

School of Business

**Adoption and Implementation of Corporate Sustainability Strategy:
Evidence from a Mixed Method Study**

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**This thesis is presented for the Degree of
Doctor of Philosophy
of
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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee, Approval Number CSEA 240413 and CSEA 200813.

Signature:

A handwritten signature in blue ink, appearing to read 'M. Ravi', is written over a light yellow rectangular background.

Date: 21st of April 2017.

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Abstract

Growing concern about environmental degradation and the urgent need to engage in sustainable development activities has drawn contemporary strategic management and business and society literature to focus on the role of businesses in achieving sustainability. Despite number of studies in corporate sustainability, little attempt has been made to investigate the factors affecting the adoption and implementation of corporate sustainability initiatives. Three research questions were formulated and a parallel mixed method research design was chosen to investigate the research questions. Accordingly, a quantitative research design was adopted to investigate the first and second research questions and a qualitative research design was adopted to investigate the third research question. For the quantitative study, an empirically testable research model was developed and several hypotheses were proposed. A questionnaire was developed to collect the data. The target population of the quantitative study was 196 listed companies in Sri Lanka that engages in corporate sustainability related initiatives. A total of 127 useable questionnaires were collected from the target population. Covariance-based structural equation modeling and MODPROBE procedure for moderated regression was used to test the proposed hypotheses. Results revealed there are indeed significant associations between the variables in the model. The third research question was investigated using the case study method. Structured interviews were conducted with six top-level managers responsible for corporate sustainability belonging to six large companies in Sri Lanka. Findings revealed that leadership, top management commitment, nature of business and operations and organizational culture were the facilitating the implementation of corporate sustainability strategy and financial limitations, initial investment, private ownership, skills, and attitude of employees, consumer awareness, and lack of experts were hindering the implementation of corporate sustainability strategy. The study makes several important contributions to the existing literature.

Key Words: Corporate Sustainability Strategy, External Stakeholder Pressures, Financial Performance, Integration Capability, Institutional Pressures, Managerial Motive, Sustainability Performance, Mixed Method, and Sri Lanka.

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Chapter 1

Introduction

1.1 Background of the Study

Firms around the world are increasingly adopting corporate sustainability initiatives to demonstrate responsiveness to growing social and environmental concerns. Siegel (2009) suggests that implementing corporate sustainability initiatives is important for firms to achieve their strategic goals and the growing body of knowledge on corporate sustainability is evidence of the business case for sustainability. The concept of sustainability gained prominence after the Report of the World Commission on Economic Development in 1987. Subsequently, many guidelines and frameworks have been introduced to enable firms to implement corporate sustainability initiatives. For example, the UN Global Compact (UNGC) has over 6000 companies from 135 countries committed to implement UNGC principles (Hall 2011).

Calls for governance and sustainability at a global level have been influenced by many issues and concerns in economic, social, and environmental spheres. Among them, the concern about climate change continues to be a dominant force influencing governments and businesses to mitigate greenhouse gas emissions and engage in corporate sustainability initiatives. The Intergovernmental Panel on Climate Change (IPCC) claims there is clear evidence that climate change is aggravated by human activities (IPCC Secretariat 2013). This view is also supported by evidence that climate departure is likely to occur as early as 2020 in the tropical zone. Developing economies in the tropical zone are more likely to be affected by the phenomenon despite having relatively low greenhouse gas emissions compared to developed economies (Mora et al. 2013; International Energy Agency 2013). In addition to climate change concerns, environmental pollution (Peter Coy and Reed 2010; *The Curse of Black Gold* 2011; Vidal 2011); environmental and industrial disasters ("*Bhopal: Ten Years On*" 1994); the use of child labour (Schanberg 1996); poor working conditions and labor practices ("*Report Says Nike Plant Workers Abused by Bosses in Indonesia*" 2001); prolonged period of weak economic conditions (Christofi, Christofi and Sisaye 2012); corporate scandals and failures in U.S. Italy, Spain, Japan and India ("*The Crisis at Parmalat: Milking Lessons*" 2004; Christofi, Christofi and Sisaye 2012; Martin 2006; Tabuchi

2011; Tripathi 2009); and corruption have continued to strengthen the demand for firms to be responsive to social and environmental concerns. Expected climate change effects and socioeconomic imbalances in economies are likely to increase our vulnerabilities (Lever-Tracy 2008) suggesting that more needs to be done to address environment, social and economic concerns.

These concerns and developments have led to a resurgence of opinion from public and civic societies, governments, and intergovernmental organizations, on “how business entities should conduct their operations.” In response to these developments, stringent regulations and protocols have emerged resulting in increased compliance, lawsuits, and costs. Simultaneously, business leaders and managers have come to realize that these developments are opportunities for competitive advantage and are embracing the concept of corporate sustainability from a strategic perspective.

The notion of corporate sustainability requires firms to develop approaches to embed social and environmental dimensions into corporate strategy and operations. However, embedding corporate sustainability initiatives into firms challenges the classical economic doctrine of profit maximization (DesJardins 1998). Although the proponents of the classical view argued that the social responsibility of the firm is to increase profits (Friedman 1970), firms have been experiencing growing environmental and social pressures for nearly 30 years (Sherwin 2004). Further stakeholders have begun to demand information on business activities aside from financial performance (Keeble, Topiol and Berkeley 2003). Thus, it can be argued that firms are forced to respond to growing societal demands to achieve their objectives. For example, 95% of the 250 largest companies in the world (G250) report on their corporate responsibility activities (KPMG 2011).

1.2 Statement of the Problem

Corporate sustainability is a relatively new phenomenon and is widely implemented by multinational corporations and large companies in developed economies. Many studies have explored corporate sustainability in this context. Further, most studies on corporate sustainability in emerging economies have focused on multinational corporations. For example, Aykol and Leonidou (2015) state that in the past decade studies in the environmental sustainability literature has mostly focused on large

manufacturing firms. This suggests there is a need to explore how large firms in emerging or developing economies are implementing corporate sustainability.

Corporate sustainability activities in emerging economies are voluntary initiatives and there is no regulatory requirement for companies to implement such initiatives or to report them. Further it is generally known that institutional frameworks in emerging economies are relatively weak compared to developed ones (Kemp 2001). In the absence of regulatory enforcement and in a weak institutional setting, external pressures are likely to play an important role influencing firms to implement corporate sustainability. Influenced by external pressures, managers of companies evaluate the effectiveness of emerging management practices and their operationalization. Because of this, significant differences exist between companies embarking on corporate sustainability, which leads to heterogeneity in terms of practice and its outcome. In this context, external pressures are likely to have a significant influence on company decisions to engage in corporate sustainability strategy.

Only a few studies have attempted to examine the factors influencing corporate sustainability strategy and the impact of corporate sustainability strategy on firm's financial performance in the Asian context. Studies testing the relationships between antecedents, consequences, and strategic sustainability initiatives in the extant literature are insufficient and is of exploratory nature (Aykol and Leonidou 2015). Further, the political-legal system, economic development and socio-cultural landscape of Asian countries are considerably different and make meaningful generalization about the entire region difficult (Kimber and Lipton 2005). Prior studies show that the number of corporate sustainability initiatives in Asian firms is lower than firms in the U.S., Europe, and Australia.

Investigating the relationship between corporate sustainability and corporate financial performance is identified as useful and testing quantitative hypotheses related to the relationship is considered important in building a systematic theory of corporate sustainability (Dylick and Hockerts 2002). Literature related to corporate sustainability from emerging economies is growing (Hah and Freeman 2014). Within emerging economies studies have mostly focused on BRICs economies and research on CSR in South Asian countries is weak (Srinivasan 2011).

1.3 Research Questions and Objectives

The overarching aim of this thesis is to “explore the factors affecting the adoption and implementation of corporate sustainability strategy in a developing economy context.” The aim of this study was further refined to formulate the following specific research questions and objectives.

Research Question 1

Do external pressures and managerial motive influence the adoption of corporate sustainability strategy?

Research Objectives

- 1.1 To examine the influence of institutional pressure on the adoption of corporate sustainability strategy.
- 1.2 To examine the influence of external stakeholder pressure on the adoption of corporate sustainability strategy.
- 1.3 To examine the influence of managerial motive on the adoption of corporate sustainability strategy.
- 1.4 To examine the role of managerial motive on the influence of external pressures on the adoption of corporate sustainability strategy.

Research Question 2

Does the adoption of corporate sustainability strategy affect firm performance and does integration capability moderates the relationship between adoption of corporate sustainability strategy and firm performance?

Research Objectives

- 2.1 To examine the effect of the adoption of corporate sustainability strategy on financial performance.
- 2.2 To examine the effect of the adoption of corporate sustainability strategy on sustainability performance.
- 2.3 To examine the mediating effect of corporate sustainability performance on the relationship between adoption of corporate sustainability strategy and financial performance.

- 2.4 To examine the moderating effect of integration capability on the relationship between adoption of corporate sustainability strategy and sustainability performance
- 2.5 To examine the moderating effect of integration capability on the relationship between adoption of corporate sustainability strategy and financial performance

Research Question 3

What are the factors enabling and impeding the implementation of corporate sustainability strategy?

Research Objectives

- 3.1 To identify the factors enabling the implementation of corporate sustainability strategy.
- 3.2 To identify the factors impeding the implementation of corporate sustainability strategy.

1.4 Research Approach

Research is a rational and linear stage process and the selection of a research approach for a particular study is determined by the research questions (Abernethy et al. 1999). Similarly, Miles and Huberman (1984) and Wildemuth (1993) also advocate that the selection of a research approach should be based on the research questions. Based on the above views, two separate studies are designed to investigate the research questions proposed in this thesis. Accordingly, the first study adopts a quantitative approach to examine the first and second research questions and the second study adopts a qualitative research approach to examine the third research question. This thesis employs a mixed-method approach to investigate the research questions.

A review of the extant literature suggests that qualitative and quantitative research approaches originate from two different philosophical perspectives known as research paradigms. The two philosophical perspectives, namely positivist and interpretivist, provide a distinctive worldview about reality and creation of knowledge (Morgan 2007). Although the positivist-interpretivist paradigm argument is an on-going debate in social sciences, proponents of the two philosophical perspectives

provide different positions on the use of the multi-method research approach. The purists (Rossman and Wilson 1985) argue that it is incompatible to use multiple research approaches due to the fundamental differences in the philosophical perspectives (Molina-Azorin 2007). However, a third philosophical perspective known as the pragmatist (Rossman and Wilson 1985) perspective emphasizes that qualitative and quantitative research approaches can be combined (Molina-Azorin 2007). The alternative views held by the purists and pragmatists on combining research approaches in a single study is because the purists focus on selecting a research approach based on the philosophical perspective or paradigm whereas the pragmatists emphasize the selection of a research approach based on the research problem.

Previous studies on corporate sustainability which also include studies on social and environmental responsibility have adopted quantitative (Andersson, Shivarajan and Blau 2005; Banerjee, Iyer and Kashyap 2003; Barnett and Salomon 2012; Chang and Kuo 2008; Hahn and Scheermesser 2006; Hall and Wagner 2012; Lindgreen, Swaen and Johnston 2009; Linnenluecke, Russell and Griffiths 2009; Sharma 2000; Wang and Bansal 2012), qualitative (Abreu 2009; Banerjee 2001; Bansal and Roth 2000; Grayson 2011; Jamali 2010; Jenkins 2006; Lertzman and Vredenburg 2005; Uecker-Mercado and Walker 2012; Sharma, Pablo and Vredenburg 1999) or mixed methods research approaches (Bansal 2005; Sharma and Henriques 2005; Sharma and Vredenburg 1998). In the above mentioned studies the choice of research method emerged from the purpose whether to test theory or construct theory. Accordingly, studies that attempted to test a theory employed a quantitative research approach and studies that attempted to construct theory employed a qualitative research approach. Similarly, corporate sustainability falls under strategic management literature and extant literature shows that studies have employed quantitative, qualitative and mixed research approaches. As stated previously, the research approach is driven by the purpose of research which is whether to confirm or explore. Hence, evidence suggests that a research approach should be based on the purpose of the research and what the research questions expect to resolve.

1.5 Context of the Study

The context of this study is 'Sri Lanka'. As per the constitution, Sri Lanka is known as the Democratic Socialist Republic of Sri Lanka (*The Constitution of the Democratic*

Socialist Republic of Sri Lanka 1978). Formerly known as Ceylon, historical sources or the Great Chronicles of Ceylon suggest that the traditional history of Sri Lanka date back to 6th century B.C. For centuries Sri Lanka had been ruled by kings and since the 16th century for 400 years Sri Lanka was a colony of European rulers. As a result, contemporary Sri Lanka's economy, culture, education, legal framework, and legislation have been largely influenced by their colonial masters.

Sri Lanka is an island nation in South Asia with a population of 20.6 million (Central Bank of Sri Lanka 2014). Comparing Sri Lanka's population density with countries with similar size population like Australia and Malaysia shows that the population density of Sri Lanka is far greater compared to the above-mentioned countries. This in turn suggests the stress on land, natural resources, and environment in Sri Lanka. In 2014, Sri Lanka's Gross National Income was US \$ 84.8 billion (Central Bank of Sri Lanka 2016). Although Sri Lanka's economy was growing above 6 per cent post 2010, in more recent years the economic growth has fallen. The World Bank classifies Sri Lanka as a lower middle income country. Based on the Hofstede's national culture dimensions, Sri Lankan society can be identified as hierarchical leading to high power distance, collectivist, feminine, and preference of certainty over uncertainty (Weathersby 1993).

Historically Sri Lanka has been an agrarian society. Hence, sustainability has been part of the life style of the rural community. Importantly, Buddhism to a large extent has influenced a view towards a sustainable society. Buddhist teachings and its value system have instilled the value of the environment among its people from ancient times. For example, Sri Lanka's ancient irrigation system developed by various kings over a period of thousand years is evidence of its appreciation of social and environmental sustainability. In addition to the ancient irrigation system, the Tank Cascade System which is a network of smaller tanks has been found to be ecologically beneficial (Geekiyanage and Pushpakumara 2013). Sri Lanka's ancient settlement systems had been identified as 'Wewai-Dagabai, Gamai-Pansalai', which refers to a hydraulic civilization (Seneviratna 1987).

Sri Lanka is considered to be among the top biological hotspots in the world (United Nations Environment Programme 2014). However, in recent years Sri Lanka's climate risk ranking has moved from a position of 98 in 2015 to 4 in 2016 (Eckstein,

Kunzel, and Schafer 2018). As a result Sri Lanka is among the top ten countries most impacted by climate related challenges. In addition to climate related impact, increasing social and environmental related challenges and issues encountered in Sri Lanka continues to gain attention from the public and media. Local and multinational entities in Sri Lanka irrespective of firm size have come under severe criticism and led to public protest and sustained negative campaigns using social media for mismanaging social and environment related matters. In certain incidents, law enforcement officials had temporarily shut-down, filed law suits, fined and shift plant locations of business entities that had found to be violating social and environment related regulations. The spread of Chronic Kidney Disease in the North Central Provinces in Sri Lanka especially among the farming community has enforced the government to setup a hospital for kidney patients and provide them with a monthly allowance. In response to this development, many business entities have taken the initiative to provide people in the high risk zone with clean drinking water. Similarly, the Government of Sri Lanka has introduced the 'Soorya Bala Sangramaya' project to encourage households to generate electricity through solar power through attractive credit facilities.

Corporate sustainability related initiatives and practices in Sri Lanka have come to be recognized by various organizations. The ACCA Sustainability Reporting Awards, Best Corporate Citizen Award by the Ceylon Chamber of Commerce, the National Business Excellence Award by the National Chamber of Commerce, Excellence in Integrated Reporting Award by the Certified Management Accountant Sri Lanka, Annual Report Award by the Chartered Accountants Sri Lanka and the National Green Award by the Central Environmental Authority are the national initiatives in Sri Lanka that recognizes contribution of business entities to sustainability. Furthermore, the number of entities in Sri Lanka signatories to the United Nations Global Compact principles has steadily increased since it's launched in 2011. The Joint Apparel Association Forum Sri Lanka has taken the leadership to promote the island nation as the world's leading ethical sourcing destination through its 'Garment without Guilt' project. Similarly, a project titled 'Greening Sri Lankan Hotels' had been launched in collaboration with the EU, Switch Asia and the Chamber of Commerce of Ceylon. The project focused on improving environmental performance (water, energy, waste) of 350 hotels in Sri Lanka. More importantly, the

revised code of best practice on corporate governance introduced in 2013 has included principles for sustainability reporting and encourages companies to voluntarily adopt sustainability reporting using either national or international guidelines (Securities Exchange Commission of Sri Lanka, & Institute of Chartered Accountant of Sri Lanka. (2013). Furthermore, an organization namely ‘CSR Sri Lanka’ has been founded by experienced personnel in the industries to drive transformative CSR in Sri Lanka toward national priorities. Thus, undertaking the study in Sri Lanka from an economy or cultural perspective has its significance.

Table 1-1 Country Profile

Country Classification	Developing economy Lower-middle income
Population	20.6 million
Land Area	65,610 Sq. KM.
Territorial Water	12 nm
Exclusive Economic Zone	200 nm
Gross National Income (US \$)	84.8 (2016)
Gross National Income Per Capita (US \$)	3,956 (2016)
Population Density	337 Sq. Km. (2016)
CO ₂ emissions Per Capita (tonnes)	0.85
Human Development Index	0.766, Rank 73
Global Peace Index	97 (2016)
World Giving Index	5 (2016)
Ease of Doing Business Index	110 (2016)
Corruption Perception Index	95 (2016)
Climate Risk Index	4 (2016)

1.6 Significance of the Study

Sustainable development is an important concept for policy makers in industry and the contributions of firms to sustainable development is considered important (Laine 2005). Further, sustainability at organizational level has been identified as an emerging field of research and this study expects to contribute to the advancement of knowledge on corporate sustainability. Further the proposed study makes theoretical and practical

contributions. The theoretical contributions are based on the conceptual framework and the research strategy adopted. The practical contributions are based on insights provided to policy makers and practitioners.

The study initially investigates what factors facilitate or constrain the effective integration of corporate sustainability into a firm, since this has been insufficiently explored. Most studies have focused on the direct relationship between social and environmental performance on financial performance. Thus, the study contributes towards identifying the determinants of corporate sustainability adoption. According to Hull and Rothernberg (2008) the relationship between corporate social performance and financial performance is not straightforward and Barnett and Salomon (2012) suggest exploring the relationship between corporate social performance and corporate financial performance incorporating additional contingencies. Thus, this study extends previous work on the relationship between corporate social performance and corporate financial performance to investigate the direct relationship between the adoption of corporate sustainability strategy and financial performance. The study further incorporates integration capability as a moderator and sustainability performance as a mediator to explore whether the relationship between the adoption of corporate sustainability strategy and financial performance can be explained using intervening and interacting variables. Further, only a few studies have examined the mediator and moderator effect on the relationship between the adoption of corporate sustainability initiatives and financial performance, and the idea of incorporating variables to explore non-linear relationships is also supported by Steger, Lonescu-Somers, and Salzman (2007) as they state that most theoretical frameworks do not explore non-linear relationship. The study empirically tests the influence of integration capability as a moderator on the relationship between corporate sustainability adoption and corporate financial performance and corporate sustainability adoption and sustainability performance. The concept of integration capability is drawn from the dynamic capability view and is limitedly explored and empirically tested (Iansiti and Clark 1994). Thus, this study contributes to knowledge of integration capability and how it can affect the relationship between adoption of corporate sustainability strategy and financial performance. Further, the study adopts a mixed method approach comprising qualitative and quantitative methods to investigate the research questions and contribute to the increasing use of mixed method studies in strategy literature.

The study also makes contribution to policy makers and practitioners in the following ways. Understanding what factors enable or impede corporate sustainability adoption is particularly important for policy makers to provide conditions favourable for corporate sustainability adoption. Thus, this study explores how external pressures: institutional pressure and external stakeholder pressure influence the adoption of corporate sustainability strategy. Institutional pressure is one of the determinants explored in this study and studies shows that firms are more likely to driven by institutional pressures favouring voluntary adoption of corporate sustainability initiatives. Thus, knowledge of forces favouring voluntary adoption should assist policy makers and regulators at national level to introduce initiatives that facilitate corporate sustainability into firms voluntarily and identify what forces facilitate and constraints the corporate sustainability adoption. The study also incorporates an internal driver: managerial motive. This would explain how top management motives influence organizations to adopt strategic sustainability initiatives. This is of importance for managers to understand how to integrate top management motives in a firm's culture and values and their impact on strategic sustainability initiatives.

The study provides empirical evidence on theory applicability in a small emerging economy. Although, Hoskisson et al. (2000) has argued that theory development in emerging economies is problematic and there are issues in the testing of instruments and hypotheses. However, Hafsi and Farashahi (2005) provided evidence that emerging and developing economies should be considered as part of normal scientific development and suggest that scientific knowledge is universal and scholars should look for theoretical framework that can be widely applied rather than looking for universality of theories.

1.7 Structure of the Thesis

This thesis consists of seven chapters. An overview of each chapter is provided in the following paragraphs.

The current chapter (chapter 1) introduces this study. The chapter covers the background of the study, problem statement, research questions and objectives, research approach, and the significance of the study.

The literature review is presented in chapter 2. The chapter begins with a critical discussion of theoretical frameworks relevant for this study found in the business and society literature. Then the chapter elaborates the concept of corporate sustainability. Next, a discussion of antecedents and outcomes of adopting corporate sustainability strategy is provided. The chapter also provides an overview of corporate sustainability research undertaken in developing economies. The final section of the chapter discusses the research context of this study.

