In addition, prior environmental behaviour studies which used the TPB show a significant relationship between attitude and behavioural intention. For example, Cordano and Frieze (2000) found a positive relationship between managers’ attitude about pollution prevention and their preference to implement source reduction activities.

Based on the findings of above literature on environmental, social and SR and the TPB literature, it could predict a positive relationship between managers’ attitude and their intention to engage in SR and it is hypothesised that:

**H4 – There is a positive relationship between managers’ attitude towards SR and their intention to engage in SR.**

4.5  Subjective Norm and Intention to Engage in SR

According to the TPB, subjective norm also predicts the intention to engage in behaviour (Ajzen, 1991). Subjective norm reflects the sense of social pressure to behave in an acceptable manner.
Internal and external social pressures with regard to environmental protection and reporting have been investigated in literature. Pressures from regulators (Dillard et al., 2005), individual investors (Epstein and Freedman, 1994), institutional investors (Magness, 2006), environmental groups (Deegan and Gordon, 1996), financiers, general public/society, potential employees (Hedberg and Malmborg, 2003) and other stakeholders (Daub, 2007) influence organizational environmental behaviour. Further, they require information about organizational environmental and social impacts to assess organizational contribution to sustainable development. Furthermore, sustainability accounting information is relevant for internal managers to make decisions (Lamberton, 2005). Wheeler and Elkington (2001) state that in predicting the future of SR, it is necessary to consider which stakeholder influence is most important to business.

In some European Union countries, social and environmental pressures have led to compulsory SR (Bebbington, 2002). Wilmhurst and Frost (2000) found that a shareholder/investor right to information was considered the most significant factor that influences managers’ decision to disclose environmental information. Providing a ‘true and fair’ view of operations, meeting legal obligations, satisfying ‘due diligence’ requirements and community concern with operations were also ranked as influential factors. The findings of these studies highlight the influence of social pressures on managers’ intention to engage in SR.

In addition, subjective norm has also been a reliable predictor of behavioural intention in prior environmental accounting and behaviour studies. For example, Flannery and May (2000) found that subjective norm was a significant predictor of managers’ environmental ethical investment intentions. Further, Weidman et al. (2010) found that subjective norm was positively related to an executives’ intention to disclose environmental liabilities.

Therefore, it is predicted that subjective norm regarding SR will be positively related to managers’ intention to engage in SR and the following hypothesis is developed:

_H5 – There is a positive relationship between managers’ subjective norm regarding SR and their intention to engage in SR._
4.6 Perceived Behavioural Control and Intention to Engage in SR

In the TPB, perceived behavioural control refers to the ease or difficulty of performing the behaviour (Ajzen, 1991). Perceived behavioural control can be important to the ultimate behavioural outcome and can be influenced by a range of factors within the organization and the realm of an individual’s approach and openness to adopt SR practices. Issues relating to factors that will facilitate or inhibit engagement in SR can be found in prior research.

Providing SR related training and creating awareness could lead to improving employee skill levels and expertise that could facilitate the SR process. The ability of an individual to take action will depend on an individual’s skill to apply action strategies to issues, combined with appropriate knowledge about the issue (Hines et al., 1987). It is necessary to educate, provide training for environmental management skills and involve environmental accounting information users such as line managers and organizational staff in the environmental agenda to improve environmental performance of the organizations (Wycherley, 1997). Perez et al. (2007, p.405) found that “training and awareness building may lead to improvements in the environmental knowledge, skills and expertise of staff, facilitate the adoption of a forward-looking and multifunctional approach, raise the managers’ environmental commitment and encourage employees’ involvement with environmental management.”

Further, Adams and McNicholas (2007) found that lack of time, resources and managers’ lack of knowledge and experience inhibits the SR process. Application of SR requires a large commitment of resources (Lamberton, 2005). Additional money and resources are necessary to compile sustainability performance data into a public report (Park and Brorson, 2005). Prior research found that large companies initiate the SR. For example, Solomon and Solomon (2006) found that larger institutes have the ability to initiate social, ethical and environmental engagement as they have more resources. Further, prior studies found that there is a positive relationship between company size and the amount of environmental disclosures (Deegan and Gordon, 1996). This may be due to the availability of resources in large companies which would facilitate SR.
If the reporting team works closely with the right personnel throughout the organization, and senior management is supporting the process, others within the organization will be motivated to support the reporting process (Owen, 2002). Wilmshurst and Frost (2001) argue that senior management should take a leadership role to adopt environmental accounting within the corporate environmental management system. Frost and Wilmshurst (1996) suggest that senior management should be involved in environmental management to minimise corporate environmental impacts. Cooperation between environmental, social and accounting staff is necessary to facilitate SR. It is necessary to form independent inter-disciplinary sustainability teams for reporting (Lamberton, 2005). Improvements in sustainability performance cannot be implemented if there is a lack of communication between members of SR team and other internal and external stakeholders (Adams and McNicholas, 2007).

In addition, SR data capturing methods are broad, varied and unreliable due to its infancy stage. Quantitative and qualitative tools are necessary to measure the performance for reporting purposes (Lamberton, 2005). Introducing an internal reporting system for environmental and sustainability data collection and analysis has been found to be a challenging task for many organizations in which managers had an intention to engage in SR (Park and Brorson, 2005).

As stated above managers have to face a number of barriers, constraints and obstacles, which limit the control they possess and their intention to engage in SR. This argument is supported by Dowling (2007), Glandon (2003), Flannery and May (2000) and Weidman et al. (2010) who found that perceived behavioural control influenced the behavioural intention.

Based on the above analysis, it is hypothesised that managers’ perceived behavioural control is an antecedent of their intention to engage in SR:

\[ H6 – \text{There is a positive relationship between managers’ perceived behavioural control over SR and their intention to engage in SR.} \]
According to the TPB, a person’s intention to perform a given behaviour is a central factor of the theory. Intention captures the motivational factors that influence behaviour, such as how much an effort people are planning to exert, in order to perform the behaviour. The stronger the intention to engage in behaviour, the more likely should be its performance (Ajzen, 1991). Ajzen (1985) suggests that intention is assumed to be the immediate antecedent of behaviour. According to Ajzen and Fishbein (1980) an appropriate measure of intention provides an accurate prediction of behaviour. That is, when appropriately measured, intention account for an appreciable proportion of variance in behaviour (Ajzen, 2005).

There has been relatively few empirical organizational level accounting and environmental behavioural studies testing the relationship between intention and behaviour. For example, Dowling (2007) found that intention determined the behaviour.