Chapter 3 presents the conceptual model and the hypotheses formulated to address research questions one and two. First, the chapter introduces the constructs and linkages between the constructs in the proposed conceptual model. Next, the chapter discusses the development of the hypotheses based on the theoretical foundations discussed in chapter 2.

Chapter 4 presents the methodology applied in this study. The chapter begins with a foundational discussion on research philosophy and the choice of research paradigm. A rationale for the methodology applied in this study is then provided. In the subsequent sections of the chapter, the research approach associated with the research questions and the methods and tools employed to select the respondents, collect and analyse data under each approach is presented.

Chapter 5 of the study provides an account of the analysis and results of the quantitative study. This chapter discusses the application of covariance-based structural equation modelling and moderated regression analysis to test the proposed hypotheses of the study.

In chapter 6, the analysis and results of the qualitative study are presented. The discussion includes the sample profile, the process of analysis of the qualitative data, and the results.

Chapter 7 is the final chapter and it presents the discussion and conclusion of this thesis. The chapter revisits the research questions of the thesis and attempts to answer them in light of the results presented in chapters 5 and 6. The discussion in the chapter is also extended to include the contribution of the study, implications arising out of the study, limitations of the study, and directions for further research.

Chapter 2

Literature Review

Overview

The aim of this chapter is to provide a synthesis based on the extant literature on corporate sustainability. The chapter includes a discussion on the theoretical perspectives applied in this study, an overview on the concept of corporate sustainability, a discussion on the antecedents and outcomes of adopting corporate sustainability initiatives with empirical findings, and the state of the corporate sustainability research in developing economies. Throughout this review, the research gaps and issues found in the extant literature are discussed with relevance to the theoretical perspectives of this study and research questions under investigation.

2.1 Theoretical Foundation

The antecedents and outcomes of corporate sustainability initiatives have been explored from different theoretical perspectives in business and society literature,. Amongst the theoretical perspectives found in such literature, stakeholder theory (Freeman 1984), institutional theory (Scott and Meyer 1991; (Dimaggio and Powell 1983; Meyer and Rowan 1977) and resource based view (Barney 1991) continue to be the leading theoretical perspectives applied to investigate issues concerning corporate sustainability (Aykol and Leonidou 2015). Stakeholder theory and institutional theory belong to the systems theories (Smith, Haniffa and Fairbrass 2011) that hypothesizes that organizations and the environment are interdependent and organizational behaviour is influenced by forces in the environment. The use of systems theories to explore corporate sustainability issues can also be attributed to the fact that corporate sustainability is considered a systems concept and some scholars recommend a systems approach to integrate corporate sustainability in organizations (Azapagic 2003; Gray 2010). Alienating from the systems view, the resource-based view proposes that organizations with distinctive resources and capabilities are more likely to integrate and implement corporate sustainability initiatives to create competitive advantage.

Although the stakeholder theory, the institutional theory and the resource-based view have different origins, they provide the theoretical rationale required to

investigate the research questions of this thesis. More importantly, corporate sustainability lacks a coherent theoretical framework that can explain its various facets (i.e. multidimensionality) and draws on theories from different schools of thought based on the research questions under investigation in a particular study. Accordingly, this thesis applies a multi-theoretical approach to connect concepts related to its research questions, to gain important insights. A multi-theoretical approach also helps to address criticisms and issues found in single theory or mono-theoretical approaches. Moreover, a mono-theoretical approach may not be able to account for all the relationships between the factors in this study. Thus, it is deemed that the multi-theoretical approach is most suitable because it integrates multiple complementary perspectives.

2.1.1 Institutional Theory

Institutional theory has emerged as a dominant theoretical perspective that explains how organizational decisions and practices are influenced by environmental forces. Institutional theory is based on the view that organizations are affected by their environment (Scott 2003) and postulate that institutional forces influence organizations to become isomorphic (DiMaggio and Powell 1983). Isomorphism is referred to as organizations in the same or similar industries having similar structures and practices (DiMaggio and Powell 1983). Thus, institutional theory posits that homogeneity among organizations is the result of conformance to prevailing societal pressures and is a prerequisite for the survival and legitimacy of the organization (DiMaggio and Powell 1983; Heugens and Lander 2009; Meyer and Rowan 1977).

Unlike the legitimacy theory, which fails to explain what constitutes societal expectation, institutional theory provides a clear depiction of the mechanisms that capture societal expectations. Institutional theorists DiMaggio and Powell (1983) suggest three types of isomorphic or institutional pressures: normative, mimetic, and coercive. As per the institutional theorists, normative isomorphic pressure emanates from professionalization; mimetic isomorphic pressures emanate from uncertainty in the environment leading to organizational modelling; and coercive isomorphic pressures emerge from formal and informal rules (DiMaggio and Powell 1983). This suggests that firm behaviour is affected by normative, mimetic and coercive pressures

in the institutional environment, which leads to the adoption of similar structures and practices by organizations.

In applying institutional theory in corporate sustainability research, it can be stated that institutional pressures related to sustainability are expected to influence organizations to adopt corporate sustainability initiatives. Accordingly, it can be proposed that there is a direct association between institutional pressures and the adoption of corporate sustainability initiatives. Studies on corporate sustainability that applied institutional theory provide evidence of institutional forces that drive organizations to adopt corporate sustainability initiatives and their effect on organizational outcome (Colwell and Joshi 2013; Simpson 2012). This suggests that institutional forces can affect organizational performance through internal practices and mechanisms.

As discussed above, institutional theory is based on the proposition that isomorphic pressures lead to homogeneity. However, Delmas and Toffel (2004) argue that there exists a certain degree of heterogeneity in terms of organizational structures and practices although organizations are subjected to the similar institutional pressures. This suggests that institutional theory alone can't provide an explanation to this heterogeneity. Delmas and Toffel (2004) attribute this to the differences in how organizations perceive isomorphic pressures. Why organizations perceive institutional pressures differently can be linked to organizational characteristics (i.e. size, industry) or importance attached to stakeholders. For example, studies on environmental sustainability have mostly focused on either high polluting sectors or industrial sectors (Clemens and Douglas 2005). Likewise, studies also provide evidence that organizations are likely to differ in the importance attached to various stakeholders (Sharma and Henriques 2005). Alternatively, Greenwood and Hinings (1996) claims that heterogeneity is caused by the internal dynamics of an organization. In further support of this view, Oliver (1997) explains that heterogeneity is caused by imperfections in the factor market that restrict resource mobility. Based on the views above, it can be assumed that internal organizational factors play an important role in determining organizational response to isomorphic pressures. Therefore, studies examining the influence of institutional pressures on organizations to adopt emerging initiatives needs to incorporate internal organizational factors to provide a strong

explanation to the relationship between institutional pressures and adoption of organizational practices.

In addition to the above issues found in extant literature on institutional theory, some of the other issues relate to the fact that normative, mimetic and coercive isomorphic pressures are not empirically distinct and originate from different conditions (DiMaggio and Powell 1983; Mizruchi and Fein 1999); and the question as to whether organizational behaviour is caused by macro-social forces or organizational agency (Heugens and Lander 2009).

2.1.2 Stakeholder Theory

Stakeholders are a key constituent of organizational environment and most importantly, they are in control of resources. Unlike in the past, today's organizations experience a gamut of stakeholder demands with an increasing intensity and this has motivated researchers to examine the effect of stakeholder demands on organizations in different fields. In corporate sustainability literature, stakeholder theory has been applied to investigate whether the adoption of corporate sustainability initiatives is influenced by stakeholder pressures (Buysse and Verbeke 2003).

Stakeholders are defined as “any group or individual who can affect or is affected by the achievement of the firm's objective” (Freeman 1984, 46). Expanding Freeman's definition further, Foley (2005, 138) defined stakeholders as “those entities and/or issues, which a business identifies from the universe of all who are interested in and/or affected by the activities or existence of that business, and are capable of causing the enterprise to fail, or could cause unacceptable levels of damage, if their needs are not met.” The definitions above emphasize that stakeholders are an integral part of organizations and it is important to understand the nature of the relationship or the interdependence between stakeholders and organizations. Supporting this claim, Suchman (1995) articulates that stakeholders are an important determinant of organizational legitimacy because they are in charge of resources. Therefore, organizations need to recognize that stakeholders are likely to exert pressure upon organizations in pursuit of their interests.

Scholars applying the stakeholder theory in corporate sustainability research mention that stakeholder pressures are among the major factors influencing

organizations to engage in corporate sustainability initiatives (Garcés-Ayerbe, Rivera-Torres and Murillo-Luna 2012). Validating this view, prior studies have found that stakeholder pressure has a direct effect on corporate sustainability practices, organizational responsiveness towards sustainability demands and corporate sustainability performance (Darnall, Henriques and Sadorsky 2010; Sprengel and Busch 2011; Walker, Ni and Huo 2014). Additionally, stakeholder theory also facilitates organizations to identify sustainability issues specific to each stakeholder in order to enhance organizational responsiveness and improve stakeholder relations and management (Cespedes-Lorente, Burgos-Jimenez and Alvarez-Gil 2003; Sharma and Vredenburg 1998). Thus, it is evident that the application of the stakeholder theory in sustainability research is based on the empirically validated proposition that there is a direct link between stakeholder pressure and corporate sustainability initiatives.

The stakeholder-sustainability discourse found in business and society literature mainly addresses the instrumental aspects of stakeholder-sustainability relationship, although the origins of stakeholder theory are rooted in normative perspective which emphasizes the moral duty or obligation of organizations towards stakeholders (Donaldson and Preston 1995; Jones 1995). This suggest that stakeholder theory continues to be applied in corporate sustainability research to enhance the ‘business case for sustainability’ and supports the opinion of some scholars that stakeholder theory is organization centred (Mitchell, Agle and Wood 1997; Gray, Owen and Adams 1996). Driven by the need to understand how stakeholders influence corporate sustainability initiatives and the complexity of the relationship between organization and stakeholders, scholars of corporate sustainability employ the stakeholder salience framework proposed by Mitchell, Agle, and Wood (1997).

Although stakeholder theory continues to be widely applied in different fields of research, some criticisms of the theory and issues pertaining to its application can be found in literature. The main criticism of stakeholder theory is that it lacks a theoretical basis for explaining organizational behaviour and does not reflect the dynamics between the stakeholders and the organizations (Key 1999; Smith, Haniffa and Fairbrass 2011). To address this concern organization legitimacy has been proposed as a basis to link stakeholder demands and organizational responsiveness (Key 1999).

Some issues pertaining to stakeholder-sustainability research have also been highlighted by scholars. One such issue is the dilemma of addressing stakeholders with conflicting interests (Cespedes-Lorente, Burgos-Jimenez and Alvarez-Gil 2003). For example, shareholders are more interested in firm value whereas the local community is more concerned with the proper disposal of waste. Improving firm value is important from an economic legitimacy perspective and implementing effective mechanisms for waste disposal is important from an institutional or social legitimacy perspective. Similarly, conflicting stakeholder demands can originate from the same stakeholder. For example, the government is interested in the tax payments and investment of organizations as well as the reduction of emissions. The examples suggest how conflicting interests can emanate from either different or the same stakeholders. To address the issue of the conflicting interests of stakeholders, it has been proposed to examine stakeholder influence strategies in relation to specific issues faced by organizations (Park-Poaps and Rees 2010).

The other issue of importance as explained by Garcés-Ayerbe, Rivera-Torres, and Murillo-Luna (2012) is heterogeneity in terms of organizational response to growing sustainability related demands of stakeholders. Theorists attribute this to limitation in resources to prioritize stakeholder demands and importance attached to different stakeholders by organizations (Buisse and Verbeke 2003; Mitchell, Agle and Wood 1997). The theorist further states that the concept of stakeholder importance is relative because sustainability demands of stakeholders are mostly issue specific and varies with time and industry (Buisse and Verbeke 2003; Mitchell, Agle and Wood 1997).

2.1.3 Resource-based View

Resource-based view (Wernerfelt 1984) has been extensively used to explain the relationship between organizational strategy and performance in strategic management literature (Newbert 2007). Resource-based view is based on the idea that idiosyncratic immobile resources create competitive advantages for organizations (Barney 1991). This suggests that organizations are dependent upon resources to develop and implement organizational strategies that generate economic value. Supporting this view, Barney (1991) states that organizational resources need to be valuable, rare, inimitable and non-substitutable to generate economic value. Extending the resource-

based view to business-society literature, Judge and Douglas (1998) proposed that organizations that deployed resources and developed capabilities to embed social and environmental issues into organizational planning and strategy process are likely to gain economic advantages. Accordingly, theorists advocate that the resource-based view is an important theoretical lens to evaluate the impact of corporate sustainability strategies and practices on organizational performance (Christman 2000; Hart and Dowell 2011).

In order to empirically test the arguments of resource-based theorists, scholars have undertaken studies to identify resources and capabilities that enable organizations to integrate or adopt strategic initiatives with existing organizational strategies and practices. The works of Judge and Douglas (1998) and Chan (2005) showed that integrating environmental sustainability aspects into organizational planning and strategy or adopting an environmental sustainability strategy that contributed to sustainability performance and financial performance was determined by sufficient allocation of organizational resources and effective use of organizational capabilities. Although their work fails to identify specific organizational resources and capabilities, they provide evidence to support the arguments of resource-based theorists. More recent work in the corporate sustainability domain has focused on identifying specific resources and capabilities that enable organizations to develop the capacity to adopt corporate sustainability initiatives. Chen and Chang (2013) found that the green product development performance of organizations in Taiwan's electronic industry was predicted by green capabilities, leadership and green creativity. Similarly, Hofmann, Theyel, and Wood (2012) found that adopting advance technological solutions and stakeholder collaborations are important to address the environmental issues faced by organizations in various subsectors in the U.S. manufacturing industry. While the above research work focused on identifying the internal factors that drive organizations to embed corporate sustainability initiatives, Delgado-Ceballos et al. (2012) showed that the resource-based view can also be extended to identify internal barriers such as the lack of financial resources, lack of awareness, lack of training and expertise, and unfavourable attitudes that affect the adoption of corporate sustainability initiatives.

As explicated above, the resource-based view is an important theoretical perspective that aids our understanding of the internal aspects of an organization.

Furthermore, most studies in corporate sustainability literature have applied stakeholder theory and institutional theory to demonstrate that external pressures or macro-forces have a direct influence on organizations to adopt corporate sustainability initiatives. However, these theories do not explain how sustainability related pressures are integrated into organizational strategy and practices. The resource-based view fills this gap by demonstrating that the integration of emerging strategic initiatives is dependent upon organizational resources and capabilities. This suggests that the resource-based perspective is important to understand the black box between external factors and internal adoption.

Deviating from the view that organizational resources and capabilities are antecedents of organizational strategy and performance (Grant 1991; Aragon-Correa and Sharma 2003), Sharma and Vredenburg (1998) utilize the resource-based view to support the case that organizations develop specific capabilities as a result of adopting corporate sustainability initiatives. They illustrated how organizations in the oil and gas industry in Canada developed stakeholder integration, innovation and learning capabilities by adopting proactive environmental sustainability initiatives. This further emphasizes that the resource-based view makes a significant contribution to the corporate sustainability research domain and there needs to be further analysis of the role of resources and capabilities in relation to the adoption of corporate sustainability initiatives and the impact such initiatives on organizational performance.

In spite of the growing popularity of the resource-based view in corporate sustainability literature, Hart (1995) argued that management theories have traditionally embraced a narrower view of the environment by ignoring the interaction between the natural environment and organizations and the resource-based view has excluded the constraints emerging from the natural environment. To address this deficiency, Hart (1995) proposed three essential capabilities: pollution prevention; product stewardship; and sustainable development for organizations. Hart's seminal work further extended the resource-based view and provided a platform for business-society scholars to engage in corporate sustainability related research.

Of the many criticisms of the resource-based view, Kraaijenbrink, Spender, and Groen (2010) only consider three of importance. First, the Value, Rare, Inimitable and Non-substitutable (VRIN) criteria are not an essential requirement for competitive

advantage. Second, the concept of value is heuristic. Third, the definition of resources is all-inclusive. While the resource-based view continues to be widely applied in corporate sustainability literature, it is observable that no attempt has been made to evaluate these criticisms. This is probably because of the nascent nature of the field and it is important to establish how the resource-based view can contribute in this area. However, it is important to understand these criticisms from a business-sustainability researcher perspective.

As research findings indicate, stakeholder integration (Aragon-Correa et al. 2008; Delgado-Ceballos et al. 2012; Torugsa, O'Donohue and Hecker 2013), knowledge resources (Gavronski et al. 2011; Simpson 2012), top management support (Colwell and Joshi 2013; Gavronski et al. 2011) and creativity (Chen and Chang 2013) have been discovered to be important resources and capabilities for organizations to implement corporate sustainability initiatives and improve performance. What is noticeable in these studies is that organizational resources and capabilities are not evaluated using VRIN criteria, no explanation is provided on how the value of the identified resources is determined and there is no discrimination between resources and capabilities. Therefore, it can be assumed that researchers evaluated these resources and capabilities based on prior literature and subjective judgment. Since studies have not examined the VRIN criteria, it is difficult to determine whether economic performance is the result of resources with VRIN characteristics or some organizational attributes that contributed to early mover advantage. As Crook et al. (2008) argues, competitive advantage is a difficult concept to measure and whether organizations generate temporary or sustainable competitive advantage depends on resource characteristics. This argument implies that organizations can benefit from early adoption but the gains are likely to be temporary. This raises the question, what needs to be done in order to continuously sustain economic gains? Eisenhardt and Martin (2000) state that organizations need to generate capabilities that manipulate resources to develop value creating strategies. This statement attaches importance to intangible resources and Galbreath (2005) opines that if resources can be sourced from markets or imitated by competitors then it is likely that intangible resources are contributing to organizational performance.

To address some of the concerns above and to provide a more holistic view that integrates internal resources and the environment, the dynamic capability view

(Teece, Pisano and Shuen 1997) has been proposed as an extension to the resource-based view. Similarly, there have been other seminal works by Prahalad and Hamel (1990) and Amit and Shoemaker (1993) that emphasize the importance of organizational capabilities. Teece, Pisano, and Shuen (1997, 516) define capabilities as “an organization’s ability to integrate, build and reconfigure internal and external competences to adapt to the changing environments.” Providing a narrower and a simpler definition of capabilities, Amit and Shoemaker (1993) state that capabilities are organization-specific tangible and intangible processes that are developed through the interactions of organizational resources over a period of time. Thus, the capabilities dimension expands the resource-based view to suggest that organizations need to develop mechanisms that foster capabilities and combine them with resources to gain competitive advantages.

2.1.4 Concept of Organizational Legitimacy

The concept of legitimacy, which frequently showed up in the discussion of stakeholder theory and institutional theory is derived from the legitimacy theory. Legitimacy theory is based on the conception that there is a contract between the organization and society (Deegan 2002; Fraser and Tourelle 2010; Woodward, Edwards and Birkin 1996). Accordingly, the legitimacy theory explicates that, organizations seek the right to exist and operate by conforming to society’s expectations. By conforming to societal expectations, organizations intend to establish congruence between organizational behaviour and norms in society to enhance their claim of legitimacy (Dowling and Pfeffer 1975). The concept of organizational legitimacy is at the core of legitimacy theory and is defined as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman 1995, 574). Legitimacy is a status conferred upon organizations by stakeholders external to the organization (Dimaggio and Powell 1983; Milne and Patten 2002) and legitimation is the process of seeking legitimacy (Pfeffer and Salancik 1978).

An organization is likely to engage in legitimation or seek legitimacy when there is a gap between an organization’s perceived conduct and societal expectations (Long and Driscoll 2008). A legitimacy gap is likely to be caused by changes in

societal expectations (Sethi 1979) or the availability of new information about an organization (Milne and Patten 2002). As a result, legitimation inevitably becomes an important task for organizational members and they may look to extend, maintain or defend the legitimacy status of an organization (Ashforth and Gibbs 1990; Suchman 1995). As per the literature, organizations are recommended to pursue either a strategic approach or an institutional approach to legitimation (Meyer and Rowan 1977; Suchman 1995). The strategic approach to legitimation considers legitimacy as a resource that needs to be extracted from the environment (Pfeffer and Salancik 1978) and is less likely to be influenced by external forces in the environment (Long and Driscoll 2008). Alternatively, the institutional approach to legitimation views legitimacy as a set of beliefs enacted by external institutions (Suchman 1995) and emphasizes that organizations derive legitimacy by adhering to external pressures. One of the distinctions between the two approaches is that the instrumental approach is grounded in the view that the legitimation process is controlled by the managers and the institutional approach considers that legitimacy is controlled by society and its constituents and access to resources is the result of the legitimacy status of the firm (Suchman 1995). Providing further insight on legitimation approaches, Ashforth and Gibbs (1990) propose substantive or symbolic mechanisms to align organizations with societal expectations. Accordingly, organizations may undertake actual organizational transformation or focus on ceremonial conformity or impression management without implementing organizational transformation (Rodrigue, Magnan and Cho 2013). Thus, what is evident from the above discussion is that organizations are dependent upon environment and pressures originating from the external environment challenge the survival and legitimacy of organizations (De Clercq and Voronov 2011; Dimaggio and Powell 1983).

In this circumstance, it becomes imperative to understand the nexus between the organization and its environment to gain insight into the environmental dynamics that challenge the legitimate state of an organization (Child and Tsai 2005; Long and Driscoll 2008). In exploring the connection between the organization and its environment, it is inevitable that some criticisms of legitimacy theory are highlighted. The legitimacy theory states that organizations conform to societal expectations in order to claim legitimacy. However, the legitimacy theory fails to define the societal expectations that an organization needs to meet. In order to understand societal expectations, it is necessary to examine the two important sources of societal

expectation: societal fundamentals and social actors. In general, conformance to societal expectations is referred to as adhering to social fundamentals such as norms, values and beliefs in carrying out business activities. Ashforth and Gibbs (1990) argue that these fundamentals of society are evolving, at times contradictory and difficult to operationalize. This argument is further supported by DiMaggio and Powell (1983) stating that norms are dynamic and contradictory. This leads to the fact that societal expectations can be ambiguous and inconsistent and pose a challenge to organizations to justify their actions towards legitimacy.

The other important source of societal expectations is the stakeholder or social actor. Societal values and stakeholders influence each other and organizations respond to stakeholder demands because they represent society and reflect societal expectations. However, acknowledging that social actors or stakeholders play an important role in determining the legitimacy status of a firm does not explain what constitutes societal expectation and raises another important issue for organizations: should organizations consider all stakeholders important in the legitimation process? As a result, organizations are required to clearly identify the social actors most likely to influence the legitimacy claims of the firm, because the heterogeneous nature of social actors and their intentions lead to myriad of legitimacy dynamics, and fulfilling the expectations of all the social actors is an impossible task (Ashforth and Gibbs 1990; Suchman 1995).

In order to address the issues discussed above, studies have incorporated institutional and stakeholder theories to explain the societal forces and stakeholder characteristics that influence the survival and legitimacy of organizations. Invariably, a discussion on legitimacy is most likely to be associated with institutional and stakeholder theories in order to precisely identify the nature of the external forces that influence organizational legitimacy. Supporting the above statement, studies on corporate sustainability apply institutional and stakeholder perspectives to provide evidence of the link between legitimacy and sustainability related pressures and claims that organizations are driven by the legitimacy motive to engage in corporate sustainability initiatives (Bansal and Roth 2000; Bronn and Vidaver-Cohen 2009). Traditionally, legitimacy was conferred upon organizations based on economic performance (Patten 1992). Growing issues related to corporate malpractice, social inequity and environment and climate change are driving organizations to make

continuous and significant efforts to demonstrate their legitimate status by addressing sustainability related pressures. This requires firms to deal with wide set of sustainability related issues beyond the economic scope of the organization to seek legitimacy. Therefore, the legitimacy claim and the survival of an organization generally depend on whether the goals, practices, operations and outputs of an organization are congruent with institutional demands on sustainability. Therefore, to understand the sustainability related institutional forces that affect organizational legitimacy, it is important to examine institutional and stakeholder theoretical perspectives.

2.2 Corporate Sustainability in Organizations

This thesis embraces the concept of sustainable development from a business organization perspective and the literature on sustainability at organizational level proposes a multitude of concepts. Despite the consortium of terminology and definitions on sustainability and related concepts, this study views sustainable development as the integration of economic, social and environmental sustainability into organizational strategy and is termed as ‘corporate sustainability’. To support this view, various definitions related to corporate sustainability found in the literature are provided in Table 2-1. An evaluation of these definitions suggests that corporate sustainability is a multifaceted concept (Linnenluecke and Griffiths 2010; Hahn and Figge 2011). It is evident from the definitions that multidimensionality is one of the facets of the concept. Corporate sustainability is considered multidimensional because it consists of economic, social and environmental dimensions. The multidimensional nature of the concept can be traced back to the definition of sustainable development (World Commission on Environment & Development 1987) and the works of Elkington on the triple bottom line (Elkington 1997).

Bansal (2002, 123) refers to economic sustainability as the “adequate production of resources for society to maintain a reasonable standard of living”, whereas Dylick and Hockerts (2002, 133) defines economic sustainability as “guarantee at any time cash flow sufficient to ensure liquidity while producing a persistent above average return to their shareholders”. The two definitions have embraced contrasting views, adding complexity to understanding the concept of corporate sustainability. Social sustainability is described as organizational efforts that

focus on employee development, proactively dealing with the community and engaging with stakeholders (Linnenluecke, Russell and Griffiths 2009). The focus of social sustainability is equity - to treat everyone fairly (Bansal 2002). Environmental sustainability according to Bansal (2002) refers to the protection of environmental resources. Expanding this view further, Dylick and Hockerts (2002) mention that consuming natural resources below the rate of natural reproduction and engaging in activities that do not degrade ecosystems are essential to environmental sustainability. Thus, corporate sustainability means the integration of social and environmental dimensions into organizational strategy and operations in addition to the economic dimension pursued by the organization.

The other underlying facet that emerges from the definitions of corporate sustainability is the strategic nature of the concept. Corporate sustainability is considered a strategic initiative because organizations are expected to integrate sustainability dimensions into organizational strategy and practices, to improve the bottom-line (Delai and Takahashi 2013). Such an approach also demonstrates organizational responsiveness toward growing sustainability demands and ensures legitimacy and survival of the organization. A strategic approach also indicates that organizations are being proactive and are going beyond compliance to establish a robust system to implement corporate sustainability initiatives. Although not directly articulated in the definitions, it seems that scholars are in favour of stakeholder participation in the process of implementing corporate sustainability initiatives. Stakeholder participation can improve the relationship between the organization and stakeholders as it creates a conducive environment for dialogue and transparency.

While the adoption of sustainable development principles and practices at organizational level continues to gain momentum as a popular and strategic business practice, some conspicuous criticisms pertaining to the concept of sustainable development or corporate sustainability have been debated in the literature. One of the main criticisms of the concept of sustainable development is it is centred on capitalistic ideology (Shrivastava, Ivanaj and Persson 2013) and is western-centric (Shrivastava 1995). This is probably one of the reasons why the concept of corporate sustainability has been approached from an instrumental perspective. However, the concept of sustainable development is fundamentally based on the principle of moral

obligation (Gladwin, Kennelly and Krause 1995), and whether a normative or moral approach is likely to generate enough interest among organizations to adopt corporate sustainability initiatives is unknown because contemporary thought and research work on corporate sustainability has been mainly influenced by the instrumental perspective.

The other criticism of the concept of sustainable development is that it is considered a complex phenomenon to conceptualize (Baumgartner 2014; Gray 2010). This can be ascribed to the fact that sustainable development is defined at macro level (Baumgartner and Ebner 2010). The abstract nature of the concept is probably the reason why there is no consensus among scholars as to what constitutes corporate sustainability (Hahn et al. 2010) and the debate is on-going (Gallo and Christensen 2011). The absence of an acceptable framework to help organizations to understand and implement corporate sustainability can be attributed to the way in which how the concept is defined and operationalized. Ahmad, Soskolne, and Ahmed (2012) emphasize that confusion about the meaning of sustainable development limits the wider reach of the concept. However, the work of Amini and Bienstock (2014) has addressed some of the issues associated with the concept of sustainability by critically examining the literature and providing an integrative definition and framework on corporate sustainability.

Table 2-1 Definitions of Corporate Sustainability

<p>Dylick and Hockerts (2002, 131)</p> <p>“Meeting the needs of a firm’s stakeholder without compromising its ability to meet the needs of future stakeholders.”</p>
<p>Hart and Milstein (2003, 56)</p> <p>“An enterprise that contributes to sustainable development by delivering simultaneously economic, social and environmental benefits – the so called triple bottom line.”</p>
<p>Marrewijk and Werre (2003, 107)</p> <p>“Company’s activities - voluntary by definition - demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders.”</p>
<p>Salzmann, Ionescu-Somers, and Steger (2005)</p> <p>“A strategic and profit driven corporate response to environmental and social issues caused through the organizations primary and secondary activities.”</p>
<p>van Kleef and Roome (2007, 43)</p> <p>“Management of business that recognizes its embeddedness in social, environmental, and economic systems and focuses on management and relationships to meet the environmental, social and economic requirements of many different stakeholders in its networks.”</p>
<p>Baumgartner and Ebner (2010, 77)</p> <p>“Sustainable development when incorporated by the organization is called corporate sustainability and it contains, like sustainable development, all three pillars: economic, ecological and social.”</p>
<p>Schneider and Meins (2012, 211)</p> <p>“An approach to combine economic, ecological and social concerns within a coherent business strategy.”</p>
<p>Amini and Bienstock (2014)</p> <p>Corporate sustainability is a multidimensional framework consisting of: (1) business level application and communication of sustainability activities/performance; (2) scope of organizational focus; (3) sustainability oriented innovation; (4) economic/ecological-environmental/equity-social emphasis; and (5) compliance stance.</p>

2.2.1 Corporate Sustainability Strategy

Analysing the conceptual and empirical studies that have explored the concept of corporate sustainability strategy suggests that researchers have adopted two alternative approaches to define and investigate corporate sustainability strategy. One of the approaches proposed in the studies is to examine the integration of corporate sustainability goals and activities with corporate strategy and managerial processes (Wagner 2007). The other approach that can be found in the literature is the profiling approach. The profiling approach attempts to either define corporate sustainability strategy in an organization on a reactive-proactive continuum or develop clearly distinguishable portfolio of corporate sustainability strategies. Some of the corporate sustainability strategy profiles found in the literature are provided in the Table 2-2.

Table 2-2 Corporate Sustainability Strategy Profiles

Hart (1997)	Pollution prevention, Product stewardship, Clean technology, Sustainability vision
Aragon-Correa (1998)	Environmental excellence, Leading edge, Compliance, Compliance plus, Non-compliance
Henriques and Sadorsky (1999)	Reactive, Defensive, Accommodative, Proactive
Buysse and Verbeke (2003)	Reactive strategy, Pollution prevention, Environmental leadership
van Marrewijk (2003)	Compliance-driven, Profit-driven, Caring, Synergistic, Holistic
Murillo-Luna, Garces-Ayerbe, and Rivera-Tores (2008)	Passive, Attention to Legislation, Attention to Stakeholders, Total environmental quality
Baumgartner and Ebner (2010)	Introverted strategy, Extroverted strategy, Conservative strategy, Visionary strategy
Lee (2011)	Obstructionist, Accommodative, Defensive, Proactive

Sharma, Aragón-Correa, and Rueda-Manzanares (2007), Chan (2005) and Judge and Douglas (1998) are some of the researchers who have adopted the integration approach in their studies. In the study by Sharma, Aragón-Correa, and Rueda-Manzanares (2007), the integration of environmental sustainability strategy was assessed in relation to 29 environmental sustainability practices found in the literature. Rather than investigating the integration of environmental sustainability practices, Judge and Douglas (1998) examined the integration of environmental sustainability issues in the strategic planning process. Some studies have adopted the integration approach to evaluate the adoption of specific environmental sustainability practices. For example, Aragón-Correa et al. (2008) examined the adoption of eco-efficient practices in automotive garages in Spain.

Although the integration approach is supposed to be different from the profiling approach, some researches have used the integration approach to determine the degree of responsiveness or proactiveness and have attempted to profile organizations based on the level of integrating corporate sustainability practices (Henriques and Sadorsky 1999; Buysse and Verbeke 2003). Supporting this position, Wagner (2007) stated that there can be different stages of integration (i.e. lower level of integration, higher level of integration). Based on how organizations responded to six (06) sustainability practices, Henriques and Sadorsky (1999) identified four types of organizations: reactive; defensive; accommodative and proactive. Organizations without an environmental sustainability strategy were labelled 'reactive'; organizations with explicit environmental sustainability plans which had failed to formalize them were labelled 'defensive'; organizations that had developed environmental sustainability plans and communicated the plans to employees were labelled 'accommodative'; and organizations that had adopted all the concerned environment sustainability practices were labelled 'proactive' by Henriques and Sadorsky (1999). Following a similar approach, Buysse and Verbeke (2003) identified three organizational profiles by evaluating the extent of the adoption of ten (10) environmental sustainability practices based on a sample of organizations in Belgium. The profiling approach discussed above had been previously used by Aragón-Correa (1998) and the approach adopted in the study can be considered robust because the strategy profiles were developed by aggregating the scores of each organization on

three types of environmental sustainability initiatives which were identified by performing a factor analysis.

Going beyond the reactive-proactive profiling of organizations, Hart (1997), van Marrewijk (2003), Murillo-Luna, Garces-Ayerbe, and Rivera-Tores (2008), Baumgartner and Ebner (2010), Lee (2011) have proposed alternate profiles of organizations and portfolios of corporate sustainability strategies. Hart (1997) proposed four types of corporate sustainability strategies that can be adopted by organizations and suggested implementing them in stages. Accordingly, organizations were recommended to adopt pollution prevention strategies at first and then move on to the product stewardship strategy, the clean technology strategy and the sustainable development strategy in subsequent steps. Explaining further, he stated that the pollution prevention strategy is required to reduce waste and energy, the product stewardship strategy is concerned with reducing the environmental impact of products thorough the product lifecycle, the clean technology strategy focuses on investment on futuristic sustainable technologies, and the sustainable development strategy is to establish a holistic sustainability framework that gives direction to the organization. The corporate sustainability strategy portfolio proposed by Hart (1997) has so far been validated by Fowler and Hope (2007) and Kurapatskie and Darnall (2013). Other empirically validated organizational profiles can be found in the works of Murillo-Luna, Garces-Ayerbe, and Rivera-Tores (2008). First, they developed four profiles of organizations (see Table 2-2) with distinguishable characteristics and requested a sample of industrial organizations in Spain to identify the most relevant profile based on the characteristics in each profile.

The sustainability strategy profiles proposed by van Marrewijk (2003), Baumgartner and Ebner (2010) and Lee (2011) are yet to be validated. Amongst them, the corporate social responsibility strategy profiles proposed by Lee (2011) are of importance because he deviates from the previous practice of adopting sustainability practices to determine organizational responsiveness and uses the intensity of institutional and stakeholder influences experienced by organizations to develop the profiles. Figure 2:1 Configuration of CSR Strategies illustrates the strategy profiles proposed by Lee (2011). According to him, organizations are likely to pursue an obstructionist approach if external pressures comprising institutional pressures and stakeholder are absent or very weak. Explaining further, he said that if the intensity of

institutional pressures and stakeholder pressures is very strong in the environment, organizations are likely to be proactive in engaging in social sustainability initiatives. Between the two extreme strategy profiles, two intermediate strategy profiles have also been proposed, based on the level of intensity of external pressures.

Stakeholder pressure intensity	Institutional pressure intensity		
		High	Low
	High	Obstructionist	Defensive
	Low	Accommodative	Proactive

Figure 2:1 Configuration of CSR Strategies

Source: Lee (2011, 288)

Most of the research on sustainability strategies has been influenced by the early works of Carroll (1979) and Wartick and Cochran (1985). Exploring the degree of integration of sustainability initiatives or profiling of sustainability strategies is an important development in corporate sustainability literature. This furthers the understanding of the concept of corporate sustainability and assists managers to effectively implement corporate sustainability initiatives in organizations.

2.3 Antecedents and Outcomes of Corporate Sustainability Initiatives

Studies on corporate sustainability fall into two categories: studies that have examined the factors driving organizations to undertake corporate sustainability initiatives and studies that have examined the effect of corporate sustainability initiatives on organizational performance. The subsequent discussion examines these two groups of studies with emphasis on the theoretical perspectives adopted in this study. An overview of the dominant themes, sub themes and the theoretical frameworks that emerged in the process of reviewing these studies is presented in Figure 2:2.

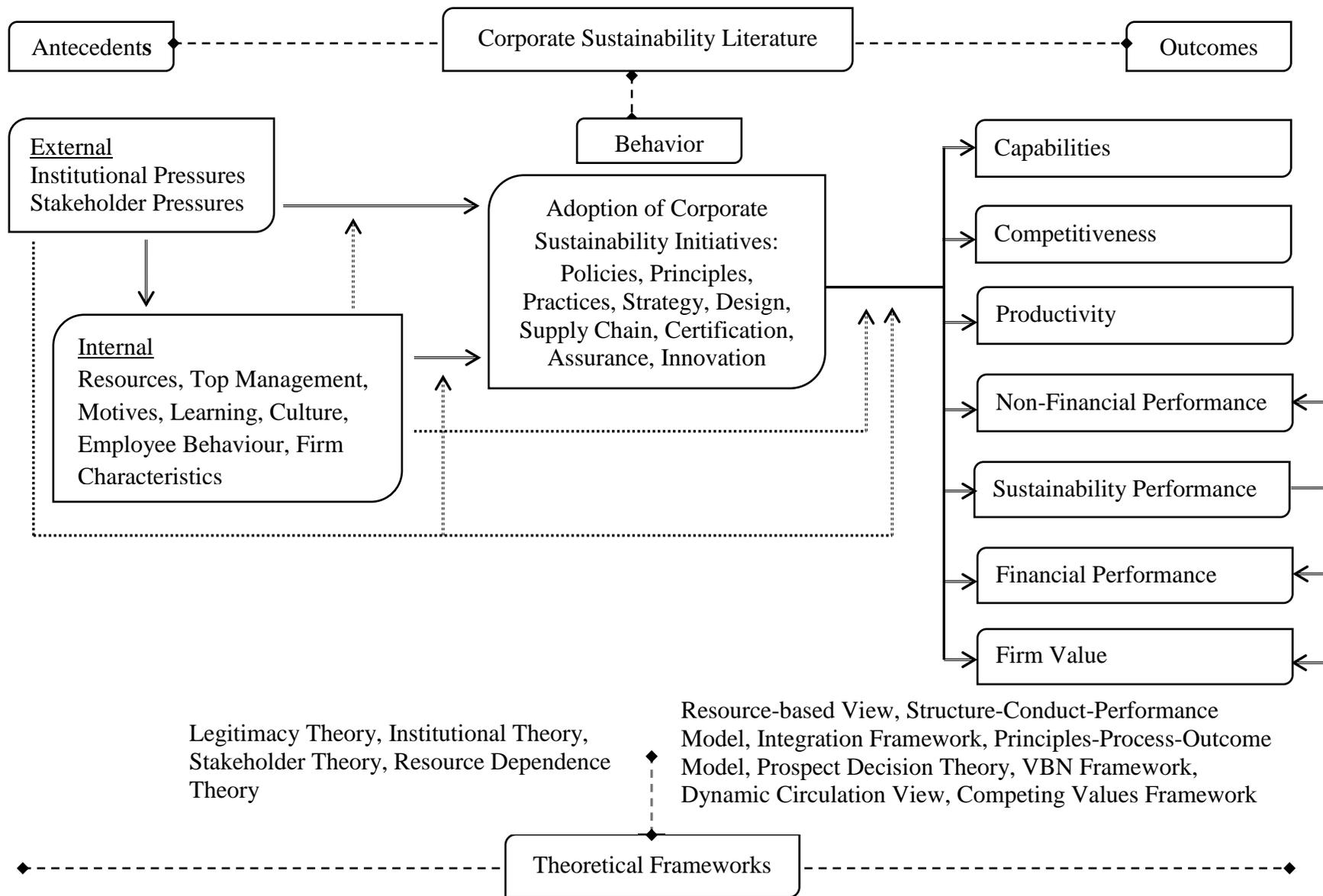


Figure 2:2 Corporate Sustainability Literature: Antecedents, Behaviour, Outcomes and

2.3.1 Antecedents of Corporate Sustainability Initiatives

Identifying the factors that influence organizations to adopt corporate sustainability initiatives continues to be of research interest, in corporate sustainability literature. The antecedents or the factors predicting the adoption of corporate sustainability initiatives can be broadly categorized into external factors and internal factors. In other words, they can be termed as environmental factors and organizational factors. In exploring external factors, existing studies have mainly depended on institutional theory or stakeholder theory to identify forces or pressures emanating from the external environment and concepts like institutional pressures and stakeholder pressures have been used in the extant literature to conceptualize 'external pressures'. Similarly, business-society scholars apply the resource-based view to identify internal drivers or organizational factors such as organizational resources and capabilities that enable organizations to adopt corporate sustainability initiatives.

2.3.1.1 External Factors

The institutional forces or pressures found in corporate sustainability studies that utilize institutional theory as the dominant theoretical framework, can be broadly grouped into coercive or regulatory pressures and non-regulatory pressures. The reasons for studies to examine the effect of coercive or regulatory pressure on corporate sustainability initiatives and performance can be presumed to be: to investigate the effect of the enforcement of environmental laws and sustainability related regulations; or to investigate the effect of compliance. Compliance with prevailing laws and regulations is regarded as a major source of legitimacy, which influence organizations to integrate corporate sustainability practices and strategies (Dangelico and Pujari 2010). Employing a sample of organizations obtained from the Toxic Release Inventory of United States Environmental Protection Agency, Simpson (2012) examined the influence of domestic environmental laws and international trade and environmental regulations on recycling and sustainability performance and found that domestic environmental laws are a significant in influencing organizations to implement recycling leading to sustainability performance. Similarly, Glover et al. (2014) mentions that farmers in the dairy supply chain are coerced by large retailers to conduct carbon audits in the U.K. These evidences suggest that institutional pressure

in the form of regulatory pressure or stakeholder coercive pressures are important explanatory factors of corporate sustainability initiatives.

Similarly, findings in corporate sustainability research also confirm that non-regulatory pressures drive organizations to engage in corporate sustainability initiatives. These non-regulatory pressures broadly comprise normative pressures, mimetic pressures, market pressures, community pressure and market demand (Liu et al. 2010; Delmas and Toffel 2008; Wu, Ding and Chen 2012; Zhu and Sarkis 2007). The study by Liu et al. (2010) found that mimetic pressures were more likely to influence industrial organizations in China to adopt proactive sustainability initiatives, emphasizing that normative and coercive pressures had limited or no effect on organizations with established legitimacy status to adopt proactive sustainability initiatives. Providing further evidence on the influences of non-regulatory pressures on corporate sustainability initiatives, Darnall (2006) and Ervin et al. (2013) shows that market pressures and competitive pressures are important external factors that explain why organizations in the U.S. adopt environmental sustainability practices.