Therefore, the next hypothesis predicts that managers’ SR intention will lead to corporate SR behaviour:

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H7 – \text{There is a positive relationship between managers’ intention to engage in SR and corporate SR behaviour.}
\]

4.8 Managers’ Level of Education and Behavioural, Normative and Control Beliefs

The TPB assumes that factors such as demographic characteristics have no direct effect on behaviour of interest and do not constitute an integral part of the TPB, but are instead considered to be external variables/background factors. These background factors, however, may influence a person’s intention and behaviour indirectly by affecting behavioural, normative and control beliefs (Ajzen, 1985). Ajzen (2011) suggests that “with the aid of the TPB it becomes possible to examine why a given background factor influences behaviour by tracing its effects via the more proximal antecedents of the behaviour.”
Hines et al. (1987) found that highly educated individuals were slightly more likely to engage in responsible environmental behaviour than the less educated individuals in their meta-analysis. Whatley (2009) emphasises the importance of integrating sustainability frameworks and theories into the management curriculum to provide necessary mental state to help create sustainable business practices. Sobczak et al. (2006) found that the type of higher education pursued has the most significant impact on managers’ perception towards the corporate social responsibility (CSR). This study highlights the importance of embedding CSR courses into the curriculum to raise the awareness of social and environmental issues among future managers. While these studies highlight the relationship between education and SR, they did not specifically examine its effect on beliefs.

Other prior literature explains the role of education in explaining and changing managers’ belief systems (e.g. Quinn and Wennes, 2008; Sobczak et al., 2006; Ali and Schaupp, 2001). Ali and Schaupp (2001) found that managers whose major area of education is in the social sciences, humanities, fine arts, or business administration had a stronger commitment to the Marxist-related belief system than those majoring in engineering and the science\(^5\). In addition, through education and training, environmental awareness of new employees can be improved (Gray and Collison, 2002). Monaghan and Cervero (2006) point out that training helps individuals to change their attitude and beliefs in order to change their behaviour.

Given the findings of prior studies regarding the positive relationship between level of education and managers’ beliefs, this study predicts that managers’ level of education positively influences the SR beliefs of managers. Therefore, the following hypotheses are put forward:

\( H8a \) – *There is a positive relationship between managers’ level of education and their behavioural beliefs regarding SR.*

\( H8b \) – *There is a positive relationship between managers’ level of education and their normative beliefs regarding SR.*

\( H8c \) – *There is a positive relationship between managers’ level of education and their control beliefs regarding SR.*

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\(^5\) Marxist-related belief system notes that productive activity is basic to human fulfilment.
Figure 1 illustrates the proposed conceptual framework of SR intention formation and behaviour based on Ajzen (2006a) TPB, which will be utilised to investigate the factors influencing managers’ decision intention to engage in SR and corporate SR behaviour.

5. Research Method

5.1 Survey Design and Administration

Data was collected through a paper-based and web-based survey. Dilman’s (2000) approach to survey development was followed by using the TPB as a guide.

The survey targeted those within companies who were involved in setting the sustainability vision for the company. The person with the highest job title in the top management was selected for inclusion in the sample for each company. As such, the Chief Executive Officers/Managing Directors of below stated companies were selected as the potential respondents. The final sample included 959 potential respondents. No cash incentives were offered to respondents. However, approximately $0.25 was donated to a temple for each completed and submitted surveys by respondents to plant trees in Sri Lanka.

The sample of 959 potential respondents was selected from three data sources, as follows:

- All 234 Sri Lankan companies listed on the Colombo Stock Exchange (CSE) as at 1st January 2009.
- 416 Non-listed companies were selected from 2008 Kompass Sri Lanka Directory. When selecting this sample, consideration was given to companies which have number of employees equal or above 50. This selection was based on the assumption that small companies may be less aware of SR than large companies, as there is no requirement for mandatory SR for companies in Sri Lanka.

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6 According to Ajzen (2012), “the TPB was developed to predict and explain human social behaviour, and to serve as a framework for behaviour change interventions. Like other theories of this kind, it can be used as a heuristic framework to guide questions to be raised in qualitative research. However, the standard methods developed over the years for use with the theory are largely quantitative in nature.” Therefore, this study utilised survey method - http://people.umass.edu/aizen/faq.html-accessed 4/5/2012.
• 309 companies in commercial operation in free trade zones/parks, approved by the Board of Investments (BOI) of Sri Lanka as at 1st January 2009 were also considered.

The survey was pre-tested in two stages. First, a pre-test of the web-based survey was conducted among 22 academics. Their feedback and comments led to revisions. Second, the survey was pre-tested among a sample of 20 top level managers of Sri Lankan companies. Managers felt that the survey was a little long, however, this time no revisions were made as all the questions in the survey were required to measure the TPB constructs.

The first mailing of the survey was done on the 5th January 2009 and 11 were returned to the sender. To improve the response rate, two weeks later, reminder letters were sent to 948 respondents with correct address details. After a month’s time, a second reminder letter along with another copy of the survey was sent to respondents.

67 web-based and 174 paper-based surveys were returned by respondents, this resulted in a response rate of 26%. Four web-based surveys were eliminated due to incompleteness. Another four responses were removed from the dataset as those were possible candidates for multivariate outliers. The total usable responses were 233, consisted of 60 web-based responses and 173 paper responses. This resulted in a usable response rate of 25%.

Table 1 provides information regarding the respondents’ companies (industry sector, number of employees and the annual sales turnover) and their demographic information (job title, religion, age, ethnic group, length of time in position and length of time in the job). The data indicates that the respondents’ companies distributed across different types of industries classified under the CSE industry classification. 56.3% of the responses were received from participants that held the most top position in the company. The characteristics of the sample indicated that the majority of respondents were experienced, middle aged, Sinhalese Buddhist males, who were well educated with academic and professional qualifications.

Before data analysis, five open-ended questions of the survey were dropped from the analysis because of the extent of missing responses. Non-response bias test was conducted by comparing
the early responses (the first 20%) with the late responses (the last 20%). It was concluded that the sample data is free of non-response error. Further, based on Mardia test results, it was found that the data was severely non-normally distributed.

5.2 Data Analysis

Given the non-normality of data, use of single composite measures as behavioural, normative and control beliefs variables, formative and reflective indicators, the small sub-sample (multi-group) comparisons, and the model complexity of the present study, PLS was considered to be an appropriate technique for analysing data.

Smith and Langfield-Smith (2004) discuss the benefits of using the PLS technique. In PLS, measurement and structural models are termed as outer and inner models respectively (Hair et al. 2008). The PLS was used to measure relationships among latent underlying independent (exogenous) variables and their associated latent dependent (endogenous) variables. The measurement model constitutes the relationship among the indicators and their underlying latent variables or theoretical constructs (Chin, 1998), whereas structural model constitutes the hypothesised relationships among latent variables (theoretical constructs). PLS technique simultaneously estimates both measurement and structural models. The PLS Graph Version 3.0 software (Chin, 2000) was used in this study.

5.3 Constructs

Seven-point Likert scales with multi-items were used to measure the constructs of the TPB, with a higher number representing a favourable evaluation. Multi-item scales are used because psychological constructs such as attitude cannot be adequately captured by a single rating scale. All the scales employed in the survey were original scales developed for the study.
**Attitude towards the Behaviour**

Four adjectives relevant to SR, which captures the overall evaluation (good – bad), instrumental (valuable – worthless) and experiential (rewarding – unrewarding, and meaningful - unmeaning) quality were selected from the literature and included in the survey to measure the attitude towards SR (e.g. Osgood et al., 1957). These four items were formed as reflective indicators in PLS. It reported loadings above 0.8 for all four items, composite reliability statistic of 0.813 and an average variance extracted (AVE) of 0.798 indicating that the construct has high internal reliability (Chin, 2010) (Table 2). Table 3 shows 0.893 for this construct, which is the squared root of AVE compared with the correlations with all the constructs. This indicates that this construct has high discriminant validity (Chin, 2010).