In order to further expand the growing body of evidence on the linkage between institutional pressures and corporate sustainability initiatives, some scholars have attempted to evaluate the interacting role of institutional pressures, deviating from the practice of using institutional pressure as a predicting factor (Wu, Ding and Chen 2012; Zhu and Sarkis 2007). Effort has also been made to investigate whether institutional pressures cause innovation related to corporate sustainability initiatives in organizations (Berrone et al. 2013; Li 2014). In spite of the growing evidence, what is noticeable in the extant literature is that only few studies have attempted to examine the effect of the three types of institutional pressures on corporate sustainability initiatives (Colwell and Joshi 2013; Liu et al. 2010). For example, Liu et al. (2010), examined the influence of normative, mimetic and coercive pressures on environmental sustainability practices as independent factors, whereas Colwell and Joshi (2013) examined the collective effect of the three isomorphic pressures on environmental sustainability responsiveness although the constructs were measured separately. Alternative to the above approaches, Zhu, Cordeiro, and Sarkis (2013) focused on the impact of international and domestic institutional pressures on the adoption of environmental management system and included normative, mimetic and coercive pressures to fabricate the main factors. What is clear from the above

discussion is that there is no consensus on how to conceptualize institutional pressures because scholars have adopted different approaches. This can also be attributed to the fact that institutional pressures are context specific and issue specific, limiting the development of a common approach or scale. Furthermore, the question of whether all three types of isomorphic pressures can be found in a single context in relation to specific sustainability issue remains unanswered.

Stakeholder pressure is the other important factor among antecedents that influences the adoption of corporate sustainability initiatives. One of the major contributions of studies exploring the relationship between stakeholder pressure and corporate sustainability strategies and practices is to distinguish stakeholder pressure according to stakeholder groups. The classifications of stakeholders found in corporate sustainability literature are provided in the Table 2-3. As evident in the table 2-3, different classifications of stakeholders have been proposed in studies and these stakeholder groups are distinct from each other. For example, Buysse and Verbeke (2003) classify stakeholders who have formal relationships with the organization as primary stakeholders and stakeholders contributing to the development and implementation of internal voluntary agreements as secondary stakeholders.

To measure the influence of stakeholders on corporate sustainability initiatives, scholars have examined either the importance of stakeholders (Walker, Ni and Huo 2014) or the intensity of pressure exerted by stakeholders (Garcés-Ayerbe, Rivera-Torres and Murillo-Luna 2012). In contrast to the measurement of institutional pressures, agreement exists within stakeholder-sustainability literature as to how stakeholder pressures are measured. Accordingly, the importance or intensity of stakeholder pressure is measured at individual stakeholder level and then aggregated into pre-identified stakeholder groups (Murillo-Luna, Garces-Ayerbe and Rivera-Tores 2008) or a factorial analysis is performed to distinguish the stakeholder groups (Buysse and Verbeke 2003; Henriques and Sadorsky 1999).

Buysse and Verbeke (2003) and Henriques and Sadorsky (1999) examined how different stakeholder groups are linked to profiles of sustainability strategies and sustainability commitments. Consequently, Buysse and Verbeke (2003) found that organizations that are considered environmental leaders attached more importance to primary stakeholders and secondary stakeholders, compared to organizations

considered reactive or pollution prevention organizations. Similarly, Henriques and Sadorsky (1999) also found that managerial perception of stakeholder importance depends on the sustainability commitment profile of the organization.

Providing further empirical evidence on stakeholder pressures as an explanatory factor, Garcés-Ayerbe, Rivera-Torres, and Murillo-Luna (2012) revealed that the proactive sustainability behaviour of high polluting organizations was affected by stakeholder pressure. Similarly, Cordano, Marshall, and Silverman (2010) examined whether external stakeholders comprising industry leaders, community, regulators, and environmental organizations affect the adoption of environmental sustainability programs in the wine industry in the U.S.A. Their findings showed that there was a significant link between external stakeholder pressures and environmental sustainability programs and they attributed this finding to the industry-wide effort by activists to incorporate sustainability initiatives across the industry. With growing evidence of the influence of stakeholder pressures on corporate sustainability initiatives, attempts have been made to link stakeholder pressures with specific sustainability initiatives. For example, Darnall, Seol, and Sarkis (2009) provide evidence that perceived pressure from regulatory and supply chain stakeholders was associated with the type of environmental audit used by manufacturing facilities in OECD countries.

Even though there is substantial evidence to suggest that stakeholder pressures affect corporate sustainability initiatives and sustainability profiles of organizations, these findings have mostly depended on managerial perception of stakeholders and have failed to capture the mechanism that influences organizations to engage in corporate sustainability initiatives. Sharma and Henriques (2005) investigating the effect of stakeholder influence strategies on corporate sustainability initiatives in the Canadian forest product industry, reports that withholding and usage influence strategies of social-ecological stakeholders and economic stakeholders influence organizations to adopt eco-design practices and eco-system stewardship practices. The researchers also provide evidence that usage influence strategy of customers' pressure organizations to adopt recirculation sustainability practices. To accumulate further evidence on the influence of stakeholder strategies on corporate sustainability initiatives, recent literature suggest to examine whether it is individual stakeholder

influence strategies or a collective influence strategy is more effective at pressurising organizations to engage in corporate sustainability initiatives (Walker and Laplume 2014)

Table 2-3 Stakeholder Classification

Clarkson (1995)
Primary stakeholders, Secondary stakeholders
Henriques and Sadorsky (1999)
Regulatory, Organizational, Community and Media
Buysse and Verbeke (2003)
Regulatory, External primary stakeholder, Internal primary stakeholder and Secondary stakeholders
Sharma and Henriques (2005)
Social and ecological stakeholders, Economic stakeholders, External stakeholders, Customers, Regulators
Henriques and Sharma (2005)
Resource independent, Resource dependent
Gonzalez-Benito and Gonzalez-Benito (2006)
Governments and regulatory agents, Non-governmental stakeholders
Murillo-Luna, Garces-Ayerbe, and Rivera-Toros (2008)
Corporate government stakeholders, Internal economic stakeholders, External economic stakeholders, External social stakeholders, Regulatory stakeholders
Darnall, Henriques, and Sadorsky (2010)
Value chains stakeholders, Internal stakeholders, Societal stakeholders, Environmental stakeholders
Huang and Kung (2010)
External stakeholders, Internal stakeholders, Societal stakeholders, Regulatory stakeholders
Vazquez-Brust, Liston-Heyes, Plaza-Ubeda, et al. (2010)
Institutional stakeholders, Organizational stakeholders, Social stakeholders
Cordano, Marshall, and Silverman (2010)
Internal stakeholders, External stakeholders

Empirical evidence provided in the preceding discussion emphasized the linkage between external pressures and corporate sustainability initiatives. However, it should be noted that in corporate sustainability literature there is evidence linking external pressures and corporate sustainability performance as well. For example, Ramanathan, Poomkaew, and Nath (2014) explicate that manufacturing firms in the U.K. are likely to experience the greatest pressure to improve environmental sustainability performance from internal stakeholders, followed by economic pressures, regulators and external stakeholders. Evaluating the direct impact of external pressures on sustainability performance is debatable because it does not explain how corporate sustainability is integrated within the organization and nor does it account for internal factors that may interact with external pressures. Furthermore, most studies examining the effect of external pressures on corporate sustainability initiatives have focused on a single or specific sustainability issue. Additionally, researchers also argue that sustainability performance is the outcome of adopting corporate sustainability initiatives and that to generate long term performance benefits organizations need to establish a robust internal mechanism (Schneider and Meins 2012).

The other interesting observation in the studies exploring the influences of external pressures on corporate sustainability initiatives is the non-existence of dynamics between external pressures. This raises the following issues: are external pressures found in studies independent from each other; is there any interaction between external pressures; and do managers perceive external pressures independently or collectively? Lee (2011) argues that institutional pressures and stakeholder pressures interact with each other and suggests that the corporate sustainability strategies of organizations are shaped by the intensity of these external influences. In supporting of his arguments and to account for dynamics between external pressures, Lee (2011) presented a conceptual configuration of external influences and sustainability profiles of organizations. However, Lee's work is yet to be empirically validated. Moreover, examining how managers of industrial firms in Spain perceive stakeholder influences, Murillo-Luna, Garces-Ayerbe, and Rivera-Tores (2008) report that when managers perceive influence from one of the stakeholders they also perceive pressure to emanate from other stakeholders. This

conceptual and empirical reasoning provides insights to address the concerns raised at beginning of this paragraph.

2.3.1.2 Internal Factors

Similar to studies exploring the antecedent effect of external pressures or environmental factors on corporate sustainability initiatives, multiple work focusing on the influence of internal factors on the adoption of corporate sustainability initiatives have emerged. These internal factors can be generally grouped into organizational resources and organizational characteristics. Studies that have examined organizational resources and capabilities as drivers of corporate sustainability initiatives have depended upon the resource-based view to explain the association between organizational resources and capabilities and corporate sustainability initiatives.

Among the internal antecedents found in corporate sustainability literature, the influential role of top management has been explored from different aspects. The inclination to examine the role of top management can be attributed to the fact that the top management is responsible for strategic decisions in organizations such as engaging in corporate sustainability initiatives and resource allocation (Berry and Rondinelli 1998; Colwell and Joshi 2013). Grounded on this view, scholars have examined the effect of top management awareness (Liu et al. 2010), commitment (Banerjee, Iyer and Kashyap 2003; Boiral, Henri and Talbot 2012; Muller and Kolk 2010), values (González-Benito and González-Benito 2010) and motives (Bansal and Roth 2000; Bos-Brouwers 2010) on corporate sustainability initiatives and indicate that top management play a critical role in engaging organizations in corporate sustainability initiatives (Colwell and Joshi 2013). Furthermore, some studies used top management commitment as an explanatory factor to explain the relationship between environmental factors and organizational responsiveness related to sustainability pressures. For example, Muller and Kolk (2010) in their study of 149 auto parts suppliers in Mexico found that management commitment to ethics was unlikely to influence the relationship between trade intensity and corporate social performance. However, Colwell and Joshi (2013) provide evidence that top management commitment does influence the relationship between external pressures and organizational ecological responsiveness employing organizations from multi sectors

in Canada. Thus, the theoretical arguments and empirical evidence about the role of top management suggest why it has gained prominence and this continues to be explored in corporate sustainability literature.

Reviewing further, it is also evident from corporate sustainability literature that researchers have tested the antecedent effect of organizational resources on corporate sustainability initiatives. Drawing on insights from the resource based view, Darnall (2006) investigated the effect of complementary resources comprising investments and technical assistance on the adoption of ISO 14001 standard and found that organizations that did not have complementary resources were less likely to adopt the standard. Likewise, Leonidou et al. (2013) examined the effect of physical resources, financial resources and experiential resources on a functional strategy related to sustainability namely environmental marketing strategy. The findings revealed that physical resources and financial resources have a significant positive effect on adopting sustainability related functional strategies, whereas experiential resources were unlikely to affect the adoption of sustainability related functional strategies.

Similar to studies exploring the impact of organizational resources on corporate sustainability initiatives, multiple works have emerged exploring the impact of various organizational capabilities. The capabilities explored in the corporate sustainability literature include shared vision (Aragon-Correa et al. 2008; Leonidou et al. 2013), stakeholder engagement (Aragon-Correa et al. 2008; Sharma, Aragón-Correa and Rueda-Manzanares 2007), collaboration or relationship building (Leonidou et al. 2013; MacKinnon et al. 2002), strategic proactivity (Aragon-Correa et al. 2008; Sharma, Aragón-Correa and Rueda-Manzanares 2007), innovation (Hofmann, Theyel and Wood 2012; Sharma, Aragón-Correa and Rueda-Manzanares 2007), technology sensing or adoption (Hofmann, Theyel and Wood 2012; Leonidou et al. 2013) and learning (Liu et al. 2010). Findings of above cited studies revealed that shared vision, strategic proactivity, technology sensing or adoption and learning were more likely to have a significantly positive effect on the adoption of corporate sustainability initiatives. However, findings pertaining to stakeholder management, collaboration or relationship building, and innovation have been mixed (Aragon-Correa et al. 2008; Hofmann, Theyel and Wood 2012; Leonidou et al. 2013; Sharma, Aragón-Correa and Rueda-Manzanares 2007).

Given the evidence above relating to the impact of organizational resources and capabilities on corporate sustainability initiatives, further studies drawing on the resource-based perspective are required to explain the internal dynamics within organizations that facilitate the adoption of corporate sustainability initiatives. However, what is noticeable in the literature is that most studies have only focused on the individual direct impact of organizational resources and capabilities on corporate sustainability initiatives (Hofmann, Theyel and Wood 2012; Sharma, Aragón-Correa and Rueda-Manzanares 2007; Torugsa, O'Donohue and Hecker 2013) and there is a clear need to explore the interacting or intervening effect of organizational resources and capabilities. Furthermore, there is also a need to investigate how internal factors interact with external pressures on organizations to adopt corporate sustainability initiatives because internal practices and mechanisms are directly affected by organizational resources and capabilities.

Moreover, there is also a need to identify the internal factors that hinder the implementation of corporate sustainability practices because studies have been mainly occupied with the idea of identifying the internal factors that facilitate organizations to adopt corporate sustainability initiatives. The study by Collins, Roper, and Lawrence (2010) on the adoption of sustainability practices in New Zealand and the study by Glover et al. (2014) on sustainable practices in the dairy supply chain in U.K. revealed that the cost of sustainability initiatives as one of the major barriers to implementing corporate sustainability practices. It is argued that sustainability initiatives are expensive, requiring organizations to make large investments. Furthermore, sustainability initiatives in organizations are implemented with the intention of reducing costs but the long-term payback period of sustainability investment is less of an incentive for financial controllers and shareholders to invest in such practices. Therefore, financial resources are a critical factor that determines the adoption of corporate sustainability initiatives. Other barriers to the implementation of sustainability initiatives include knowledge and skills and management time needed to implement sustainability initiatives (Collins, Roper and Lawrence 2010).

Besides organizational resources and capabilities, organizational characteristics are yet another internal factor affecting the adoption of corporate sustainability initiatives. Studies investigating the impact of organizational characteristics on corporate sustainability initiatives shows that organizational size,

industry, ownership, past performance, organizational slack and profitability are likely to affect the adoption of corporate sustainability initiatives in organizations (Bowen 2000; Gallo and Christensen 2011). Accordingly, scholars proposed to account for the effect of organizational characteristics when exploring the impact of external and internal factors on corporate sustainability initiatives (Henriques and Sadosky 1999).

In sum, what emerges from the above discussion is how internal factors have influenced the adoption of corporate sustainability initiatives in organizations. As evident from the discussion, there ought to be further investigation exploring the effect of internal factors on the adoption corporate sustainability initiatives, given the nascent nature of the field and growing recognition and application of sustainability in businesses.

2.3.2 Outcomes of Corporate Sustainability Initiatives

As per the extant literature on corporate sustainability, the focus on the outcome or consequences of corporate sustainability strategies or specific corporate sustainability practices is to establish a ‘business case for sustainability’. The notion that the adoption of corporate sustainability initiatives leads to performance outcome is grounded in the instrumental perspective and is supported by the view that organizations implementing corporate sustainability initiatives can gain competitive advantages (Porter and Kramer 2006). Institutional theory and stakeholder theory underpin the facts that organizations seek conformance to societal expectations to maintain or attain legitimacy. This ensures organizational acceptance among key constituents and access to resources. Additionally, organizational harmonization is also caused by conformity. Therefore, access to resources and the competitiveness arising out of harmonization can contribute to competitive advantage. The resource-based view suggests that the link between the adoption of organizational practices and competitive advantage is the result of organizational resources and capabilities. Accordingly, it can be claimed that corporate sustainability initiatives are expected to have a positive impact on financial performance and this is supported by above theoretical underpinnings.

The question of whether there are financial gains from an organization’s strategic behaviour in relation to corporate sustainability has been explored in CSR and environmental literature for decades. Carroll’s (1979) seminal paper is one of the

earliest attempts to conceptually establish the link between CSR and organizational performance. With the emergence of corporate sustainability management and performance frameworks, scholars have also begun to examine whether being sustainable improves financial gain. Therefore, corporate sustainability studies that attempt to examine the effects of corporate sustainability initiatives on firm performance mostly derive their literature and empirical reasoning from studies that link CSR and environmental practices with financial performance. The large amount of research that has explored the link between CSR and financial performance, environmental performance and financial performance have produced meta-analytic reviews (Etzion 2007; Orlitzky, Schmidt and Rynes 2003). The meta-analytic review suggest that the findings about the relationship between CSR and financial performance and environmental performance and financial performance are mixed (Orlitzky, Schmidt and Rynes 2003). The inconsistencies in the results have been attributed to the differences in methodologies (Griffin and Mahon 1997). This includes differences in measures applied to measuring economic performance and environmental performance, while different research models and different time periods have also caused inconsistent results (Wagner 2007). It is also claimed that past studies have ignored integration and researchers advocates to include integration in research models to examine the financial outcomes of sustainability initiatives (Wagner 2007). Judge and Douglas (1998) and Chan (2005) have shown that integration of environment with strategic process is a pre-condition for improving environmental performance. Chan (2005) found that the adoption of environmental strategies positively affects financial performance. He also found positive influence of environmental strategies on environmental performance. Wagner (2007) employed survey data to examine the effect of integration of environmental management with managerial processes on economic performance in firms in Europe, and the results indicated a positive impact. A study in the MENA region by El-Khalil and El-Kassar (2018) also found that a strong positive relationship existed between sustainability categories and firm performance.

Lo (2010) obtained a sample of S & P 500 companies and compared the profitability of sustainable companies (measured by inclusion in the DJGSI¹) with other companies. The findings of the study indicated that the average profitability of

¹ Dow Jones Sustainability Index

sustainable companies were higher than the profitability of other companies but was not significantly different. Contrary to Lo's findings, Lopez, Garcia, and Rodriguez (2007) also compared the financial performance (measured by profitability and revenues) of sustainable companies and other companies. In the short run they found that being sustainable negatively affects profit (in the early years of adoption) which other companies will not experience. However, in the long run sustainable companies' profitability measures showed significant difference in contrast to other companies. Thus, they concluded that companies benefit from sustainability practices in the long-term. The effects were mostly observed in profitability (Profit, RoA, RoE) with no effect on revenue. The scholars demonstrated that the competitive advantage can only be maintained until other companies implement sustainability. When the other companies catch up, the benefits experienced by early adopters diminishes.

Traditionally, it is argued that sustainability performance is expected to have a positive impact on financial performance. But, there is also counter-argument that it can have a negative impact or have no impact on financial performance. The counter argument is based on the trade-off argument. Accordingly, the trade-off argument posits that the costs incurred in implementing sustainability initiatives negate the financial gains of such initiatives. However, scholars claim that in the long run the financial gains are likely to exceed the initial costs. From a competitive advantage point of view, any financial benefit gained by firms is likely to decline because other firms are likely to imitate them and catch up with the leaders. This could result in the decline of competitive advantage. Thus, firms must engage in sustainability related innovation if they are to maintain their competitive advantage in the long run. But what can be assumed is that there are 'early adopter advantages'.

In conclusion, it can be stated that organizations expect to benefit from implementing corporate sustainability initiatives. It is likely that integrating corporate sustainability initiatives into organizational policy, strategies and practices is likely to improve corporate sustainability performance and financial performance of an organization.

2.4 Corporate Sustainability Research in Developing Economies

Corporate sustainability is growing in acceptance and application among organizations in developing economies. The Global Corporate Sustainability Report (GCSR) 2013 contends that organizations that endorse the United Nations Global Compact (UNGC) equally hail from developed and developing economies (United Nations Global Compact Office 2013). Similarly, the Carbon Disclosure Project (CDP) reported that there is a significant improvement in the quality of green disclosures in emerging economies in 2009, compared to previous years (OECD 2010). Although the above examples ratify the view on the growing acceptance of corporate sustainability initiatives in developing economies, they do not provide adequate insight into the actual state of implementation. Baskin (2006) compared the reported corporate responsibility behaviour of 127 companies from 27 emerging markets with companies from OECD countries and found that corporate responsibility behaviour was less embedded in the corporate strategies of emerging market companies. Baskin's study also found that there was wide divergence between companies leading and lagging in corporate responsibility in the emerging markets. Luo, Tang, and Lan (2013) compared the propensity to disclose carbon mitigation activities between firms in developed and developing economies and found that the commitment of firms from developing economies to carbon mitigation and disclosure is constrained by resource shortage and thus falls behind the firms from developed economies. It can be inferred from the above findings that there are significant differences in the implementation of corporate sustainability initiatives between organizations in developed and developing economies and thus, it is likely that the adoption of corporate sustainability initiatives in organizations from developing economy contexts is at an incipient level.

It is important from a developing economy view that their businesses engage in corporate sustainability initiatives, because that would contribute to long-term national directives on sustainable development. Moreover, developing economies are more vulnerable to the adverse effects of climate change and environmental degradation. The severity of these vulnerabilities is heightened by socio-economic disparity and macro-economic instability in these economies. This fosters the need for collaborative engagement between government, national agencies and businesses in developing economies to setup macro and micro level initiatives to promote and implement sustainable development activities. Additionally, multilateral agencies

have established initiatives such as climate funds and clean development mechanisms to enhance the responsiveness of governments and businesses in developing economies, to mitigate the risks and threats posed by climate change and environmental degradation (The World Bank 2010; UNFCCC Secretariat 2013). The above challenges and developments further establish the importance of businesses in developing economies engaging in corporate sustainability initiatives. However, the adoption of corporate sustainability initiatives in developing economies remains a voluntary initiative, in the absence of regulations and weak institutional mechanisms. In the above context, it is important to review corporate sustainability research in developing economies to gain an insight to the state of implementation of sustainable development activities at organizational level.