**Subjective Norm**

Subjective norm items with injunctive quality (i.e. whether important others approve or disapprove behaviour) typically have low variability because important others typically approve the desirable behaviour and disapprove the undesirable behaviour. To overcome this problem descriptive quality items (i.e. whether important others themselves perform the behaviour) were included in the scale (Ajzen, 2006a). The important stakeholders related to SR were identified from the literature (e.g. Medley, 1997; O'Dwyer, 2003) Table 2 shows that all four items have loadings above 0.7 with a high composite reliability (0.772) and AVE (0.692), resulting in an adequate internal reliability (Chin, 2010) and high discriminant validity (0.832) as shown in Table 3.

**Perceived Behavioural Control**

Four perceived behavioural control items relevant to SR were selected from the literature (e.g. Glandon, 2003) to measure the perceived behavioural control towards SR. They represented items of self-efficacy (capability of performing the behaviour) and controllability over the behaviour (Ajzen, 2006a). The PLS analysis reported loadings above 0.7, a composite reliability of 0.743 and an AVE of 0.65 (Table 2) and high discriminate validity of 0.806 (Table 3).
**Intention**

Four intention items relevant to SR were selected from the literature with acceptable psychometric qualities (e.g. Ajzen, 2006a) and included in the survey for measurement of intention to engage in SR. All items displayed factor loadings above 0.8, a composite reliability of 0.833 and an AVE of 0.853 exhibiting a high internal consistency (Chin, 2010) (Table 2) and high discriminant validity (0.924) as shown in Table 3.

**Behavioural Beliefs Composite**

Based on the literature 16 advantages and disadvantages to engage in SR were identified and included as behavioural belief items in the survey (e.g. Adams, 2008; Adams and Frost, 2008; Herzig and Schaltegger, 2006). Behavioural belief is measured by a cross-product of the beliefs about anticipated consequences/outcomes of SR (b) and outcome evaluation (e) for each behavioural belief item (consequence of SR). The final measure of behavioural belief was the sum of cross-product for all of the consequences. Ajzen (1991, p.191), states that “*a person’s attitude is directly proportional to this summative belief index.*” Behavioural beliefs are the underlying determinant of attitude, a relationship expressed by Equation 1.

\[
A_B \propto \sum b_i e_i
\]  
(Equation 1)

According to Ajzen (2006a), internal consistency is not a necessary feature for all behavioural, normative and control belief composites.

**Normative Beliefs Composite**

The social pressure that managers may experience when deciding whether to engage in SR is a multiplicative function of how he/she thinks stakeholders would approve or disapprove the behaviour and how willing he/she is to comply with each of the stakeholder’s (referent’s) wishes. Most frequently mentioned individuals or groups are the salient referents (Ajzen and Fishbein, 1980). The logic of assessment of normative beliefs is similar to that of behavioural beliefs.
Drawing from the literature (e.g. Tilt, 1994; Neu et al., 1998; Belal and Owen, 2007) 10 important stakeholders relevant to SR were identified. Normative belief is measured by a cross-product of the beliefs about identity and expectations of stakeholders towards engaging in SR (n) and motivation to comply with those stakeholders (m) for each normative belief item (stakeholder). The final measure of normative belief was the sum of cross-product for all of the stakeholders. Ajzen (1991) states that subjective norm is directly proportional to this summative normative belief index. Normative beliefs are the underlying determinant of subjective norm, a relationship expressed by Equation 2.

\[ S_N \propto \sum n_i m_i \]  
(Equation 2)

**Control Belief Composite**

Based on the literature (e.g. Adams and McNicholas, 2007; Lodhia, 2003; Schaltegger et al., 2006) 14 factors facilitating or impeding SR were identified. Control belief is measured by a cross-product of the belief about the presence of factors that may facilitate or impede performance of SR (c) and perceived power of the factor (p) for each control belief item (control factor). The final measure of control belief was the sum of cross-product for all of the control factors. Ajzen (1991) states that perceived behavioural control is directly proportional to this summative control belief index. Control beliefs are the underlying determinant of perceived behavioural control a relationship expressed by Equation 3.

\[ PBC \propto \sum c_i p_i \]  
(Equation 3)

**SR Behaviour**

To measure the SR behaviour, respondents were asked to indicate the emphasis that their company currently placed on each of the three areas of SR, namely, environmental, social and economic reporting aspects. In PLS, the three measures of SR behaviour construct were considered as formative indicators because it is more correct to think that the three measures are ‘causing’ or defining the SR behaviour construct. The ‘economic reporting aspects’ item of this
variable reported a loading of only 0.4208 whereas the other two items reported loadings well above 0.7 (Table 2). Although, Hulland (1999) argues that the items with loadings of less than 0.5 should be dropped, he notes that item reliability can only be applied to measures that are reflective in nature, rather than formative. Given the fact that the ‘economic reporting’ item was modelled as a formative indicator of the underlying construct and its loading was 0.4208, it was decided to retain the ‘economic reporting’ item based on theoretical grounds. Further, composite reliability and AVE statistics are not applicable to latent variables with formative indicators (Chin, 2010).

**The Level of Education of the Management Team**

The respondents were asked to indicate the highest level of qualification achieved by members of the management team of their company. 12 categories of top and middle level managers were included in the survey question. This question was used to measure the influence of the managers’ level of education on SR as an external variable to the TPB. The average value of top and middle level managers’ level of education was used in the analysis as a measured variable, as the engagement in SR can be considered as a collective decision of the top and middle level managers.

**Control Variables**

Three measured control variables were included when testing the conceptual framework of this study to minimise the chances of model misspecification. They are, company size (measured by annual sales turnover and number of employees), environmental sensitive industries, and company listing in the CSE. These control variables were selected because prior research shows that large companies (e.g. Patten, 1992) and companies which are in environmental sensitive industries (e.g. Deegan and Gordon, 1996) are heavily engaged in environmental and social disclosures. Prior studies typically use annual sales turnover and number of employees to measure company size (e.g. Roberts, 1992; Neu et al., 1998). Based on prior studies, the chemicals and pharmaceuticals, construction and engineering, and power and energy sectors were classified as environmental sensitive industries (e.g. Karim et al., 2006). For the purpose of
analysis, the size variable was log-transformed and the environmental sensitive industries and company listing in the CSE variables were measured as dummy variables.

6. Results

T-statistic for each path coefficient was obtained through bootstrapping technique. Multiple sub-samples from an original dataset were created through bootstrap technique (Byrne, 2001), which performs a bootstrap on 1000 samples to evaluate the statistically significant estimates for path coefficients; this approach is in line with prior studies (e.g. Ferreira et al., 2010). The results of the testing of the structural model (path coefficients) as well as their statistical significance are shown in the Figure 2.