Reviewing the corporate sustainability literature emanating from developing economies indicates that researchers have mainly shown interest in large emerging economies (Delai and Takahashi 2013; Fifka and Pobizhan 2014; Maubane, Prinsloo and Rooyen 2014; Sangle 2010; Weber 2017; Zhang, Wang and Wang 2014). The interest of scholars in undertaking corporate sustainability research in emerging economies is supported by the fact that these are among the top ten economies in the world in terms of GDP, energy consumption, greenhouse gas emissions, and population (International Energy Agency 2013; The World Bank 2014). Additionally, recent institutional developments in emerging economies such as the introduction of a corporate sustainability index in Brazil (International Finance Corporation), a social responsibility index in the Shanghai Stock Exchange in China, and the CSR regulation in India (Ministry of Corporate Affairs 2014) are also likely to motivate scholars to undertake corporate sustainability research in relating to these economies. In spite of the general interests in emerging economy contexts, some researchers have undertaken corporate sustainability related research in developing economies in Asia (Farooq et al. 2014; Hoque and Clarke 2013; Massoud et al. 2010; Rettab, Brik and Mellahi 2009; Sajjad, Jillani and Razika forthcoming; Saleh, Zulkifli and Muhamad 2011; Setthasakko 2007) and Latin America (Morioka and Carvalho 2016; Rivera 2004; Vazquez-Brust, Liston-Heyes, Plaza-Ubeda, et al. 2010).

A wide range of issues has been explored in corporate sustainability literature originating from developing economies. This includes the drivers and barriers to corporate sustainability (Cruz and Pedrozo 2009; Massoud et al. 2010; Setthasakko 2007), the motives for adopting corporate sustainability (He and Chen 2009), the

adoption of corporate sustainability strategy and practices (Chan 2005; Delai and Takahashi 2013; Hoque and Clarke 2013; Law and Gunasekaran 2012; Sangle 2010), sustainability performance (Chow and Chen 2012; Singh et al. 2007; Yu, Choi and Zhang 2015), and the impact of corporate sustainability initiatives on firm performance (Rettab, Brik and Mellahi 2009; Saleh, Zulkifli and Muhamad 2011). Among the issues explored in corporate sustainability research, sustainability performance has been recognized as a critical issue and it has been claimed that studies emerging from developing economies have paid less attention to sustainability performance (Goyal, Rahman and Kazmi 2013).

Reviewing the studies on corporate sustainability from developing economies also reveals that most of them are exploratory studies that employ qualitative and quantitative research approaches. Setthasakko (2007) used the case study approach to identify the barriers faced by companies in the frozen seafood industry in Thailand when implementing corporate responsibility. Hoque and Clarke (2013) conducted structured interviews with senior executives of ten plants belonging to five industries considered to be among the top ten pollutant industries in Bangladesh to identify pollution prevention practices. Sangle (2010) conducted two focus groups discussions to identify the drivers of proactive environmental strategy in India. Lam (2011) conducted fieldwork to identify the internal and external challenges faced by MNEs to develop environmental programs in China. A previous study also claimed that qualitative research approaches are more likely to be adopted in developing economies to conduct research related to corporate sustainability (Visser 2008). However, there are studies that have tested organizational theories in corporate sustainability research in developing economy contexts. du Plessis and Grobler (2014) combined stakeholder theory and the resource-based view to identify the determinants of corporate sustainability performance of Brazilian listed firms. Zailani et al. (2012) used institutional theory to examine the effect of regulation and incentive and customer pressure on eco-design and environmental performance employing a sample of ISO 14001 certified manufacturing firms in Malaysia. Liu et al. (2010) examined whether the proactive environmental practices of firms in the Changshu city of China were affected by external pressures, based on institutional theory.

Corporate sustainability literature originating from developing economies also indicates that these studies depended upon theory and literature developed and empirically validated in developed economies. Hafsi and Farashahi (2005) points out

that there are divergent views on the applicability of theories originating from developed economies in developing economic contexts. The relevance and applicability of theories originating from western developed economies in other economic and cultural settings is an on-going discourse in organizational scholarship. The conundrum for corporate sustainability scholars is that they need to either engage in the development of theories that embraces different economic and cultural settings or apply existing organizational theories in different economic and cultural contexts to gain insight on the moderations required to improve wider applicability of the theories. It should also be noted that corporate sustainability is a growing body of knowledge that lacks its own theoretical framework and uses established theories from various other disciplines.

For example, it has been claimed that corporate sustainability initiatives in developing economies are largely philanthropy-oriented because of socio-economic needs and cultural beliefs (Jamali 2014; Jayakumar 2016). Furthermore, there are developing economies with low per capita GHG emissions, but with higher levels of low-income population and inequality. The above evidence indicates that there are context specific priorities in developing economies that are different from developed economies. This calls for corporate sustainability scholars to strike a balance in terms of drawing inferences from literature on developed economies because a universal approach or “one size fits all” approach to corporate sustainability research may constrain the global discourse on corporate sustainability.

2.5 Summary

This summary aims to highlight some of the key observations found in the literature review. The chapter initially discusses the theoretical perspectives relevant to address the research questions of this thesis. The discussion on the theoretical underpinnings adopted in this study focuses on the logics and structure of the theories and some of the criticisms levelled against these theories in extant literature. Further on, the literature review defines the concept of corporate sustainability and discusses the facets of the concept. The discussion also briefly examines some of the criticisms levelled against the concept of corporate sustainability. Extending the discussion on corporate sustainability further, various approaches to integrating sustainability into organizations are discussed. The subsequent section of the chapter narrows down the

antecedents and consequences of corporate sustainability initiatives as found in the literature. Finally, the chapter examines the state of corporate sustainability research and findings in developing economies.

Chapter 3

The Conceptual Model and Hypotheses

Overview

The purpose of this chapter is to present the conceptual model and hypotheses to address the research questions 1 and 2. The chapter commences with the discussion on the proposed conceptual model that introduces the variables and linkages between the variables in the model. The subsequent sections of this chapter focus on formulating the hypotheses. This chapter further extends the discussion on theoretical perspectives and literature in chapter 2 to fulfil the above purpose.

3.1 The Conceptual Model

As mentioned in chapter 1, this study aims to investigate three research questions. Out of them research questions 1 and 2 takes the form of causal or relational research questions, hence a conceptual model is proposed.

Research question 1:

Do external pressures and managerial motive influence the adoption of corporate sustainability strategy?

Research question 2:

Does the adoption of corporate sustainability strategy affect firm performance and does integration capability moderates the relationship between adoption of corporate sustainability strategy and firm performance?

Given the nature of the research questions, an empirically testable conceptual model of adoption of corporate sustainability strategy was developed based on theoretical perspectives, literature, and research gaps discussed in chapter 2. In the proposed conceptual model, adoption of corporate sustainability strategy is the focal variable and it is linked to antecedents: external pressures and managerial motive; and outcomes: sustainability performance and financial performance. The conceptual model also includes integration capability as a variable that affects the linkages between the adoption of corporate sustainability strategy, sustainability performance and financial performance. The proposed conceptual model can be considered as an

integrated model of adoption of corporate sustainability strategy because: it includes antecedent-adoption-performance elements and attempts to capture the effects of elements from external, task and intra-organizational environment on the adoption of corporate sustainability strategy and performance outcomes. The proposed conceptual model is graphically illustrated in figure 3.1.

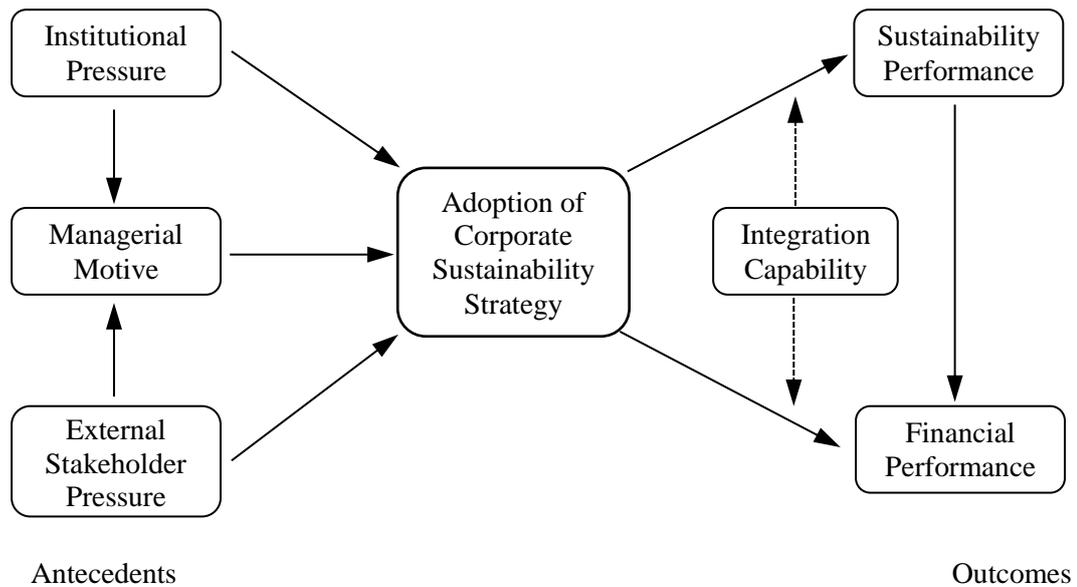


Figure 3:1 The Conceptual Model

As shown in the conceptual model, there are two focal relationships. The first focal relationship examines the influence of institutional pressure, external stakeholder pressure, and managerial motive on the adoption of corporate sustainability strategy. The path originating from institutional pressure to the adoption of corporate sustainability strategy and the path originating from external stakeholder pressure to the adoption of corporate sustainability strategy is derived from institutional and stakeholder theories. These hypothesized paths suggest that institutional pressure and external stakeholder pressure has a direct influence on the adoption of corporate sustainability strategy. The conceptual model also illustrates that institutional pressure and external stakeholder pressure has a direct influence on managerial motive, which in turn has a direct influence on the adoption of corporate sustainability strategy. Thus, the model predicts that institutional pressure and external stakeholder pressure have a direct as well as an indirect influence on the adoption of corporate sustainability strategy. In the antecedent part of the model, institutional pressure and external

stakeholder pressure are the independent variables, managerial motive is the mediating variable and adoption of corporate sustainability strategy is the dependent variable.

The outcome part of the research model illustrates the second focal relationship, and it focuses on the effect of adoption of corporate sustainability strategy on sustainability performance and financial performance. According to the model, the adoption of corporate sustainability strategy has a direct impact on sustainability performance and financial performance and sustainability performance has a direct impact on financial performance. The conceptual model also proposes that adoption of corporate sustainability strategy has an indirect impact on financial performance through sustainability performance. Based on the above relationships, it can be stated that the adoption of corporate sustainability strategy is the independent variable, sustainability performance is the mediating variable and financial performance is the dependent variable in the outcome part of the conceptual model. The linkages in the outcome part of the conceptual model are mainly based on the notion of ‘business case for sustainability’.

Finally, integration capability is introduced in the outcome part of the model as a moderator variable. The two paths originating from integration capability hypothesize that the relationship between the adoption of corporate sustainability strategy and sustainability performance and the relationship between the adoption of corporate sustainability strategy and financial performance are affected by integration capability. The inclusion of integrating capability as a moderator variable would explain the condition in which the relationship between the adoption of corporate sustainability strategy and firm performance occurs. The theoretical and empirical reasons pertaining to the linkages proposed in the conceptual model are further elaborated in the formulation of hypotheses section below.

3.2 Formulation of Hypotheses

3.2.1 Institutional Pressure and Corporate Sustainability Strategy

According to institutional theorists, adoption behaviour or practice diffusion is caused by institutional isomorphic pressures (DiMaggio and Powell 1983; Greenwood and Hinings 1996; Tolbert and Zucker 1983). Supporting the above claim, Colwell and Joshi (2013) and Sangle (2010) empirically demonstrated that pro-environmental behaviour is influenced by institutional pressures in two contrasting economic

contexts. The above theoretical rationale and empirical finding suggests a possible link between institutional pressures and the adoption of corporate sustainability strategy. In order to establish the proposed linkage, it is important to explore the typology of institutional pressures: normative, mimetic, and coercive proposed by DiMaggio and Powell (1983) with relevance to the field of corporate sustainability.

The influence of normative pressures on organizations to adopt corporate sustainability strategy depends on how norms and values related to sustainable development are diffused. Formal education, professional communities and international organizations are the main sources of normative pressures that plays a significant role in diffusing norms and values related to sustainable development (DiMaggio and Powell 1983; Doh et al. 2010; Park 2007). Multilateral agencies such as UNESCO have collaborated with universities and national governments around the world to promote education on sustainable development and to instil principles, values, and behavioural outcomes through formal education (UNESCO 2009). Likewise, professional communities and international organizations diffuse norms and values on sustainable development through voluntary initiatives (i.e. Green Awards, Sustainability Reporting Awards) and the endorsement of voluntary guidelines and standards (i.e. GRI, ISO 14001, ISO 26000, SA8000). The European Commission endorsed the ISO 26000, the United Nations Global Compact, and the OECD initiative 'Guideline for Multinational Enterprises' to provide guidance on social responsibility to European enterprises (Frost 2011). Similarly, international non-profit organizations like the United Nations Global Compact (UNGC) and the World Business Council for Sustainable Development (WBCSD) promote sustainable development principles through their network of participatory organizations. Accordingly, it can be stated that normative pressures in the field of corporate sustainability are intended to develop a moral commitment to encourage individuals and organizations to adopt pro-sustainability behaviour.

Mimetic pressure in relation to corporate sustainability can be described as the pressure on organizations to pursue corporate sustainability activities institutionalized by other organizations. It has been emphasized that the pressure to imitate or copy activities of other organizations is caused by uncertainty and ambiguity (DiMaggio and Powell 1983). In the context of corporate sustainability, uncertainty can be attributed to existing and pending legislation and the changing nature of stakeholder demands.

Ambiguity may occur because corporate sustainability is a new multi-dimensional concept that continues to evolve and may require organizations to shift from a traditional business model to a sustainable one. Furthermore, Baumgartner and Ebner (2010) contend that organizations do not know how to integrate sustainability aspects into their strategies and practices. This suggests that organizations have to deal with a lot of uncertainty and ambiguity with regard to the implementation and adoption of corporate sustainability activities. In addition, the adoption of pro-sustainability behaviour requires a significant investment upfront and there is no clear evidence of corresponding financial gain. In such circumstances, the successful adoption of corporate sustainability activities by an organization or a few organizations in the industry or within a geographic context would generate pressure on other organizations to mimic such behaviour. Therefore, it can be concluded that there is a positive link between mimetic pressures and the adoption of corporate sustainability strategy.

Coercive pressures that influence organizations to adopt corporate sustainability strategy consist of legislation, enforcement agencies and international agreements (Dimaggio and Powell 1983; Escobar and Vredenburg 2011). Legislation takes the form of a 'command and control' approach, to force organizations towards compliance. Compliance with regulatory pressures enhances organizational legitimacy and ensures access to resources and the survival of organizations (Dimaggio and Powell 1983). However, the downside of compliance is that it increases compliance cost and may reduce productivity. For example, pollution abatement operating cost in U.S. industries has increased from \$11.86 billion in 1999 to \$20.68 billion in 2005 (US Census Bureau 2008, 2002). In the face of intensifying regulatory pressures and its consequences, organizations may consider shifting from the adoption of compliance driven reactive strategies and practices to more proactive behaviours such as to adopt corporate sustainability strategy with the intention to minimize compliance, costs and risks associated with coercive pressures. Another argument that supports the link between coercive pressure and the adoption of corporate sustainability strategy is that proactive engagement in sustainability initiatives can pre-empt future regulations leading to lower compliance (Carroll and Shabana 2010; Khanna, Deltas and Harrington 2009). Therefore, it can be concluded that organizations are persuaded by coercive pressures to adopt corporate sustainability strategy.

Empirical studies investigating the link between institutional pressures and pro-sustainability behaviour predict a positive association. In the study conducted by Khanna, Deltas, and Harrington (2009) using a sample of S & P 500 companies, it was found that existing and anticipated regulatory pressure had a significant positive impact on pollution prevention techniques. Zhu, Cordeiro, and Sarkis (2013) investigated the effect of institutional pressure at domestic level and international level on environmental management systems namely ISO 14001 and total quality environmental management employing a sample of 377 manufacturing companies belonging to 4 industrial sectors in China. They found that institutional pressures at the domestic and international level had a significant positive effect on pro-environmental behaviour. Doran and Ryan (2014) found that existing regulation is a positive and significant driver of eco-innovation among a sample of Irish firms responding to the Irish Community Innovation Survey. Zailani et al. (2012) collected data from 132 ISO 14001 firms in Malaysia and found that regulation had a significant direct positive effect on eco-design and environmental performance. using a sample of companies in India, Sangle (2010) also claimed that institutional pressures are driving companies in India to adopt proactive environmental strategies. However, one of the issues of Sangle's finding was that 66% of companies in the sample were large and the rest were medium and small companies. Studies have also revealed multinational corporations are influenced by institutional pressures to engage in CSR activities (Bondy, Moon and Matten 2012). The works of Li (2014) and Singh, Jain, and Sharma (2014) in emerging Asian contexts also supports the view that there is a strong link between institutional pressures and pro-sustainability behaviour.

As stated in chapter 2, institutional theory has been extensively applied in conceptual and empirical papers in business-society literature. The conceptual papers have mostly emerged from the developed economies. Empirical studies in developing economies and markets have mostly focused on emerging economies like China and India. Escobar and Vredenburg (2011) state that concern about sustainability in survival economies is likely to be less compared to social issues like poverty alleviation. They also claim that external influences are likely to be context specific and an outcome of the prevailing institutional environment. Hence, there is a need to investigate smaller developing economies and markets in Asian contexts.

Based on theoretical arguments and empirical evidence given above, the following hypothesis is proposed.

H₁: Institutional pressure has a significant positive influence on the adoption of corporate sustainability strategy.

3.2.2 External Stakeholder Pressure and Corporate Sustainability Strategy

Along with institutional pressures, the other key external determinant of pro-sustainability behaviour in organizations is stakeholder pressure (Lee 2011). The linkage between stakeholder pressure and pro-sustainability behaviour such as the adoption of corporate sustainability strategy is based on the stakeholder theory, which postulate that stakeholders have interests and they influence organizations to meet their interests (Donaldson and Preston 1995). Accordingly, it can be asserted that integrating sustainability aspects into corporate strategy indicates that organizations are concerned about the rising sustainability demands of stakeholders. Furthermore, involving stakeholders in the strategic process of integrating sustainability aspects into corporate strategy enhances the legitimacy and the reputation of the organization (Hart 1995). In essence, how managers construe stakeholders and their relationship with organizations determines the impact of stakeholder pressure on organizations with regard to adopting corporate sustainability strategy.

In examining the influence of stakeholders on the adoption of corporate sustainability strategy, the focus is specifically on the influence of external stakeholders that don't engage in transactions with organizations and are considered non-essential for the survival of organizations (Clarkson 1995). This class of external stakeholders include local communities, the media, environmental organisations (ENGO), and external agencies (trade and industry associations). These external stakeholders are generally perceived to be secondary stakeholders with less important because they do not control critical resources required by organizations (Sharma and Henriques 2005). Since organizations consider themselves to be resource independent from these external stakeholders, they do not have the power to influence organizations by direct means (Frooman 1999; Henriques and Sharma 2005). For example, secondary stakeholders may shape the views of consumers, government, regulators through the use of media and influence these parties to engage in action against the

companies. Given the above facts, managers may undermine the role of the above-mentioned external stakeholders in the process of integrating sustainability aspects into corporate strategy. However, it has been pointed out that these external stakeholders can mobilize their resources to improve the awareness and knowledge of other stakeholders on whom organizations are resource dependent to influence organizations to adopt pro-sustainability behaviour (Clement 2005; Henriques and Sharma 2005). Moreover, the growing awareness of these external stakeholders about sustainability issues may motivate them to act as watchdogs monitoring the impact of organizational activities on society and environment. Thus, it is clear that the pressure exerted by the above-mentioned external stakeholders can cause organizations to adopt corporate sustainability strategy.

Empirical findings in social responsibility and environmental management studies also affirm the view that external stakeholder pressure has a positive impact on pro-sustainability behaviour. The study by Yu and Choi (2016) found that stakeholder pressure that comprised of both internal and external stakeholders had a positive influence on the adoption of CSR among companies in China. Two separate studies that investigated the impact of specific stakeholder pressure on CSR activities of MNE subsidiaries operating in South Korea, reported that NGOs had the most significant impact among secondary stakeholders followed by the local community which had a partial impact (Park, Chidlow and Choi 2014; Park and Ghauri 2015). However, the two South Korean studies could not find empirical evidence to support the notion that media pressure can drive MNE subsidiaries to adopt CSR practices.

In contrast, Helmig, Spraul, and Ingenhoff (2013) reported that external stakeholders that comprising media, NGOs and activists had no significant impact on large and medium sized enterprises in Switzerland to implement CSR. Choi and Park (2014) found that NGOs and media had a significant positive influence on foreign subsidiaries of South Korean MNEs to adopt environmentally responsible management. Vazquez-Brust, Liston-Heyes, Plaza-Úbeda, et al. (2010) investigated the effect of different stakeholder groups on environmental strategy profiles using a sample of small, medium and large firms representing different sectors in Argentina. The results of the study showed that firms with proactive environmental strategies perceived a higher degree of pressure from all classes of stakeholders compared to firms with defensive or reactive environmental strategies. Sarkis, Gonzalez-Torre, and

Adenso-Diaz (2010) examined the relationships between stakeholder pressure, environmental training and the adoption of environmental practices in the automotive sector in Spain and showed that a positive relationship existed between stakeholder pressure and pro-environmental behaviour. The study was conducted using a sample of companies from the automotive sector in Spain. Alternatively, Walker, Ni, and Huo (2014) found that external stakeholder pressure had no significant effect on environmental proactivity, yet the association was found to be negative. Surroca, Tribo, and Zahra (2013) showed that multinational enterprises respond positively to a higher degree of stakeholder pressure on CSR in their home country, which may also lead to the transfer of CSR practices of HQ to subsidiaries in host countries.

As discussed in paragraphs above and what is evident from the social and environmental responsibility literature is that stakeholder pressure is an important determinant of pro-sustainability behaviour (Buysse and Verbeke 2003). Stakeholders are also regarded as the main source of sustainability demands and they may either support or act as buffer to institutional pressures (Lee 2011). The stakeholder-organization relationship is grounded on the instrumental stakeholder view. In principle, corporate sustainability is a stakeholder driven approach. Thus, ‘managing organization-stakeholder relationship’ is important to attain organizational objectives (Donaldson and Preston 1995; Freeman, Wicks and Parmar 2004; Frooman 1999; Gibson 2012). There are calls to converge corporate sustainability and stakeholder theory due to resemblance in either approach (Gibson 2012; Horisch, Freeman and Schaltegger 2014; Wood and Jones 1995).

Based on the theoretical arguments and empirical findings discussed above, it can be concluded that external stakeholders have a positive influence on organizations to engage in the adoption of corporate sustainability strategy. Accordingly, the following hypothesis is proposed.

H₂: External stakeholder pressure has a significant positive influence on the adoption of corporate sustainability strategy.

3.2.3 Managerial Motive and Corporate Sustainability Strategy

The top management of organizations are responsible for strategic decisions like adoption of corporate sustainability strategy. The role of top management with regard to the adoption of corporate sustainability is important on two counts. First, there is

ambiguity regarding the concept of corporate sustainability in terms of finding a balance between attaining economic and sustainability goals. Second, integrating corporate sustainability aspects into corporate strategy may cause organizations to shift towards a sustainable business model. Thus, when it comes to the role of pro-sustainability behaviour, the role of top management cannot be ignored and this has garnered significant attention in sustainability literature. However, what is not discussed or elaborated is that top management commitment is governed by the intention or motives of the top management. It can be argued that the role of top management is central to the adoption of pro-sustainability behaviour (Sarkis, Gonzalez-Torre and Adenso-Diaz 2010), hence it has received significant attention in management literature. However, the motives behind top management commitment to engage in corporate sustainability initiatives has not been extensively explored, with more focus being placed on top management commitment, awareness, attitude etc.

Managerial motive refers to the underlying beliefs of the top management, in regard to the adoption of corporate sustainability strategy. Managerial motive has been found to play a key role in enacting policies, strategies, and practices that govern the pro-sustainability behaviour of organizations (Uecker-Mercado and Walker 2012). Corporate sustainability is a strategic initiative and integrating corporate sustainability aspects into corporate strategy may cause organizations to shift from a traditional business model to a sustainable one. Such developments and transformations in organizations cannot be achieved without the support and commitment of the top management. In corporate sustainability literature that includes social and environmental responsibility, top management commitment has received significant attention (Berry and Rondinelli 1998; Colwell and Joshi 2013).

Although top management commitment is considered an important predictor of pro-sustainability behaviour, it is argued that the decision and commitment of top management to engage in pro-sustainability behaviour is guided by various motives. In other words, these motives are the reason why the top management of organizations would consider the adoption of corporate sustainability strategy. For the purpose of this study, three distinct managerial motives were identified from previous studies. First, the strategic motive is the belief that adoption of corporate sustainability strategy can improve financial performance and create competitive advantage (Bansal and Roth 2000; Walker, Ni and Huo 2014; Bronn and Vidaver-Cohen 2009). Isaksson,

Kiessling, and Harvey (2014) state that organizations driven by strategic motive to engage in socially responsible behaviour had more CSR activities and better financial performance. Second, the value motive is the belief that adoption of corporate sustainability strategy is ‘the right thing to do’ (Maignan and Ralston 2002). This means that the organization and its members have embraced the concept of sustainability to be part of its culture and its day to day life. This stems from the idea that organizations have a moral obligation towards society (Bronn and Vidaver-Cohen 2009). They embrace this idea by embedding sustainability into organizational culture. This influences the awareness of managers and they would genuinely seek to improve sustainability performance of organizations (González-Benito and González-Benito 2005). Third, the legitimacy motive: the belief that adoption of pro-sustainability initiatives enhances organizational legitimacy (Bronn and Vidaver-Cohen 2009; Walker, Ni and Huo 2014). According to Bansal and Roth (2000) legitimacy motive focuses on compliance with regulations and institutional norms. A summary of motives that may influence the top management of an organisation to engage in corporate sustainability initiative is presented in Table 3.1.

Lynes and Andrachuk (2008) in their conceptual model of social and environmental responsibility included firm motives as an important component driving organizational commitment. Results showed that senior managers have different motives with regard to social and environmental responsibility and multiple motives are likely to exist at one time. Bansal and Roth (2000) emphasize that motives lead to a higher degree of ecological responsiveness in organizations. They also mentioned that it is likely that some organizations would identify a dominant motive and some organizations would have multiple or mixed motives.

Table 3-1 Classification of Motives

Authors	Motives
Aguilera et al. (2007)	Instrumental, Relational, Moral
Bansal and Roth (2000)	Competitiveness, Ecological Responsibility, Legitimation
Bos-Brouwers (2010)	Eco-efficiency, Value creation, Compliance
Bronn and Vidaver-Cohen (2009)	Sustainability motives, Legitimacy motives, Profitability motives
Font, Garay, and Jones (2016)	Lifestyle, Business, Legitimization
He and Chen (2009)	Political, Instrumental, Integrative, Ethical
Heras-Saizarbitoria, Arana, and Boiral (2015)	Holistic, External focus, Internal focus
Lannelongue, Gonzalez-Benito, and Gonzalez-Benito (2014)	Legitimation, Competitiveness
Uecker-Mercado and Walker (2012)	Competitiveness, Ethical
Walker, Ni, and Huo (2014)	Competitive, Ecological
Windolph, Harms, and Schaltegger (2014)	Legitimacy, Market success, Internal improvement

Managerial motive refers to the motives that drive a firm's top management to adopt corporate sustainability strategy. Interests of managers to adopt pro-sustainability activities are likely to be fuelled by expected outcomes. Establishing the motives driving the adoption of corporate sustainability strategy is important in the sense that it helps organizations to clearly define the corporate sustainability program as well as to infuse the idea of sustainability among other members of the organization (Isaksson, Kiessling and Harvey 2014). Lannelongue, Gonzalez-Benito, and Gonzalez-Benito (2014) showed that a negative relationship exists between environmental motivations and environment imbalance. This means that the greater the environmental motivations the lesser the negative impact on the environment. They also showed that motivation was more likely to affect actions rather than environment performance. Maignan and Ralston (2002) compared the motives driving organizations in the US, U.K., Netherland and France to engage in CSR. Evidence

emerged from the above study showed that organizations in the U.S were mainly impelled by the value-driven motive. In contrast, the organizations from the European countries were mainly influenced by performance and legitimacy motives. Findings from their study also revealed that multiple motives are likely to exist simultaneously. In light of the above reasoning, the following hypothesis is proposed.

H₃: Managerial motive has a significant positive influence on the adoption of corporate sustainability strategy

3.2.4 The Mediating Effects of Managerial Motive

The senior management of an organization is responsible for setting strategies, goals, implementation of strategic initiatives and providing directions for the future. From a manager's point of view, this involves appraising the present and the future challenges emerging from the environment. Accordingly, the top management that includes the CEO and senior managers of an organization has to play a pivotal role to understand and mitigate the pressure emerging from the external environment. Supporting the above view, Fineman and Clarke (1996) state that managers are the mediators of stakeholder influences. In response to external forces calling organizations to engage in corporate sustainability initiatives, managers might consider to develop proactive initiatives to mitigate current as well future threats (Plaza-Úbeda et al. 2009). Therefore, the motives of top management with regard to sustainability are likely to be shaped by external pressures comprising institutional and stakeholder pressures. Bansal and Roth (2000) emphasize that although environmental responsibility in organizations is driven by different motives, their antecedents and outcomes are unknown and need to be explored. Giving further evidence that institutional and stakeholder pressures may influence managerial motive, Yang and Rivers (2009) state that stakeholders are likely to exercise their influence on organization's sustainability related attitude and practices. Accordingly, the following hypotheses are suggested.

H₄: Managerial motive mediates the relationship between institutional pressure and the adoption of corporate sustainability strategy.

H₅: Managerial motive mediates the relationship between external stakeholder pressure and adoption of corporate sustainability strategy.

3.2.5 Corporate Sustainability Strategy and Financial Performance

The general expectation regarding the adoption of corporate sustainability strategy is that it would improve the financial performance of organizations. This expectation stems from the idea that good management initiatives improve organizational performance overall (Waddock and Graves 1997). In the broader domain of corporate sustainability literature that covers CSR and environmental management, the link between pro-sustainability behaviour and firm performance has been theorized based on the resource-based view (Etzion 2007). As explained in chapter 2, the resource-based view proposes that organizational resources with VRIN attributes create competitive advantage that eventually leads to financial and non-financial gains.

In addition to the resource-based view, several other rationales can be found in the past studies that could explain the nature of the relationship between the adoption of corporate sustainability strategy and financial performance. The first rationale is associated with the need to reduce compliance cost. Society and environment related laws are increasing around the world and organizations are faced with the possibility of increase in compliance and litigation related costs (Berry and Rondinelli 1998). Therefore, adoption of pro-sustainability behaviour can lead to reduction in compliance cost and have a positive impact on financial performance.

The next rationale that links the adoption of corporate sustainability strategy and financial performance is grounded on the efficiency view. It is claimed that pro-sustainability behaviour shall reduce operational costs and improve revenue. Employing a sample of U.S. manufacturing facilities, Clelland, Dean, and Douglas (2000) found that the adoption of waste minimization practices had direct and indirect effects on operational efficiency. Similarly, the Carbon Disclosure Project and World Wildlife Fund (2013) disclosed that the U.S. corporate sector can save up to US \$ 780 billion in net present value between 2010 and 2020 by reducing energy emissions 3.2% on average in each year. Porter and van der Linde (1995) argues that pollution and emissions are waste and signals inefficiency in an organization. Therefore, organizations are likely to benefit from developing mechanisms to deal with resource inefficiency that would improve financial performance. Guenster et al. (2011) suggested that embedding pollution prevention techniques into production process may improve efficiency and profitability.

The next rationale linking adoption of corporate sustainability strategy and financial performance is based on reputational benefits. It is argued that implementing corporate sustainability initiatives enhances an organization's corporate image and reputation that leads to improvement in business performance. Sinkin, Wright, and Burnett (2008) provide empirical evidence that eco-efficient business strategies have a direct effect on firm value. Similar evidence was also provided by Osazuwa and Che-Ahmad (2016) in the Malaysian context and they claimed that embarking on pro-environmental practices improved firm value.

The rationales explained above provide sufficient theoretical grounds that there is indeed a positive relationship between adoption of corporate sustainability strategy and financial performance. Although, some of the studies have reported that evidence on the relationship between the adoption of corporate sustainability initiatives and financial performance is mixed or inconclusive (Li 2014; Walker, Ni and Huo 2014). It is stated that in emerging economies link between sustainability and financial performance may not be found because stakeholders are more interested in the financial performance of the firm than sustainability (Aras, Aybars and Kutlu 2010). The following hypothesis is suggested based on the discussion above.

H₆: Adoption of corporate sustainability strategy has a significant positive effect on financial performance

3.2.6 Corporate Sustainability Strategy and Sustainability Performance

Sustainability performance is the outcome of corporate sustainability activities and behaviours (Perrini et al. 2011). The intention of adopting corporate sustainability strategy is to improve the sustainability performance of organizations. Economic sustainability performance, social sustainability performance and environmental sustainability performance constitute sustainability performance. Zailani et al. (2012) collected data from 132 ISO 14001 firms in Malaysia and found that eco-design had a significant positive effect on environmental performance. Embarking on environmental sustainability initiatives improves firm performance by reducing the overall impact on the environment. Henri and Journeault (2010) introduced eco-control as a degree of integration of socio-environment issues into organizational strategy. They examined the effect of environmental performance as a mediator to financial performance. Yet, the following hypothesis is suggested.

H₇: Adoption of corporate sustainability strategy has a significant positive effect on sustainability performance

3.2.7 The Mediating Effect of Sustainability Performance

Adopting sustainability and improving sustainability performance contributes to reputational benefits leading to improving financial performance. Li (2014) found that environment innovation practices had an indirect effect financial performance through environment performance. Organizations need to communicate their corporate sustainability activities and sustainability performance to interact with stakeholders and create relational benefits. Chan (2005) examined whether environmental performance mediated the relationship between pro-environmental strategy and financial performance. However, Chan's study failed to provide any evidence on the mediating role of environmental performance. Molina-Azorín et al. (2009) proposes to investigate variables mediating between pro-sustainability management and financial performance. Thus, the following hypothesis is formulated.

H₈: Sustainability performance mediates the relationship between adoption of corporate sustainability strategy and financial performance

3.2.8 The Moderating Effects of Integration capability

Integration capability is defined as the capability to effectively implement strategic management initiatives (strategy, practices, processes and systems) to attain performance outcomes. Organizations that intend to introduce new management systems (i.e. ISO 14001) or practices are likely to face severe challenges. The success or failure of the implementation of new management systems or practices depends on many organizational factors.

There are calls to adopt a contingency perspective regarding the relationship between corporate sustainability strategy and financial performance. This is because the relationship is considered complex. Translating an organization's adoption of corporate sustainability into improved organizational performance is more likely to depend on organizational capabilities. Resource-based view provides a strong foundation for how a firm's capabilities can contribute to its performance.

Over the years, firms are likely to have developed competences or capabilities that can be useful in implementing new strategic initiatives, such as corporate

sustainability (Schrettle et al. 2014). Organizations' embarking on new activities is likely to face impediments. However, expertise developed over the years may help the firm to minimize the effect of such barriers or impediments and effectively implement new programs. In past, organizations are likely to have implemented TQM and international certifications. As a result organizations' may have developed various capabilities enabling them to implement new activities or practices. Thus, It can be expected that integration as a capability to have a significant impact on firm performance. Hence, firms with higher integration capability are likely to experience a positive impact on firm performance compared to firms with lower degree of integration capability. Aragon-Correa, Alberto, and Sharma (2003) suggest that many studies have not accounted for organizational variables that may moderate the relationship between sustainability performance and financial performance. Hence, the following hypotheses are suggested.

H₉: Integration capability moderates the relationship between the adoption of corporate sustainability strategy and sustainability performance, such that the positive relationship will be stronger when integration capability is high

H₁₀: Integration capability moderates the relationship between the adoption of corporate sustainability strategy and financial performance, such that the positive relationship will be stronger when integration capability is high

3.3 Summary

This chapter has presented an integrative model of the adoption of corporate sustainability strategy and it is grounded in antecedent-adoption-performance frameworks. In the conceptual model, institutional pressure, external stakeholder pressure and managerial motive are linked to the adoption of corporate sustainability strategy, which in turn is linked to sustainability performance and financial performance. The model also includes integration capability as a moderator to explain the linkage between the adoption of corporate sustainability strategy and performance outcomes. Thereafter, a set of empirically testable hypotheses are proposed, based on institutional theory, stakeholder theory and the resource-based view. The lists of hypotheses are provided in Table 3:1 below.

Table 3-2 Summary of Hypotheses

H₁: Institutional pressure has a significant positive influence on the adoption of corporate sustainability strategy

H₂: External stakeholder pressure has a significant positive influence on the adoption of corporate sustainability strategy

H₃: Managerial motive has a significant positive influence on the adoption of corporate sustainability strategy

H₄: Management motive mediates the influence of institutional pressure on the adoption of corporate sustainability strategy

H₅: Management motive mediates the influence of external stakeholder pressure on the adoption of corporate sustainability strategy

H₆: Adoption of corporate sustainability strategy has a significant positive effect on financial performance

H₇: Adoption of corporate sustainability strategy has a significant positive effect on sustainability performance

H₈: Sustainability performance mediates the effect of the adoption of corporate sustainability strategy on financial performance

H₉: Integration capability moderates the relationship between the adoption of corporate sustainability strategy and sustainability performance, such that the positive relationship will be stronger when integration capability is high

H₁₀: Integration capability moderates the relationship between the adoption of corporate sustainability strategy and financial performance, such that the positive relationship will be stronger when integration capability is high

Chapter 4

Methodology

Overview

This chapter explains the methodology applied to investigate the research questions outlined in chapter 1. The chapter discusses the underlying research philosophy, methodological approach and the research design. Grounded in a worldview of pragmatism, this thesis opts for a mixed method research design because the research questions belong to different research method strands. Accordingly, a quantitative research design was chosen to investigate the first two research questions and a qualitative research design was chosen to investigate the third research question.

4.1 Research Philosophy and Paradigm

Research is a systematic investigation or inquiry (Saunders, Lewis and Thornton 2009), which is based on certain underlying beliefs. These beliefs guide a researcher's quest for knowledge and are regarded as research philosophy or paradigm. Paradigm is a worldview or a belief system based on philosophical assumptions about ontology, epistemology, axiology, and methodology (Creswell 2013; Guba and Lincoln 2008). Ontology is the nature of reality (Creswell 2013; Guba and Lincoln 1994). Epistemology is the nature of knowledge (Creswell 2014). Axiology is the role of researcher values in the research process (Guba and Lincoln 2008; Ponterotto 2005). Methodology is the process of knowledge discovery (Creswell 2013). Many distinct worldviews or paradigms can be found in methodological literature. Among them, postpositivism and constructivism, the two polar extremes of research paradigms have gained the most attention.

The postpositivist paradigm emerges from the positivist school of research paradigm. The positivists were the proponents of scientific method to research (Teddlie and Tashakkori 2009; Creswell 2014). Like the positivists, the postpositivists too embrace a deductive logic that involves developing hypotheses from existing theory, collecting data to confirm or refute the hypotheses, and revising and conducting further tests to develop the theory (Creswell 2014; Saunders, Lewis and Thornton 2009). The postpositivist paradigm has been generally associated with quantitative

methodologies (Johnson and Duberley 2000). In contrast, the constructivist paradigm focuses on making sense of meaning or interpreting meaning constructed by people, which is influenced by their views, interactions and contexts (Creswell 2014). The constructivist mostly adhere to an inductive logic that involves assembling specific meaning to generate comprehensive themes that lead to theory and generalization (Creswell 2014). Constructivists mostly favour qualitative research methods such as case studies, interviews, observation and ethnography (Creswell 2013).

As described above, the two distinct research paradigms are associated with two different methodological strands namely quantitative and qualitative. Quantitative methodology is described as the “techniques associated with the gathering, analysis, interpretation, and presentation of numerical information” (Teddlie and Tashakkori 2009, 5). Qualitative methodology is described as the “techniques associated with the gathering, analysis, interpretation, and presentation of narrative information” (Teddlie and Tashakkori 2009, 6).

Since this study entails explanatory and exploratory type of research questions, it was decided to use the most appropriate research method to each research question. This follows what is recommended in methodological literature, which is to select a research method that suits the research question. Accordingly, a quantitative research design was opted to investigate the first and the second research questions. A qualitative research design was selected to investigate the third research

4.2 Rationale for Methodological Approach

As explained in the previous section, this study intends to adopt a methodological approach that supports the combining of different methodological strands. The first research question of this thesis was framed as “Do external pressures and managerial motive influence the adoption of corporate sustainability strategy?” The second research question of this thesis was framed as “Does the adoption of corporate sustainability strategy affect firm performance and does integration capability moderate the relationship between the adoption of corporate sustainability strategy and firm performance?” The aforementioned two research questions have been proposed to explore a set of pre-determined relationships. In order to test or establish pre-determined relationships in the form of hypotheses, a quantitative method is warranted.

The third research question of this thesis is “What factors enable and impede the adoption of corporate sustainability strategy”. The focus of the third research question is to identify the factors facilitating or impeding the adoption of corporate sustainability strategy. This type of research question is generally associated with qualitative methods. Therefore, this study calls for a methodological approach that combines quantitative and qualitative methods.

Combining methodological strands in a single study is generally framed as a mixed method research design and is affiliated to the pragmatism paradigm. Tashakkori and Creswell (2007, 4) describe mixed method methodology as “research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry” (Tashakkori and Creswell 2007, 4). The key components of mixed method design include purpose, design, philosophy, and meta-inference. Greene, Caracelli, and Graham (1989) suggest five different purposes for mixed method designs namely: triangulation, complementarities, initiation, development, and expansion. Triangulation focus is to corroborate findings obtained from different methods. Complementarity is to explore overlapping but different aspects of a phenomenon. Development is associated with the sequential mixed method design. The purpose is to use the results obtained from one method strand to develop the other method strand. The purpose of initiation is to discover fresh perspective. Mixed method designs with the purpose of expansion focus on scope and breadth of the study.