Based on the TPB, attitude towards behaviour depends on the underlying behavioural beliefs that a person holds about a particular behaviour. The PLS analysis (Figure 2) provided strong support (p<0.001) for hypothesis H1, that there is a positive relationship between managers’ behavioural beliefs regarding SR and their attitude towards engaging in SR. The standardised path coefficient between behavioural beliefs and attitude was 0.632 with a p-value of 0.000. This result is consistent with prior studies. For example, five prior studies which used the TPB in other areas, reviewed by Ajzen (1991) provides correlations between behavioural beliefs and attitude at a significant level of p<0.05. Further to this, a meta-analysis conducted by Armitage and Conner (2001) on the TPB studies found a strong correlation (0.50) between behavioural beliefs and attitude at a significant level of p<0.001. Glandon (2003) also reports a coefficient of 0.015 (p<0.01) between behavioural beliefs and executives’ attitude towards the modification of the management accounting controls after implementation of electronic data interchange.

In the same manner as how the behavioural beliefs assist towards explaining the attitude toward behaviour, the normative beliefs explain the subjective norm towards the behaviour. Hypothesis H2, that there is a positive relationship between managers’ normative beliefs regarding SR and their subjective norm to engage in SR, was strongly supported (p<0.001) (Figure 2). The standardised path coefficient between normative beliefs and subjective norm was 0.539 with a p-value of 0.000. This result is consistent with the findings of the meta-analysis of studies which
used the TPB in other areas (Armitage and Conner, 2001). This meta-analysis found a strong correlation (0.50) between normative beliefs and subjective norm. However, the result is contrary to finding with Glandon’s (2003) study, no relationship between normative beliefs and executives’ subjective norm towards the modification of the management accounting controls after implementation of electronic data interchange.

The hypothesis H3 was developed with regards to control beliefs. H3 deems that there is a positive relationship between managers’ behavioural control beliefs regarding SR and their perceived behavioural control to engage in SR. This hypothesis was also strongly supported by the findings (p<0.001) as shown in Figure 2. The standardised path coefficient between control beliefs and perceived behavioural control was 0.368 with a p-value of 0.000. This finding is in line with the literature presented in the meta-analysis of Armitage and Conner (2001), which found a strong correlation (0.52) between control beliefs and perceived behavioural control. However, as in the case of normative beliefs and subjective norm, Glandon (2003) found no relationship between control beliefs and executives’ perceived behavioural control.

The hypothesis H4 predicted that there is a positive relationship between managers’ attitude toward SR and their intention to engage in SR. This hypothesis was supported by the data, (p<0.001) indicating managers’ attitude to engage in SR has an effect on managers’ intention to engage in SR. The attitude variable had a significant standardised path coefficient of 0.320 with a p-value of 0.000 (Figure 2). It is interesting to note that this significant result is comparable with that of Cordano and Frieze (2000), which reports a standardised path coefficient of 0.34 (p<0.001) between pollution prevention attitude and preference to implement source reduction activities. The result is also similar to the findings by Flannery and May (2000), Glandon (2003), Weidman et al. (2010), supporting a positive relationship between managers’ attitude and their intention to engage in behaviour.

The hypothesis H5 predicted that there is a positive relationship between managers’ subjective norm regarding SR and their intention to engage in SR. The subjective norm and intention to engage in SR had a significant standardised path coefficient of 0.276 with a p-value of 0.000 (Figure 2). This provides support for H5 too (p<0.001). The result is comparable to Cordano and
Frieze (2000) who report a standardised path coefficient of 0.18 (p<0.01) between subjective norm about environmental regulation and preference to implement source reduction activities.

Ajzen (1991) states that the relationship between subjective norm and intention provides mixed results with no clearly discernible pattern. For example, Flannery and May (2000), Cordano and Frieze (2000), Glandon (2003) and Weidman et al. (2010) found a significant influence of subjective norm variable on intention while in other TPB studies, (e.g. Taylor and Todd, 1995) the subjective norm variable indicated a weaker influence on intention than attitude towards behaviour. In the present study the significant result is consistent with that of Cordano and Frieze (2000), Flannery and May (2000), Glandon (2003) and Weidman et al. (2010). According to Armitage and Conner (2001, p.485), “subjective norm shows a reasonably strong relationship with intention when appropriately measured with multiple item scales.” Therefore, it is possible to argue that the present study used appropriate measures to test the relationship between subjective norm and intention.

The hypothesis H6 predicted that there is a positive relationship between managers’ perceived behavioural control over SR and their intention to engage in SR. The results supported the hypothesis (p<0.001) exhibiting a significant path coefficient of 0.329 with a p-value of 0.000 (Figure 2). Prior TPB studies (e.g. Ajzen, 1991) have produced similar results showing a strong relationship between perceived behavioural control and intention. Further, the path coefficient for the relationship between perceived behavioural control and a behavioural preference for source reduction activity was found to be significant (p<0.05) in Cordano and Frieze’s (2000) study. In spite of its statistical significance, the predicted sign was in opposite direction as that found in Cordano and Frieze’s (2000) study. Weidman et al. (2010) found that perceived behavioural control significantly and positively relates to executives’ intention to accrue environmental liabilities but not the disclosure of environmental liabilities. Further, Glandon (2003) also found that there is no relationship between perceived behavioural control and executives’ intention to modify the management accounting controls after implementation of electronic data interchange. While prior research has provided mix findings, the results of this study highlights that, in the context of SR, managers’ perceived behavioural control is likely to lead to greater intention to engage in SR.
Out of the three variables (attitude, subjective norm and perceived behavioural control), Ajzen (1991) suggests attitude variable makes a significant contribution to the prediction of intention in the TPB. However, Flannery and May (2000) found that managers’ attitude was marginal predictor and subjective norm was a significant predictor of managers’ environmental ethical decision intentions. In order to find out the relative effect of the three variables, t-tests were conducted for the difference between path coefficients of attitude towards engaging in SR, subjective norm and perceived behavioural control on intention. All of them were not statistically significant. Therefore, this study suggests all three variables have similar effect.

Analysis also supports hypothesis H7 that there is a positive relationship between managers’ intention to engage in SR and corporate SR behaviour. The intention variable had a significant (p<0.05) standardised path coefficient of 0.184 with a p-value of 0.029 (Figure 2). The finding shares similar results as Dowling (2007) which reports a standardised path coefficient of 0.264 (p<0.05) between intention to use the audit support system appropriately and appropriate use of the audit support system. Further, a meta-analysis conducted by Armitage and Conner (2001) on TPB studies found a strong correlation (0.47) between intention and behaviour at a significant level of p<0.001.

The analysis was controlled for the effect of company listing in the CSE, company size and environmental sensitive industries. It was found that all three control variables had no influence on managers’ intention to engage in SR behaviour. However, out of the three control variables, only company listing in the CSE variable reported a significant influence on SR behaviour, indicating that listed companies are more involved in SR behaviour. The path coefficient was 0.159 (p<0.05) (Figure 2).