This study opts for the parallel mixed designs mixed methods research approach. Parallel mixed design comes under the umbrella term mixed methods multi strand designs (Teddlie and Tashakkori 2009). Mixed methods multi strand designs have at least two research strands and mix the methods within or across the stages of the study. Parallel mixed designs are mixed method research design with at least two parallel and independent research strands phases. The two phases are relatively independent and may occur simultaneously or with time lapse (Teddlie and Tashakkori 2009). The two research strands, the QUAN and QUAL strands consist of their own research question, data collection, and analysis. It is recommended to integrate the results from either strand to form a conclusion. In mixed methods methodological literature, integration of results from different research strands in a single study is referred to as ‘meta-inference’. Moreover, in mixed method studies it is recommended

to analyse the data of qualitative and quantitative studies independently using methods that best fit the data and the research questions of the study.

The components of the design include data collection, data analysis, interpretation, and validity. Scholars of the mixed methods approach have advocated that studies adopting a mixed method approach should to select a mixed method design. According to Creswell (2014) the mixed method research design can be divided into basic mixed methods, including parallel and sequential designs and the advanced mixed method designs, including embedded, transformative and multiphase mixed method designs. Another aspect of designing mixed methods studies is to decide on the priority given to a particular strand. Accordingly, this would lead to procedural notation. This study opts for ‘Quan + qual’ procedural notation. In mixed method studies, it is recommended to analyse the data of qualitative and quantities studies independently employing methods that best fit the data and the research questions of each study. As for demonstrating the validity of the mixed method approach, Creswell (2013) proposes to adhere to guidelines on validity established in quantitative and qualitative research strands.

The use of mixed method research design in corporate sustainability research is also supported by the view that “mixed method research shows great promise for addressing environmental management and sustainability topics and issues” (Molina-Azorin and López-Gamero 2016). The above view can be ascribed to the fact that corporate sustainability is a new and at the same time a complex multi-domain phenomenon that needs to be investigated employing new approaches. For example, Thompson and Hansen (2012) combined quantitative and qualitative methods to investigate the intentions of large industrial forestland owners in U.S. to participate in the carbon offset market. Although, the mixing of quantitative and qualitative data is not new in business research, the application of mixed methods principles and design is.

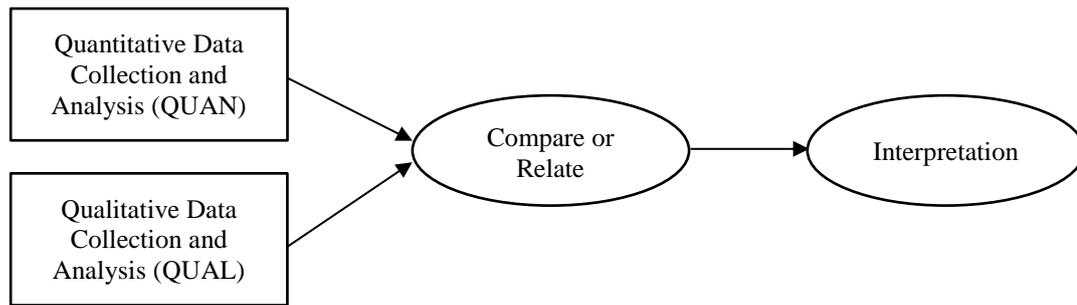


Figure 4:1 Parallel Mixed Methods Design

Source: Creswell (2014, 220)

4.3 Research Design: Quantitative Study

4.3.1 Population and Sample

Large companies involved in corporate sustainability initiatives in Sri Lanka were the target population of this study. In order to identify the large companies that are involved in corporate sustainability, the following information was required: financial information (i.e., turnover, assets) to assess company size and corporate sustainability information (i.e. sustainability activities, certification, reporting) to determine the involvement of company in corporate sustainability initiatives. However, the information provided by existing company directories in Sri Lanka was mainly limited to contacts, industry sector, and key personnel. The non-availability of financial information for large companies other than the listed companies in the public domain was a particular constraint in developing a sampling frame comprising of large companies. In this context, the directory of companies listed in the Colombo Stock Exchange (CSE) was deemed appropriate and accessible because all the listed companies in the CSE have a minimum capital of Sri Lankan Rs. 100 million (Colombo Stock Exchange 2014) and the involvement of companies in corporate sustainability initiatives can be identified by using annual reports and corporate websites. Importantly, the selection of companies from the directory of listed companies in the CSE also allows the controlling of company size by research design. The directory of companies listed in the CSE is available to the public at <http://www.cse.lk/home/listByAlphabetical>.

In 2013, there were 289 listed companies on the CSE (Colombo Stock Exchange 2013). Each of the company's annual reports, corporate websites, and corporate news was examined to identify whether the companies were involved in

corporate sustainability initiatives. Findings revealed that 196 listed companies were involved in such initiatives. The general notion regarding sample size is ‘the bigger the better’. However, in this particular case, the population of listed companies was below 300 ($N < 300$) and out of these, the number of listed companies involved in corporate sustainability initiatives was below 200 ($N < 200$). As a result, it was decided that selecting a sample out of the 196 listed companies would further reduced the response rate during data collection. At minimum, 100 cases or observations essential for data analysis that is if the distribution assumptions and other conditions associated with the analytical techniques are met (Hair et al. 2010). Furthermore, studies by Baruch and Holtom (2008) and Shih and Xitao Fan (2008) revealed that the mean response rate for surveys was 48% and 45% respectively. Considering the facts above, it was determined to approach all 196 listed companies engaged in corporate sustainability initiatives for the quantitative study. Although it can be argued that a pool of 196 companies may not generate an adequate number of responses, it should be noted that most of the listed companies in Sri Lanka are located either in the Colombo district or in neighbouring districts, which falls within the western province region. This in fact increased the physical accessibility of the target companies and controlled various cost associated with administering of the survey.

Sampling is one of the elements of research design and is described as the selection of parts from the population. Sampling involves identifying the population, decide between census and sample, method of sample, determine the sample size and select the sample (Daniel 2012). The goal of sampling is to reduce sampling error and this is achieved by important expectations of sampling procedure are representativeness and adequacy. The expected outcome of sampling is to select a sample that is representative and adequate to generalize the findings to the larger population. Due to limited size of the target population, a sample was not selected for this phase of the study and it was decided to survey all the 196 companies. A breakdown of the eligible companies based on their industry is provided in Table 4.1.

Table 4-1 Industry Profile

Industry	No.
Accommodation and food service activities	27
Agriculture, forestry, and fishing	25
Construction	03
Electricity, gas, steams, and air conditions supply	05
Financial and insurance activities	54
Human health and social work activities	05
Information and communication	02
Manufacturing	54
Professional, scientific, and technical activities	08
Real estate activities	01
Transportation and storage	01
Wholesale and retail trade	11
Total	196

As per the table below, the lowest sample size is 55 and the largest sample size is 282. These values are obtained based on the total population of the study, degree of freedom, and expected margin of error. However, these sample sizes can be arbitrary because the formulas used by authors were developed based on certain assumptions (i.e. normal distribution). Additionally, the above priori sample sizes were calculated without considering the data collection method and method of data analysis or statistical procedure. Hence, priori sample size may be determined by specific guidelines pertaining to the analytical tool.

Table 4-2 Minimum Sample Size

	Confidence Intervals	χ^2 df = 1	Error		
			.10	.05	.01
Krejcie and Morgan (1970)	90%	2.706	55	140	275
	95%	3.841	72	165	279
	99%	6.635	105	201	282
Yamane (1967)			75	167	279

4.3.2 Questionnaire Design and Operationalization of variables

Guidelines for developing questionnaires can be broadly divided into guidelines on scale development and guidelines on scale measurement. Broadly, questionnaire development may include, identifying and defining the construct, generate items that captures the construct, determine the scale, pilot testing and assessing reliability and validity. As the first step of scale development, Churchill (1979) suggest to survey the literature to conceptualize and specify the domain of the constructs. The second step of the procedure is to identify domains, components and items of the construct through a literature search (Churchill 1979). An important consideration here is to determine whether the items should take the form of reflective or formative measures. This is relevant for studies that intend to use SEM as the method of analysis. Once the structure of the construct is determined, attention should be paid to the measurement of the construct. There seems to be difference in opinions with regard to the number of items in a scale. Some scholars have argued in favor of good single item measure whereas the conventional approach has been to adopt multi item measures (Churchill 1979; Diamantopoulos et al. 2012; Rossiter 2002). It has also been claimed that single item measures are unlikely to capture the richness of complex constructs (Slater and Atuahene-Gima 2004). The next step is to determine the number of scales to capture the response. Likert-type scales are commonly used in strategic management research and studies have found that there is a stronger relationship between the scales and higher levels of reliability (Churchill and Peter 1984). Conducting pilot tests is another step in the process of questionnaire design. The purpose of pilot test is to refine questionnaires or data collection instruments to be concise, clear, consistent, and understandable to the respondents (Saunders, Lewis and Thornton 2009). The final step of the process is to provide evidence of reliability and validity. Reliability is the internal consistency between items of a construct. Validity is the items or measures of a variable measures what it intend to measure. It is widely considered that reliability is a prerequisite for validity and is measured using reliability coefficient (Cronbach α) (Slater and Atuahene-Gima 2004). As for validity, Churchill (1979) suggest provide evidence of convergent validity and discriminant validity.

4.3.2.1 External Stakeholder Pressure Construct

External stakeholder pressure is a single dimension construct comprising seven items. The respondents were asked to determine the degree of pressure exerted by external stakeholders on the organization to adopt corporate sustainability strategy on a seven-point Likert-type scale, where 1 = “very low” and 7 = “very high”. Table below provides the items of external stakeholder pressure and its literature sources.

Table 4-3 External Stakeholder Pressure Construct

Items	Sources
SP1 Customer/Buyer	Buysse and Verbeke (2003), Cordano, Marshall, and Silverman (2010), Darnall, Henriques, and Sadorsky (2010), Gonzalez-Benito and Gonzalez-Benito (2006), Ahmad, Soskolne, and Ahmed (2012), He and Chen (2009), Henriques and Sadorsky (1999), Henriques and Sharma (2005), Ramanathan, Poomkaew, and Nath (2014) , Murillo-Luna, Garces-Ayerbe, and Rivera-Tores (2008), , Vazquez-Brust, Liston-Heyes, Plaza-Ubeda, et al. (2010), Wagner (2011).
SP2 Suppliers	
SP3 Competitors	
SP4 Media	
SP5 NGOs/ENGOS	
SP6 Policy makers and regulators	
SP7 Government	

4.3.2.2 Institutional Pressure Construct

Institutional pressure is a single dimension construct comprising eight items. In empirical studies institutional pressure has been operationalized either as a single dimension or multi-dimensional constructs. The study by Wendy, Lisa, and Kevin (2014) examined the impact of normative, mimetic, and coercive pressures separately on supplier environmental practices. Similarly, Zhu, Sarkis, and Lai (2013) also examined the impact of the three components of the institutional pressure separately on green supply chain management practices and performance. However, Colwell and Joshi (2013) in their study used structural equation modeling to construct institutional

pressure as a second order construct. Review of various operationalization of the construct suggests that the choice of the construct was mainly determined by the purpose of the study. Furthermore, Dimaggio and Powell (1983) states that the components of institutional pressure are not empirically distinct. It can also be argued that whether members of organizations do perceive pressure independently of each other or collectively is unknown.

Initially, a list of eighteen (18) items was generated from prior literature to cover normative, mimetic, and coercive pressure. Based on feedback from experts and during the stage of pre-testing, and a second thorough review of the items, the number of items was reduced to eight. The respondents were asked to circle the degree of institutional pressure perceived by their organizations on a Likert-type scale ranging from 1 to 7. In the scale, 1= “strongly disagree” and 7= “strongly agree”. See table below for the items of institutional pressures and its literature sources.

Table 4-4 Institutional Pressure Construct

Items	Sources
My organization engages in corporate sustainability because:	Colwell and Joshi (2013), Dayana,
IP1 It is the right thing to do.	Maliah, and Nik
IP2 It is beneficial to adopt international standards on sustainability (ISO, GRI).	(2011), Walker, Ni, and Huo (2014) Zhu,
IP3 Organizations want to be recognized as a responsible corporate citizen.	Cordeiro, and Sarkis (2013).
IP4 Most organizations today are engaging in corporate sustainability.	
IP5 Influence from laws, regulations, international agreements and protocols.	
IP6 Fines & penalties are imposed for violating laws on social justice & environment.	
IP7 Non-compliance to laws on social justice & environment leads to legal action.	
IP8 Non-adoption may affect organization’s future prospects and value.	

4.3.2.3 Managerial Motive

Managerial motive is a one-dimensional construct comprising three items. Prior studies have shown that there are many motivations for managers in organizations to adopt corporate sustainability strategy and they can be broadly categorized into three types of motives namely: strategic, value, and legitimacy. It is also likely that more than one motive may drive organizations to adopt corporate sustainability strategy (Maignan and Ralston 2002). The three items representing each one of the motives were developed from previous studies. The respondents were asked to state their degree of agreement with the items of managerial motives on a Likert-type scale, where 1 = “strongly disagree” and 7 = “strongly agree”. The items of managerial motives and its sources are included in the table below.

Table 4-5 Managerial Motive Construct

	Items	Sources
MM1	Sustainability is part of my organization’s culture and core values.	Bansal and Roth (2000), Bronn and Vidaver-Cohen (2009), Maignan and Ralston (2002).
MM2	Sustainability improves my organization’s financial performance and competitive posture.	
MM3	Sustainability in my organization is in response to pressures and scrutiny of one or more stakeholder groups.	

4.3.2.4 Adoption of Corporate Sustainability Strategy Construct

Adoption of corporate sustainability strategy is one-dimensional construct comprising seven items. Initially a list of fourteen (14) items were generated from previous studies. Although there is no specific construct that has been developed and empirically tested for corporate sustainability strategy, constructs with similar conceptualization can be found within the broad literature of corporate sustainability. Drawing on those studies and on some corporate sustainability related scales found in the literature, the items were identified and developed. After much deliberation and thought and expert feedback, the most suitable seven items was included in the final questionnaire. Respondents were required to state their level of agreement with the items of corporate

sustainability strategy in a Likert-style scale where 1 = ‘strongly disagree’ and 7 = ‘strongly agree’. Table below list the items and the sources of items of corporate sustainability strategy.

Table 4-6 Adoption of Corporate Sustainability Performance Construct

Items	Sources
CS1 Developed explicit policies & guidelines on sustainability	Bansal (2005), Chan (2005), Chow and Chen (2012), Henri and
CS2 Organizational mission reflects commitment to sustainable development	Journeault (2010), He
CS3 Engages with stakeholders to identify their sustainability concerns & issues	and Chen (2009), Ni et al. (2013), Reyes-
CS4 Established indicators and targets for sustainability	Rodríguez, Ulhøi, and Madsen (2014), Singh,
CS5 Established sustainability criteria towards suppliers & sourcing	Jain, and Sharma (2014), Wisner, Bagozzi, and
CS6 Set up a management team/unit to implement & monitor sustainability activities	Epstein (2006),
CS7 Reports sustainability initiatives and performance	

4.3.2.5 Integration Capability

The variable integration capability assess the degree of capability of an organization to integrate strategic initiatives. The construct was newly developed for this study. Strategic management literature was surveyed to identify the items relevant to construct the variable. In the first phase, eleven (11) items were generated from various studies. Finally 7 items were selected. After receiving feedback from experts and the pilot testing resulted in reducing the number of items to seven (7). Respondents were required to rate the items in a Likert-style scale ranging from 1 to 7, where 1 = “strongly disagree” and 7 = “strongly agree”.

Table 4-7 Integration Capability Construct

Items	Sources
<p>In my organization:</p> <p>IC1 Top management initiates and implements new strategic initiatives.</p> <p>IC2 Existing structure and culture supports new strategic initiatives.</p> <p>IC3 Cross functional teams implement new strategic initiatives.</p> <p>IC4 All organizational units coordinate to implement new strategic initiatives.</p> <p>IC5 Employees share knowledge when implementing new strategic initiatives.</p> <p>IC6 Training is provided to implement new strategic initiatives.</p> <p>IC7 Employees are rewarded for implementing new strategic initiatives.</p>	<p>Baihaqi and Sohal (2013), Hartmann and Germain (2015), Johnson and Filippini (2013), Lin and Wu (2014), Wu (2013), Zahra and Nielson (2002).</p>

4.3.2.6 Corporate Sustainability Performance Construct

Corporate sustainability performance is a multi-dimensional construct that encompass economic performance, social performance, and environmental performance. There are studies that have examined the components of sustainability performance in isolation like environmental performance or corporate social performance and then there are studies that have examined the concept as a multi-dimensional construct (Goyal, Rahman and Kazmi 2013). It is also evident from the extant literature that the above terminology is interchangeably used and there is no consensus with regard to the most appropriate way to measure or assess the concept of corporate sustainability performance. The complication may also be attributed to the studies that uses objective data to measure corporate sustainability performance. For example, the study by Wagner (2010) uses the overall corporate sustainability performance score obtained from the corporate sustainability performance index developed by the KLD. Similarly, Shrivastava and Addas (2014) uses environmental disclosure scores and ESG scores

as proxies of sustainability performance. However, studies that uses perceptual measures to ascertain the state of corporate sustainability performance in organization have used single or multi-dimensional scales (Bansal 2005; Chow and Chen 2012; Zailani et al. 2012) based on the purpose and design of the study. Therefore, it can be argued that studies that uses perceptual measures are likely to be more homogenous in their scales measuring corporate sustainability performance than studies that may uses various objective data developed or provided various third parties. Hence, this study uses corporate sustainability performance as a multi-dimensional construct. It measures the impact of corporate sustainability performance outcomes on a Likert-type scale, where 1 = “very small impact” and 7 = “very large impact”. See tables below for corporate sustainability performance items for each dimension and the sources.

Table 4-8 Economic Sustainability Performance Construct

Items		Sources
ES1	Generated income by selling waste product	Banerjee (2002), Bansal (2005), Chan (2005), Chow and Chen (2012).
ES2	Reduced cost of inputs	
ES3	Reduced the cost for waste management	
ES4	Differentiated products/processes based on the products/processes environmental performance	

Table 4-9 Social Sustainability Performance Construct

Items		Sources
SS1	Improved employee/community health and safety	Bansal (2005), Paulraj (2011).
SS2	Increase funds for local community initiatives	
SS3	Increased steps to protect rights of differently-abled and local community	

Table 4-10 Environment Sustainability Performance Construct

Items	Sources
EN1 Reduced energy consumption	Bansal (2005), Chan (2005), Hall and Wagner (2012), Paillé et al. (2014), Paulraj (2011), Sharma and Vredenburg (1998), Wagner (2011).
EN2 Reduced wastes and emissions	
EN3 Reduced impact on animal species and natural habitats	
EN4 Reduced the environmental impact of products and services offered	
EN5 Reduced the risk of environmental accidents (e.g. spills, releases)	
EN6 Reduced the purchase of non-renewable resources	

4.3.2.7 Financial Performance Construct

This study uses perceptual measures of financial performance. Use of subjective financial performance measures to capture relative improvement in comparison to other firms in the industry have been found to be highly correlated with objective measures of financial performance (Dess and Robinson 1984; Venkatraman and Ramanujam 1986). Furthermore, the use of subjective assessment of firm performance is widely found in strategic management literature (Combs, Crook and Christopher 2005). Accordingly, financial performance construct was developed as a single dimension construct comprising three items. The respondents were asked to rate each indicator of financial performance for the last three years in comparison to competitors as found in strategic management research. The Likert-style scale ranged from 1 to 7 where 1 = “very low” and 7 = “very high”. Importantly, the use of perceptual performance measures also ensures the confidentiality and non-identification of the respondents as mentioned during the data collection protocol.

Table 4-11 Financial Performance Construct

Items	Sources
RoA Return on Assets (RoA) in last three years compared to competitors	Amores-Salvado, Castro, and Navas-Lopez (2014), Chan (2005), Hall and Wagner (2012), Leonidou, Christodoulides, and Thwaites (2014), Leonidou et al. (2013), Reyes-Rodríguez, Ulhøi, and Madsen (2014), Saeidi et al. (2014), Worthington, Ram, and Jones (2006)
RoE Return on Equity (RoE) in last three years compared to competitors	
RoS Return on Sales/Revenue (RoS) in last three years compared to competitors	

4.3.3 Method of Data Collection

Primary data required for the quantitative study was collected using a survey design. The target key informant was manager or executive level employee knowledgeable about their company's corporate sustainability activities. In strategy and management research, the use of questionnaires to obtain perceptual data from organizational members is supported (Faulkner 2002). Furthermore, the use of perceptual measures is encouraged in the absence of objective measures in the strategy and performance literature (Dess and Robinson 1984; Hult et al. 2008).

Most studies on corporate sustainability strategy have mainly dependent upon self-perceptions of managers to evaluate the adoption of corporate sustainability strategies in organizations. One of the concerns of self-assessment is common method bias (Wagner 2007). Other concern is if a single informant is used how accurate is the response and whether single respondent responses is affected by social desirability bias.

4.3.4 Pilot Study

A pilot study was conducted after receiving approval from the ethics committee. First, the questionnaire was shared with several experts including university academics and members from the industry to obtain feedback on the questionnaire. In the next step, the questionnaire was administered among postgraduate students pursuing business

studies in Sri Lanka. Postgraduate students were selected because almost all of them are employed in industries and their feedback provided insight into their awareness and current level adoption of corporate sustainability in their respective organizations. Finally, the questionnaire was shared among potential respondents from the population of the study. Out of them 20 respondents returned the questionnaire. Respondents who took part in the pilot study were not contacted for the main study. Suggestions and feedback received from sharing the questionnaire helped to identify complex or confusing words, identify confusing questions and reduce overall length of the questionnaire.

4.3.5 Method of Analysis

It is intended to use Univariate, bivariate and multivariate data analysis techniques to analyse data. Statistical Package for Social Sciences, Analysis of Moment Structures and MODPROBE procedure (Hayes 2015) is used to conduct relevant analysis. Specially, Covariance-based Structural Equation Modelling is used to test the conceptual model and the proposed hypotheses.