According to Ajzen (2011), external variables indirectly influence the intention through behavioural, normative and control beliefs. That is, background factors influence intention and behaviour, but this influence is usually mediated by beliefs (Ajzen, 2005). The hypotheses H8a, b and c, that there is a positive relationship between managers’ level of education (the external variable) and their behavioural beliefs, normative beliefs and control beliefs regarding SR, were supported by the analysis. The level of education positively influenced the behavioural beliefs
(p<0.01), normative beliefs (p<0.01) and control beliefs (p<0.05) with path coefficients of 0.167 (p=0.007), 0.166 (p=0.004) and 0.160 (p=0.017), respectively (Figure 2). As Ajzen (1991) suggests, the results exhibited the influence of a background factor on managers’ behavioural, normative and control beliefs. This shows that managers’ level of education influences their intention to engage in SR behaviour. Further insights into the determinants of behaviour could be gained by examining the effect of a given background factor on behavioural beliefs, normative beliefs and control beliefs (Ajzen, 2005).

**Multi-group Analysis**

A multi-group (Byrne, 2001) comparison was conducted to examine if there was any difference between models estimated for listed companies in the CSE and non-listed companies. The reason for this multi-group comparison was that the company listing in the CSE was the only control variable which significantly influenced SR behaviour. Sub-samples considered were 76 respondents from listed companies and 157 respondents from non-listed companies. All path coefficients were significant for listed companies with a R² of 0.692 and 0.117 for intention and SR behaviour respectively. This highlights that listed companies are more involved in SR behaviour. For non-listed companies the path coefficients of managers’ level of education to behavioural beliefs and control beliefs were not significant. R² of intention and SR behaviour were 0.597 and 0.037 respectively.

Further, t-tests were conducted to see whether the differences in path coefficients of listed and non-listed models are significant. It was found that behavioural beliefs to attitude towards the SR behaviour path, subjective norm to intention path, managers’ level of education to behavioural beliefs and control beliefs paths were statistically significant. Therefore, this analysis suggests that there is a difference between two groups in managers’ intention to engage in SR behaviour, in terms of the effect of subjective norm, behavioural beliefs and managers’ level of education.
Further Analysis

An additional test was conducted to understand the influence of culture patterned by Buddhism on managers’ attitude towards engaging in SR. Although Sri Lanka is a multi-ethnic, multi-lingual and multi-religious country, the predominant cultural and ethnic composition of Sri Lanka is Buddhist culture shaped by the teaching of Buddhism. Harmony prevails between different cultures and Buddhist teaching may shape the managers’ attitude by promoting the appreciation of the environment and the inculcation of sound environmental values which has been embedded in Sri Lankan culture since ancient times. Buddhism and thereby Buddhist culture was found to have a positive and significant (p<0.01) influence on managers’ behavioural beliefs which was an antecedent of their attitude towards engage in SR. The Buddhism variable had a significant standardised path coefficient of 0.166 to managers’ behavioural beliefs variable.

Further, a multi-group comparison was conducted to examine if there was any difference between models estimated for Buddhists and non-Buddhist respondents. Sub-samples considered were 163 Buddhist respondents and 70 non-Buddhist respondents. All path coefficients were significant for Buddhist respondents with a $R^2$ of 0.589 and 0.062 for intention and SR behaviour respectively. For non-Buddhist respondents the path coefficients of intention to SR behaviour, control beliefs to perceived behavioural control and managers’ level of education to normative beliefs and control beliefs were not significant.

T-tests were conducted to see whether the differences in path coefficients of Buddhist and non-Buddhist models are significant. It was found that subjective norm to intention path, managers’ level of education to control beliefs path, control beliefs to perceived behavioural control path and perceived behavioural control to intention path were statistically significant. Therefore, this analysis suggests that there is a difference between two groups in managers’ intention to engage in SR behaviour, in terms of the effect of subjective norm, perceived behavioural control, control beliefs and managers’ level of education.
The results of the PLS analysis found that there was a positive significant relationship between behavioural beliefs regarding SR and attitude towards to engage in SR. Attitude was driven by underlying behavioural beliefs which were based on favourable and unfavourable outcomes of SR. The present study also found that normative beliefs regarding social referents associated with SR were positively influenced the subjective norm with a significant relationship. This shows that managers’ SR decision was influenced largely by the approval of their internal and external stakeholders. That is, managers would also be influenced by social pressures. The control beliefs were captured based on the factors that would facilitate or impede (i.e. availability of resources, support from the employees and managers, awareness of SR, availability of reporting guidelines etc.) the SR process. These factors were internal and external to both managers and the companies. It was found that there was a positive significant relationship between control beliefs and perceived behavioural control. Managers’ who may perceive themselves to be in control of SR process have more confidence and are likely to engage in SR behaviour.

The managers’ positive attitude towards engaging in SR influenced their intention to engage in SR. The more positive the attitude of managers towards SR behaviour, the stronger their intention to engage in SR. Subjective norm and perceived behavioural control also influenced managers’ intention to engage in SR. The results reported that these three immediate antecedents explained a large proportion of the variance ($R^2$ of 0.610) (without the effect of control variables) in intention to engage in SR.

However, the intention to engage in SR behaviour variable did not strongly explain the variance in SR behaviour. The intention variable explained only 0.047 (without the effect of control variables) of the variation in SR behaviour. However, the pathway between intention and SR behaviour was significant ($p<0.05$). Therefore, results show that intention predicts SR behaviour. However, it was necessary to identify why managers’ intention to engage in SR behaviour will not translate well into actual SR behaviour. This led to the identification of other variables that determine corporate SR behaviour in addition to the variables already included in the TPB. As
shown in Figure 2, the inclusion of control variables led to a minimal improvement in variance in SR behaviour ($R^2$ of 0.073). Such findings are in contrast to various EA research studies which have found that large companies in terms of size and operating in environmental sensitive industries are heavily engaged in environmental and social disclosures. However, Vormedal and Ruud (2009) found that there is no clear link between size and high reporting scores. Further, Alnajjar (2000) found that industry groups have no significant influence on total social responsibility disclosure.

Nevertheless, in the present study both size variable and environmental sensitive industries variable was found to be statistically insignificant predictors of managers’ SR intention and corporate SR behaviour. This may be due to the fact that there is no operation of major environmental sensitive industries such as coal mining, oil exploration, and chemicals, whereas power and energy industry in Sri Lanka, have environmental safeguards. However, these industries are not legally required to engage in environmental, social or SR. Prior research has identified electronics, petroleum, chemical and oil and gas industries as significantly affected by environmental regulations due to their environmental sensitiveness (Karim et al., 2006).

The company listing in the CSE variable was significant on SR behaviour ($p<0.05$). This was expected as these CSE listed companies are exposed to the CSE regulatory environment, greater public scrutiny and expectations than non-listed companies. This may have created pressure for listed companies to engage in SR for greater transparency and accountability. Most of the listed companies include a sustainability section or chapter in their annual reports, even though SR is a voluntary reporting practice in Sri Lanka.

Ajzen, (2006a, p.1) suggests that “intention is thus assumed to be the immediate antecedent of behaviour. However, because many behaviours pose difficulties of execution that may limit volitional control, it is useful to consider perceived behaviour control in addition to intention. To the extent that perceived behavioural control is veridical, it can serve as a proxy for actual control and contribute to the prediction of the behaviour in question.” Therefore, in addition to above mentioned control variables, actual behavioural control may have inhibited the translation of managers’ favourable intention into actual SR behaviour. The perceived behavioural control
captured by the survey were availability of financial resources, availability of time, support from employees and top management, availability of SR guidelines and non-financial data collection procedures, existence of a stock of specialised employees’ knowledge, skills and expertise, easiness in assessing reliable data, easiness in changing the mindset of management, awareness of potential benefits of SR, familiarity with SR practices, availability of accepted accounting standard for SR and concerns about company’s stakeholder accountability. By considering the above perceived behavioural control measures as proxy for actual behavioural control, the moderating effect of actual control belief on the intention and SR behaviour was tested as suggested by Ajzen (2006a) and found that the moderating effect is statistically insignificant. Ajzen (2005) notes, that there could be a gap between intention and behaviour due to literal inconsistency. That is, sometimes people do not act on their stated intentions. Further, the effect of intention on behaviour is stronger when actual control is high.

Ajzen (1985) states individual and situational characteristics indirectly influence behaviour through behavioural, normative and control beliefs. That means these background factors influence SR intention only indirectly to the extent that they influence the way individuals perceive and feel about the behaviour. The present study considered only one external factor at the organizational level as the TPB was applied to an organizational context. That was the managers’ level of education. This allowed the level of analysis to remain the same. Consistent with Ajzen (1985) it was found that managers’ level of education has an effect on the behavioural, normative and control beliefs held by managers which influenced their immediate antecedents of SR intention (attitude towards engage in SR, subjective norm and perceived behavioural control). This education variable captured the managers’ general education not the specific education on sustainability issues. Although, it is not clear whether this has captured the managers’ sustainability education, one could argue that majority of managers are qualified in many different disciplines, including accountancy, banking, finance, information technology, law, marketing, engineering, and human resources management and had some form of education in the area of environmental and sustainability. Most of the managers were exposed to overseas training, some receiving their tertiary education in foreign countries. Others have overseas experience participating in various training programs, seminars and study tours related to environmental management. However, this was not surveyed in this study. Nevertheless, this
interpretation reinforces the importance of incorporating environmental, social and sustainability education and training in primary, secondary and tertiary level curricula in shaping the beliefs of future managers.

8. Conclusion

The primary aim of this study was to examine and understand how different psychological factors influence managers’ behavioural intention to engage in SR and SR behaviour of Sri Lankan companies. That is, to understand how managers’ attitude towards SR, their perceptions about the social pressure imposed on the organization from internal and external stakeholders (subjective norm) and the perceived control they have over the SR decision (perceived behavioural control) influence their intentions and corporate SR behaviour. The study also sought to understand the influence of managers’ education and influence of Buddhism on SR behaviour. In doing so, the study utilised Ajzen’s (1985) TPB, which is a well-established theory in the Psychology literature, to better understand the reasons behind SR behaviour. Further, this study sought to determine the suitability of the TPB within an organizational setting in a new behavioural context.

Several distinctive characteristics were associated with this study compared with prior studies in the area of environmental, social and SR. The main characteristics were the conceptual framework utilised in the study, the unique research context and the adoption of advanced statistical approaches to test the hypotheses of the study.

The study was motivated by three factors. First, to contribute to limited research on SR from developing country perspective; second, to extend research focusing on the influence of psychological factors that motivates managers’ for corporate SR; third, to fill the gap in literature by empirically testing a behavioural model of decision makers to provide direction for change in SR behaviour aiming towards greater transparency and accountability. There was the lack of research identifying how psychological variables of decision makers influence the SR behaviour to give rise to change in disclosures by using psychological theoretical frameworks.
A survey was conducted among 948 top and middle level managers of listed and non-listed companies in Sri Lanka. The survey yielded 233 usable responses, resulting in a usable response rate of 25%. The data was analysed using a PLS model.

The survey results show that managers’ psychological variables (attitude, subjective norm and perceived behavioural control), influence managers’ intention to engage in SR behaviour. That is, the present study has provided evidence that managers’ SR intention was influenced by their attitude, their perceptions about internal and external stakeholder pressures, and their perceived sense of control over performing the SR behaviour. These psychological variables were determined by their respective beliefs. It was also found that the level of education and the religious variable influenced the managers’ beliefs regarding SR. Further, the intention to engage in SR behaviour was found to have a significant relationship with SR behaviour, however, this relationship was found to be weak. It can be said that the Sri Lankan companies are more open towards carrying out corporate social responsibility (CSR) and sustainability initiatives and managers have high intention to engage in SR. These intentions may stem from a combination of personal and social value systems inspired by Buddhism, which is positive towards balance. Whilst managers have intention to engage in SR they have not taken the next step towards corporate SR due to lack of sufficient degree of actual control over the SR process. Furthermore, the findings support the suitability of the TPB in corporate settings, where the performance of the behaviour of interest requires the cooperation of many organizational members and show that managers’ psychological factors are important in determining SR behaviour in companies.

The findings have implications for the TPB and practice of SR in Sri Lanka. According to Ajzen (2006b), understanding why people hold a certain attitude, subjective norm and perceived behavioural control is helpful when developing programs for behavioural interventions to change behaviour. This study has also shown that psychological variables do influence the SR process to the extent that managers have a control over the process. That is, the influence of these factors on SR behaviour varies depending on the actual control managers’ have over the SR behaviour. If managers lack the actual control over the SR, the process will be hindered and their intention to engage in SR will not translate into SR behaviour. The implication is that, to translate SR behavioural intention to behaviour managers need to be provided with necessary control over the
SR behaviour. For example, managers need to be provided with adequate resources, support from the top management, training and education and other non-motivational factors to engage in SR in promoting behavioural change. Thus, the application of the TPB contributes to the advancement of knowledge in the area by highlighting that engaging in SR behaviour is difficult without actual control over the process. The TPB can also be used to develop research models to examine the influence of psychological and other variables on behaviour in corporate settings.

The findings of this study will potentially assist the development of greater sensitivity to SR issues amongst managers. This study has indicated the need for Sri Lankan companies to devise more effective strategies and design programs to enhance the SR behaviour. These strategies and programs could be aimed towards in providing a sufficient degree of actual control to managers over the SR process. For example, managers’ lack of awareness would lead to lack of actual control over the SR process. Therefore, it is important that developing strategies and designing programs towards raising greater awareness about sustainability and SR and enhancing managers’ commitment towards sustainable business and SR behaviour. This will encourage the creation of enabling organisational cultures which contribute towards the improvement of sustainable development and foster a new reporting culture, exhibiting a greater transparency and accountability amongst companies.

The findings would provide Sri Lankan policy makers with an opportunity to take necessary steps to strengthen the relationship with managers’ intention to engage in SR and corporate SR behaviour. According to Ajzen (2006b), when the relationship between intention and behaviour is weak, the most effective mean is to induce individuals to form an implementation decision that is to form a plan detailing when, where, and how the behaviour will be performed. The policy makers could formulate plans for SR and provide necessary guidance for companies to make it easier for them to carryout SR. The effective planning and development of programs for managers to develop sensitivity to SR would promote SR in Sri Lanka with the majority of companies resorting to it. There is an opportunity for companies to explore avenues to broaden managers’ commitment, to enhance the understanding of the role and reporting issues, and to strive towards raising greater awareness.
This study identified three main limitations. First, from the variable measurement perspective, a shortcoming was the use of self-reported data as the measurement of SR behaviour variable. This measure of behaviour is not an ideal measure as it relies on the self-reporting of respondents. However, the content analysis method could not be used in this study as anonymity of response impeded the identification of respondents with particular companies. Second limitation is the possibility of omitted external and control variables. For example, only two variables external to the TPB were tested and the study considered the influence of only three control variables that may affect intention and SR behaviour. While the explanatory power of the conceptual framework was strong and significant, it is unreasonable to expect that all external variables to the TPB and all control variables were considered in the study. Third, from the methodological perspective, it is worth considering the use of semi-structured interviews to identify the beliefs regarding SR from the research population in addition to the literature.

Future research could meaningfully pursue various extensions such as incorporation of other external variables to the TPB to provide a better understanding of other factors determining the SR behaviour. Furthermore, it could attempt to integrate other relevant theoretical perspectives with the TPB to enhance the understanding of factors influencing SR in promoting behavioural change. Future research could also refine the methods used in this study. Semi-structured interviews and in-depth case studies may yield additional insights of the factors influencing SR and why SR intention is not largely translating into SR behaviour. From contextual perspective, by selecting Sri Lanka as the research context provides evidence for exploration of comparative research in different cultures. Further, the measurement scales developed in this study can be used to measure the managers’ SR intention formation and SR behaviour in other research contexts to see whether there are similarities and differences between Sri Lanka and other cultures. Also, it will help to further validate the measures developed for the present study.
References


Gray, R., and D. Collison. 2002. Can't see the wood for the trees, can't see the trees for the numbers? Accounting education, sustainability and the public interest. *Critical Perspectives on Accounting* 13 (5-6):797-836.


FIGURES

Figure 1: The Conceptual Framework of SR Intention Formation and Behaviour

Figure 2: The Estimated PLS Path Model

Notes:

***p<0.001 (one-tail); **p<0.01 (one-tail) and *p<0.05 (one-tail)

Solid lines represent significant paths.
### Table 1: Industry Sector, Number of Employees, Annual Sales Turnover of Respondents’ Companies and Respondents’ Demographic Statistics

<table>
<thead>
<tr>
<th>Industry Sector</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Number of Employees</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>69</td>
<td>29.6</td>
<td>Up to 50</td>
<td>23</td>
<td>9.9</td>
</tr>
<tr>
<td>Bank, finance and insurance</td>
<td>25</td>
<td>10.7</td>
<td>51-100</td>
<td>46</td>
<td>19.7</td>
</tr>
<tr>
<td>Other (Advertising, Consultancy, Shipping etc.)</td>
<td>25</td>
<td>10.7</td>
<td>101-250</td>
<td>50</td>
<td>21.5</td>
</tr>
<tr>
<td>Diversified holdings</td>
<td>16</td>
<td>6.9</td>
<td>251-500</td>
<td>37</td>
<td>15.9</td>
</tr>
<tr>
<td>Construction and engineering</td>
<td>14</td>
<td>6.0</td>
<td>501-1,000</td>
<td>28</td>
<td>12.0</td>
</tr>
<tr>
<td>Plantations</td>
<td>14</td>
<td>6.0</td>
<td>1,001-2,500</td>
<td>19</td>
<td>8.2</td>
</tr>
<tr>
<td>Hotels and travels</td>
<td>13</td>
<td>5.6</td>
<td>2,501-3,500</td>
<td>4</td>
<td>1.7</td>
</tr>
<tr>
<td>Information technology</td>
<td>12</td>
<td>5.2</td>
<td>Over 3,500</td>
<td>26</td>
<td>11.2</td>
</tr>
<tr>
<td>Beverage, food and tobacco</td>
<td>11</td>
<td>4.7</td>
<td>Total</td>
<td>233</td>
<td>100.0</td>
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<tr>
<td>Health care</td>
<td>11</td>
<td>4.7</td>
<td>Annual Sales Turnover (in Million Rupees)</td>
<td>Frequency</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>Chemicals and pharmaceuticals</td>
<td>9</td>
<td>3.9</td>
<td>Up to 100</td>
<td>29</td>
<td>12.4</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>9</td>
<td>3.9</td>
<td>101-500</td>
<td>42</td>
<td>18.0</td>
</tr>
<tr>
<td>Power and energy</td>
<td>5</td>
<td>2.1</td>
<td>501-1,000</td>
<td>24</td>
<td>10.3</td>
</tr>
<tr>
<td>Total</td>
<td>233</td>
<td>100.0</td>
<td>1,001-5,000</td>
<td>34</td>
<td>14.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5,001-10,000</td>
<td>14</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10,001-30,000</td>
<td>29</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30,001-50,000</td>
<td>29</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Over 50,000</td>
<td>32</td>
<td>13.7</td>
</tr>
<tr>
<td>Total</td>
<td>233</td>
<td>100.0</td>
<td>Total</td>
<td>233</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Religion</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management</td>
<td></td>
<td></td>
<td>Buddhism</td>
<td>163</td>
<td>70.0</td>
</tr>
<tr>
<td>Chairman</td>
<td>9</td>
<td>3.9</td>
<td>Catholic or Christianity</td>
<td>39</td>
<td>16.7</td>
</tr>
<tr>
<td>Chief Executive Officer</td>
<td>34</td>
<td>14.6</td>
<td>Hinduism</td>
<td>10</td>
<td>4.3</td>
</tr>
<tr>
<td>Chief Financial Officer/Controller</td>
<td>23</td>
<td>9.9</td>
<td>Muslim</td>
<td>16</td>
<td>6.9</td>
</tr>
<tr>
<td>Company Secretary</td>
<td>3</td>
<td>1.3</td>
<td>Not applicable</td>
<td>4</td>
<td>1.7</td>
</tr>
<tr>
<td>Managing Director</td>
<td>52</td>
<td>22.3</td>
<td>Other</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Other (4 Directors, 5 General Managers and a Vice-President)</td>
<td>10</td>
<td>4.3</td>
<td>Total</td>
<td>233</td>
<td>100.0</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Middle Level Management</th>
<th>Age Category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountant</td>
<td>21</td>
<td>9.0</td>
<td>25 or under 25 years</td>
<td>2</td>
</tr>
<tr>
<td>Manager-Communications</td>
<td>11</td>
<td>4.7</td>
<td>26-29 years</td>
<td>25</td>
</tr>
<tr>
<td>Manager-Environmental/Sustainability</td>
<td>2</td>
<td>0.8</td>
<td>30-39 years</td>
<td>62</td>
</tr>
<tr>
<td>Manager-Human Resources</td>
<td>14</td>
<td>6.0</td>
<td>40-49 years</td>
<td>77</td>
</tr>
<tr>
<td>Manager-Public Relations</td>
<td>8</td>
<td>3.4</td>
<td>50-59 years</td>
<td>48</td>
</tr>
<tr>
<td>Other Middle Level Managers</td>
<td>46</td>
<td>19.8</td>
<td>60 and 60 plus</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>233</td>
<td>100.0</td>
<td>Total</td>
<td>233</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Experience</th>
<th>Minimum Value</th>
<th>Maximum Value</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Ethnic Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of years in current position</td>
<td>1</td>
<td>26</td>
<td>6.47</td>
<td>5.00</td>
<td>4.890</td>
<td>Burgher</td>
<td>4</td>
<td>1.7</td>
</tr>
<tr>
<td>No. of years working for the company</td>
<td>1</td>
<td>31</td>
<td>9.66</td>
<td>7.00</td>
<td>7.044</td>
<td>Malay</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Highest Level of A/Qualification</td>
<td>Frequency</td>
<td>Percentage</td>
<td>Moor</td>
<td>10</td>
<td>4.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>5</td>
<td>2.1</td>
<td>Sinhalese</td>
<td>204</td>
<td>87.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master’s degree</td>
<td>125</td>
<td>53.6</td>
<td>Tamil</td>
<td>8</td>
<td>3.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergrad/degree</td>
<td>90</td>
<td>38.6</td>
<td>Other</td>
<td>5</td>
<td>2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>5.8</td>
<td>Total</td>
<td>233</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 2: Composite Reliability, AVE Scores, Descriptive Statistics and Loadings

<table>
<thead>
<tr>
<th>Constructs and its Indicators</th>
<th>Item Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitude</strong> (Composite Reliability=0.813, AVE=0.798, Mean=5.91, SD=0.96)</td>
<td>0.8511, 0.8984, 0.9148, 0.9084</td>
</tr>
<tr>
<td>Q01A01- It is good for my company to engage in SR</td>
<td>0.8511</td>
</tr>
<tr>
<td>Q01A02- It is rewarding for my company to engage in SR</td>
<td>0.8984</td>
</tr>
<tr>
<td>Q01A03- It is valuable for my company to engage in SR</td>
<td>0.9148</td>
</tr>
<tr>
<td>Q01A04- It is meaningful for my company to engage in SR</td>
<td>0.9084</td>
</tr>
<tr>
<td><strong>Subjective Norm</strong> (Composite Reliability=0.772, AVE=0.692, Mean=4.90, SD=1.10)</td>
<td>0.8279, 0.8502, 0.8742, 0.7712</td>
</tr>
<tr>
<td>Q01SN01- Most of my company’s stakeholders (shareholders, employees, community, etc.) think that my company should engage in SR</td>
<td>0.8279</td>
</tr>
<tr>
<td>Q01SN02- Most of the internal stakeholders (employees and management) would approve my company engaging in SR</td>
<td>0.8502</td>
</tr>
<tr>
<td>Q01SN03- Most organizations, whose opinions are valued by my company, engage in SR</td>
<td>0.8742</td>
</tr>
<tr>
<td>Q01SN04- Many companies similar to my company engage in SR</td>
<td>0.7712</td>
</tr>
<tr>
<td><strong>Perceived Behavioural Control</strong> (Composite Reliability=0.743, AVE=0.650, Mean=5.23, SD=1.02)</td>
<td>0.7599, 0.8450, 0.8303, 0.7872</td>
</tr>
<tr>
<td>Q01PBC01- It is easy for my company to engage in SR</td>
<td>0.7599</td>
</tr>
<tr>
<td>Q01PBC02- It is possible for my company to engage in SR</td>
<td>0.8450</td>
</tr>
<tr>
<td>Q01PBC03- The decision to engage in SR is under my company’s authority</td>
<td>0.8303</td>
</tr>
<tr>
<td>Q01PBC04- The decision to engage in SR is under my company’s control</td>
<td>0.7872</td>
</tr>
<tr>
<td><strong>Intention</strong> (Composite Reliability=0.833, AVE=0.853, Mean=5.50, SD=1.16)</td>
<td>0.8810, 0.9552, 0.9505, 0.9066</td>
</tr>
<tr>
<td>Q01IN01- My company is committed to engage in or continue SR</td>
<td>0.8810</td>
</tr>
<tr>
<td>Q01IN02- My company plans to engage in or continue SR</td>
<td>0.9552</td>
</tr>
<tr>
<td>Q01IN03- My company has the intention to engage in or continue SR</td>
<td>0.9505</td>
</tr>
<tr>
<td>Q01IN04- My company is willing to engage in or continue SR</td>
<td>0.9066</td>
</tr>
<tr>
<td><strong>SR Behaviour</strong> (Mean=5.28, SD=1.33)</td>
<td>0.8302, 0.9827, 0.4208</td>
</tr>
<tr>
<td>Q08CR_EN01- Environmental reporting aspects: (e.g. energy and water usage, wastage, greenhouse gas emissions, environmental impacts etc.)</td>
<td>0.8302</td>
</tr>
<tr>
<td>Q08CR_SO02- Social reporting aspects: (e.g. workplace relationships, employee benefits, training, human rights, health and safety procedures, donations etc.)</td>
<td>0.9827</td>
</tr>
<tr>
<td>Q08CR_EC03- Economic reporting aspects: (e.g. expenditures, incomes, distribution to providers of capital, taxes etc.)</td>
<td>0.4208</td>
</tr>
</tbody>
</table>

### Table 3: Correlation Matrix from PLS Model with Square Root of AVE Statistics

<table>
<thead>
<tr>
<th>Behavioural Belief</th>
<th>Normative Belief</th>
<th>Control Belief</th>
<th>Attitude</th>
<th>Subjective Norm</th>
<th>Perceived Behavioural Control</th>
<th>Intention</th>
<th>SR Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioural Belief</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative Belief</td>
<td>0.730</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Belief</td>
<td>0.611</td>
<td>0.503</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>0.632</td>
<td>0.492</td>
<td>0.365</td>
<td>0.893</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>0.525</td>
<td>0.539</td>
<td>0.353</td>
<td>0.528</td>
<td>0.832</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Behavioural Control</td>
<td>0.560</td>
<td>0.559</td>
<td>0.368</td>
<td>0.516</td>
<td>0.561</td>
<td>0.806</td>
<td></td>
</tr>
<tr>
<td>Intention</td>
<td>0.665</td>
<td>0.620</td>
<td>0.384</td>
<td>0.646</td>
<td>0.646</td>
<td>0.654</td>
<td>0.924</td>
</tr>
<tr>
<td>SR Behaviour</td>
<td>0.128</td>
<td>0.271</td>
<td>0.006</td>
<td>0.030</td>
<td>0.085</td>
<td>0.250</td>
<td>0.216</td>
</tr>
</tbody>
</table>