4.4 Research Design: Qualitative Study

As outlined in chapter 1, the third research question of the study is ‘what factors enable and impede the Implementation of corporate sustainability?’ A qualitative research design was chosen because of the nature of the research question. Creswell’s view that qualitative research is undertaken when there is a problem or issue to be explored further justifies a qualitative research design (Creswell 2013). The purpose of qualitative research is to generate information to provide an in-depth understanding of the research question or phenomenon of interest (Barr 2004).

4.4.1 Sample

Purposive sampling method was used to identify the companies and individuals that could provide information with regard to the research question of the qualitative study. It is claimed that this method of sampling is appropriate for exploratory research because it allows the researcher to identify cases to fit the research question under investigation (Daniel 2012; Neuman 2006). The choice of purposive sampling method was also justified because a directory or database that provides information on

corporate sustainability aspects of Sri Lankan companies is non-existent. Brewerton and Millward (2001) considers purposive sampling method to be useful in the absence of clearly defined population or sampling frame.

The next key aspect of sampling is to determine the sample size. Unlike in quantitative studies, the number of elements studied in a qualitative research is fewer. However, there is considerable difference of opinion among qualitative methodologists with regard to the sample size. From the qualitative research methodology literature, it can be ascertained that there are two approaches to determining the sample size. The first approach emphasize that the sample size of a qualitative research depends on the data collection method (Creswell 2013). For example, Morse (2000) recommends 30-60 participants for semi-structured interviews and 20-30 participants for grounded theory. Creswell (2014) recommends 20-30 individuals for grounded theory and case studies to be about 4-5. As for interview and focus group methods, the recommendation ranges from 6-12 participants and 3-6 focus groups respectively (Johnson and Christensen 2008; Krueger 2000). The second approach that can be adopted to figure out the sample size is based on the concept of data saturation (Guest, Bunce and Johnson 2006). This requires the researcher to collect and analyse elements to the point that additional or new elements does not generate new information. However, the point in which the data saturation occurs can't be predetermined and Tashakkori and Teddlie (2010) informs that many factors comes into play in determining the point of data saturation.

As an additional step, qualitative studies on corporate sustainability and related topics by Abreu (2009), Eweje (2011), Glover et al. (2014), Huq, Stevenson, and Zorzini (2014), Lamberti and Noci (2012), Nielsen and Thomsen (2009), Oberseder, Schlegelmilch, and Murphy (2013), Ramirez (2013) and Williams and Schaefer (2013) were examined to identify the number of participants. Findings show that the number of interview participants representing top-level managers in the above studies ranged from 03 to 20. Determining a priori sample size has come under some criticism in qualitative research methodology literature and yet, qualitative methodologists recommends to specify a sample size (Patton 2002). Thus, it can be argued that the sample size of a particular qualitative study is a judgement call that depends on the expertise and experience of the researcher.

Eight large companies that have been in the forefront of corporate sustainability in Sri Lanka were identified through news archives, corporate web sites, annual reports, and sustainability related awards and events. In each of the identified company, a key informant responsible for sustainability at the top or middle level of the management was identified through various sources. The potential companies and the participants were approached through either personal connections or telephone to inquire their interest to participate in the study. Welch et al. (2002) has recommended employing personal connections to gain access to corporate elites such as the top-level management. The top-level manager responsible for sustainability belonging to six of the identified companies agreed to participate in the study. One of the companies that decline to participate in the study informed that their manager for sustainability had quit the company at the time of invitation. The other company that decline to participate in the study informed that they had been incurring losses and had halted sustainability activities. Further effort was made to identify and invite two more companies that were similar in profile to replace the companies that decline to participate in the study. Most of the companies that were invited showed unwillingness to participate citing various reasons. Hence, the sample of participants in the qualitative study had to be limited to the six top-level managers responsible for sustainability that gave the consent to participate in the study. Limited access to companies, reluctance of companies to participate in the study, and resource and time constraints were the main reasons that limited the sample size. The profile of companies and the title of managers participated in the qualitative study are given in the table 6-1 in chapter 6.

4.4.2 Interview Design and Data Collection

Structured interviews were identified as the most appropriate method of data collection for the qualitative study because interviews are considered an efficient way of gathering rich empirical data (De Massis and Kotlar 2014; Eisenhardt and Graebner 2007). More importantly, structured interview designs ensure comparable responses and avoid bias (Hair et al. 2011). However, Patton (2002) cautions that the quality of information generated using the interview method largely depends on the interviewing skills of the researcher. Several main and auxiliary open-ended questions were developed for the interviews focusing on the key elements of the research question of

the qualitative study. The interview questions were developed taking into consideration Creswell's suggestion that interview questions are often the sub questions of the overall research question written in a way to be understood by the interviewee (Creswell 2013). The initial list of interview questions was reviewed by the academics associated with this research project. After obtaining ethical clearance, an industry expert with qualitative research experience and an executive employee of a company involved in sustainability was approached for feedback and pre-testing on the interview design and questions. Sampson (2004) recommends pre-testing in qualitative research because, it can facilitate the direction of the research, refine research instruments, and minimize risks. The industry expert and the pre-test participant suggested few minor changes such as changing the order of the questions, reword some questions, combine questions with similar structures, remove auxiliary questions from the interviewee's schedule because their purpose is to guide the interviewer, and simplify the firm profile questions that were incorporated. The duration of the pre-test was around 30 minutes. See Appendix C for the interview protocol and schedule.

The first step of the data collection process was to obtain an appointment from the top-level manager for sustainability in each of the six companies that agreed to participate in the study. At the point of contact, each of the potential interviewees was informed about the research project and the steps taken to maintain their confidentiality. Prior to giving the appointment, all interviewees requested to provide them with the interview questions. Honouring this request and following the ethical guidelines, documents on ethical clearance and the interview protocol and questions were provided to each of the participant. The participants were approached again to schedule an appointment. At times, the participants had to be contacted several times to obtain an appointment because they were top-level managers with significant responsibilities and hectic schedules. In several occasions, the appointments were postponed and rescheduled. Despite the delays, all six interviews were completed within duration of six months in 2014.

All the interviews began with a brief introduction about the research project and interview protocol. Prior to moving on to the interview questions, permission was sought from the interviewee to use a tape recorder. Some of the interviewees consented to the use of the tape recorder and some only consented to the taking of notes. The

interviews were carried out as per the interview protocol and no ethical concerns emerged. All the interviews were conducted face-to-face at the offices of the respective interviewees. The interviews lasted between 30 – 50 minutes. At the end of the each of the interview session, the interest of the interviewee to give feedback on the interview transcript was inquired. The interviewees mentioned that they respect the process and had little time for further review and feedback. After completion of the interview, audio records and written notes were collated to produce interview transcripts for each of the interviewee. All the interview transcripts were produced in Microsoft® word documents. The interview transcripts were further reviewed to remove any name of company or individual that could have been mentioned during the interview session to ensure anonymity.

4.4.3 Analysis of Data

The consistency of information in the interview transcripts were cross-checked with secondary or archival information published by the respective participating companies available in the public domain (i.e. sustainability reports, web sites) before analysing the qualitative data. Since the purpose of the qualitative study was to identify factors enabling and impeding the implementation of corporate sustainability strategy, a content analysis was considered the most appropriate method of analysis. The texts in the interview transcripts were analysed using a three step coding approach based on the works of Miles and Huberman (1994). This approach is also known as the ‘Ladder of Analytical Abstraction’ (Carney 1990). Coding is described as a process of categorizing and sorting data by Charmaz (1983).

The first step of the analytical approach is to summarize the data. Each interview transcript was examined several times and texts and sentences that highlight factors relevant for the research question were marked and recorded. The second step is the aggregation of data which is to assign codes to each texts and sentences identified in the first step. Each marked and recorded texts and sentences from each of the transcripts were assigned a first-order theme. Next, each of the texts and sentences were grouped under a single first-order theme to review whether the assigned themes were representing identified texts and statements. The third step requires to draw conclusions and if possible to display data in a logical way. Given the research question has already identified the two broader categories or themes of factors, the

first-order themes were grouped into factors enabling impeding implementation of corporate sustainability strategy.

To ensure the validity of coding, two external reviewers were asked to perform the coding for two of the interview transcripts. The coding of the external reviewers was compared with the researcher's coding and was found to be highly similar.

4.5 Ethical Clearance

Curtin University requires all research projects involving humans as subjects to obtain written approval from the Human Research Ethics Committee (HREC). As per the guidelines on ethical approval for research involving humans as subjects, the researcher is required to submit an application according to the class of risk associated with the research project. After consultation with the supervisors of this research project and the Office of Research and Development at the university, the class of risk associated with this research project was determined as 'low risk'. Accordingly, Applications for Approval of Research with Low Risk (Form C) along with other supporting documents were submitted and ethical approval was obtained.

In line with the guidelines on ethical approval, any kind of interaction with potential experts and participants were avoided. This includes the avoidance of obtaining feedback from experts on the data collection instruments and conducting the pilot study. Post-ethical approval, participants were provided with the Participant Information Sheet (PIS) during the various stages of data collection as mentioned in the guidelines. The PIS included clauses on information on the research project, consent to participate, confidentiality, and other information. Adhering to the guidelines, participants were informed that their participation is voluntary and they are allowed to withdraw at any given time. Furthermore, the participants were informed that the returning of the questionnaire with responses and participating in the interview was assumed as in agreement to participate in the research project and to the use of the data. To ensure confidentiality of the participants (survey respondents and interviewees) any kind of personal information (i.e. name) or information that could directly identify the participants was not collected. In the case of the survey, all firms in the sample and respondents were allocated a numerical code to ensure de-

identification. Similarly, the interview sessions were administered by set of protocols to ensure interviewee de-identification.

4.6 Summary

This chapter has presented a detail account of the methodology applied in this thesis. Methodological literature underpins that the methodological approach of a study is determined by the research questions. Since the research questions of this study belong to two different research method strands, it was determined to apply a mixed method approach guided by pragmatism. The choice of mixed method applied in this study is parallel mixed methods design. The procedural notation is QUAN + qual. Accordingly, this chapter has presented the research design for either strands which includes: population, sample, data collection instruments and methods, and method of analysis.

Chapter 5

Analysis and Results: Quantitative Study

Overview

Chapter 5 reports the analysis and results of the quantitative study. This chapter covers the reliability and validity of the measurement constructs and empirically test the hypotheses proposed in chapter 3.

5.1 Response Adequacy

127 fully complete questionnaires were received from the target population of 196 listed companies. This number of responses was deemed more than adequate given the population of the study was limited. In order to obtain a higher response rate each company in the list was contacted several times and was personally visited to develop a good understanding with potential respondents. As stated in previous chapter, proximity to location of companies was another major reason why such a response was obtain. However, there were instances where companies were not willing to participate and didn't respond to our request participate in the study. Profile of the individual respondents is given in table below.

Despite the call for large samples, the existing guidelines or recommendations pertaining to sample size in SEM literature remains an on-going debate and has received significant attention in SEM literature. Another argument that supports the SEM methodologists call for large sample is that chi-square statistic does not follow the chi-square distribution when sample size is small ($n < 200$) (Bone, Sharma and Shimp 1989).

The existing guidelines regarding the sample size can be categorized into guidelines on absolute numbers, guidelines on observation-parameter ratio, and guidelines power analysis. Extant literature on the application of SEM reveals that there are two approaches to determining sample adequacy: power analysis (Shook et al. 2004) and rules of thumb (Williams, Gavin and Hartman 2004). Martinez-Lopez, Gazquez-Abad, and Sousa (2013) state that the median ratio of sample size to number of free parameters is about 4:1 in their study of marketing and business research

papers. Shah and Goldstein (2006) examining the application of SEM in operations management literature found that majority of the studies had less than 10:1 sample size to parameters ratio. Moreover, they found that about 36% of the papers they examined had less than 5:1 sample size to parameters ratio. Baumgartner and Homburg (1996) found that the median sample size was 178. Studies have generally found that sample size to parameter ratio is below stipulated rules of thumb (Baumgartner and Homburg 1996; Shah and Goldstein 2006). Although determining power of the sample prior to data collection is difficult, (MacCallum, Browne and Sugawara 1996) provides a priori sample size to meet expectations of statistical power based on degrees of freedom (df) and RMSEA.

Bentler and Chou (1987) recommends five observations per variables (5:1) if there are multiple indicators and distribution assumption is met. Wolf et al. (2013) suggest that determining the sample size should be based on the evaluation of the specific model. There are studies that has performed CBSEM with samples less than 100 (Doloi 2009; Doloi, Sawhney and Iyer 2012; Eriksson and Pesämaa 2007; Ikediashi, Ogunlana and Udo 2013; Jin, Doloi and Gao 2007; Vinodh and Joy 2011). Anderson and Gerbing (1988) proposes a sample consisting of 150 observations. According to MacCallum, Browne, and Sugawara (1996) to conduct MLE is SEM it is a must to have $N \geq p$.

Although determining power of the sample prior to data collection is difficult, MacCallum, Browne and Sugawara (1996) provides a priori sample size to meet expectations of statistical power based on degrees of freedom (df) and RMSEA. Collection of primary data using surveys and self-administered questionnaires suggest that researches have difficulty in collecting very large samples to meet SEM requirements.

5.2 Respondent Profile

Table 5-2 below provide a summary of characteristics of respondents. As highlighted in the previous section, the number of respondents were 127 ($n = 127$). Two-third (67 per cent) of the respondents were holding Senior Manager or Managerial positions where as one-third (33 per cent) of the respondents held Senior Executive or Executive positions. Almost one-fourth (23 per cent) of the respondents had work experience of more than ten (10) years. Respondents with work experience between five to ten (5 –

10) years and below five years were 32 per cent and 45 per cent respectively. Overall, 55 per cent of the respondents had work experience more than 5 years. It is also evident from the table that respondents come from various work divisions. Comparison of work division of the respondents suggest that respondents held positions in various departments at the time of the survey. Overall, 54 per cent of the respondents belong to finance divisions, 38 per cent of the respondents were from human resources, operations & facilities, and supply chain. Comparing the gender of the respondents informs us that 96 per cent of the respondent were male and only 4 per cent of the respondents were female. Female labour force participation in Sri Lanka has been around 30 percent to 35 per cent. Although there is no statistics with regard to women holding managerial positions in Sri Lankan organizations, it is widely believed to be lower. Hence, the 4 per cent respondents being female falls within the evidence provided. Furthermore, there is no empirical evidence to suggest that gender identity may influence how corporate sustainability is perceived. Two-third (66 per cent) of the respondents at least had a bachelor degree. The rest of the 34 per cent of the respondents had obtained professional qualifications.

Table 5-1 Summary of Respondent Profile

Employment position	Senior Executive/Executive	33%
	Senior Manager/Manager	67%
Work experience (years)	Less than 5	45%
	5 – 10	32%
	Above 10	23%
Work Division	Administration & Establishment	1%
	Corporate Planning	4%
	Finance	28%
	Human Resources	13%
	Manufacturing	3%
	Marketing	26%
	Operations & Facilities	12%
	Supply chain	13%
Risk & Compliance	1%	
Gender	Male	96%
	Female	4%
Educational qualifications	Post graduate	16%
	Bachelor degree	50%
	Professional	34%

5.3 Univariate and Bivariate Analysis

Univariate and bivariate are obtained by summing values using the mean method. The highest mean value is for financial performance variable which is 5.23. The lowest mean value is for external stakeholder pressure which is 3.69. Among sustainability performance dimensions, environmental sustainability performance has the highest mean value of 4.62. All the Skewness statistics are between 0 and 1. Kurtosis statistics ranges between -0.42 and 2.22. Although skewness and kurtosis values not equal to zero they well below the moderate and severe non-normality values proposed by Curran, West and Finch (1996). Univariate statistics are presented in table 5-2.

Table 5-2 Univariate Statistics

Variable	Mean	Std. Deviation	Skewness	Kurtosis
External Stakeholder Pressure	3.69	.89	.55	-.42
Institutional Pressure	4.56	.67	-.11	.45
Managerial Motive	4.57	.72	.70	1.04
Corporate Sustainability Strategy	4.61	.61	.64	.78
Financial Performance	5.23	.70	-.09	-.62
Economic Sustainability Performance	4.43	.62	-.08	1.18
Environmental Sustainability Performance	4.62	.71	.66	.77
Social Sustainability Performance	4.60	.83	.78	1.05
Integration Capability	4.65	.69	-.12	2.22
Sustainability Performance	4.60	.69	.88	1.06

Tables 5-3 and 5-4 provides correlation coefficients between variables in the study. Table 5-3 includes the each of sustainability performance dimension separately whereas the Table 5-4 includes sustainability performance variable that encompasses the mean values of the all three dimensions. Among the antecedent variables of the conceptual model, the highest correlation coefficient is between managerial motive and corporate sustainability strategy. The correlation between institutional pressure and corporate sustainability is stronger than the correlation between external stakeholder pressure and corporate sustainability strategy. Similarly, institutional pressure and managerial motive has a stronger association than between external stakeholder pressure and managerial motive. Significant correlation exist between all the variables in the antecedent part of the conceptual model. This is evident in both the tables.

In the outcome part of the conceptual model, none of the variables are correlated with the dependent variable financial performance. This can be seen in both the tables. However, there is significant correlation between the sustainability performance dimensions in Table 5-3. In Table 5-4, corporate sustainability strategy is correlated with sustainability performance and integration capability. The highest correlation values found in the tables are below 0.9 suggesting the threat of multicollinearity is unlikely.

Table 5-3 Correlation Matrix I

Variable	1	2	3	4	5	6	7	8	9
External Stakeholder Pressure	1								
Institutional Pressure	.308**	1							
Managerial Motive	.258**	.531**	1						
Corporate Sustainability Strategy	.339**	.512**	.718**	1					
Financial Performance	0.101	-0.023	0.111	0.126	1				
Economic Sustainability Performance	0.07	.304**	0.164	0.122	-0.075	1			
Environmental Sustainability Performance	.277**	.566**	.713**	.706**	0.10	.308**	1		
Social Sustainability Performance	.264**	.431**	.678**	.601**	0.158	0.157	.726**	1	
Integration Capability	.213*	.491**	.592**	.643**	0.10	0.121	.606**	.574**	1
** Correlation is significant at the 0.01 level (2-tailed).									
* Correlation is significant at the 0.05 level (2-tailed).									

Table 5-4 Correlation Matrix II

Variable	1	2	3	4	5	6	7
External Stakeholder Pressure	1						
Institutional Pressure	.308**	1					
Managerial Motive	.258**	.531**	1				
Corporate Sustainability Strategy	.339**	.512**	.718**	1			
Financial Performance	.101	-.023	.111	.126	1		
Sustainability Performance	.280**	.591**	.764**	.721**	.136	1	
Integration Capability	.213*	.491**	.592**	.643**	.100	.643**	1
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

5.4 Structural Equation Modeling

Structural equation modelling is a second generation multivariate statistical technique (Xiong, Skitmore and Xia 2015) that can simultaneously test a series of dependence relationships (Hair et al. 2010; Shook et al. 2004). The application of SEM in the various areas of business research has been growing substantially (Shah and Goldstein 2006; Shook et al. 2004). What is evident from SEM literature is that it is a family of different approaches and estimation methods. SEM mainly consist of two approaches, the covariance-based structural equation modelling (CB-SEM) approach and the variance-based structural equation modelling (VB-SEM) (Hair et al. 2014) approach. Similarly, the estimation methods found in SEM can be categorised into full information estimation methods and partial information estimation methods.

A two-step approach has been proposed to conduct SEM (Anderson and Gerbing 1984; McDonald and Ho 2002). The first step is to perform the confirmatory factor analysis (CFA). The purpose of CFA is to specify the relations of the manifest (observed) variables to their latent constructs in order to provide evidence on construct validity (Anderson and Gerbing 1988). The second step is to perform the structural model and its purpose is to test the hypothesize relationships between latent constructs developed based on certain theory (Anderson and Gerbing 1988).

5.4.1 Evaluation of Model Fit

Fit indices that have been developed to evaluate research models using SEM are categorised into Absolute fit indices, Goodness-of-fit indices, Incremental fit indices, and Parsimony fit indices. Although SEM literature has clearly set out threshold levels for various fit indices, it is advocated not to consider them as ‘golden rules’ to determine model fit. Table 5-5 outlines the threshold levels for the few of the commonly used fit indices.

Table 5-5 SEM Model Fit Threshold Levels

Family of Fit Indices	Fit Indices	Threshold Levels
Absolute Fit Indices	Chi-square (χ^2)	A positive non-significant χ^2 (Kline 2011)
Goodness of Fit Indices	GFI	GFI > 0.90 (Hair et al. 2010; Joreskog and Sorbom 1984)
	RMSEA	RMSEA < 0.05 (pclose < 0/05) (Browne and Cuddeck 1993; Hu and Bentler 1999; Steiger 2007)
Incremental Fit Indices	CFI	CFI > 0.90, CFI > 0.95 (Bentler 1990; Hair et al. 2010)
	TLI	TLI > 0.95 (Hair et al. 2010; Tucker and Lewis 1973)

5.5 Multicollinearity

Multicollinearity was examined by regressing each variable on each other in the respective model. The Variance inflation factors (VIF) are given in table below (Table 5.3). The VIF values are well below the recommended level and suggest that multicollinearity is unlikely.

Table 5-6 Multicollinearity

Independent Variables	Dependent Variables								
	ST	IP	MM	ACSS	ESP	SSP	ENP	FP	IC
ST	-	1.13	1.16	1.12	-	-	-	-	-
IP	1.46	-	1.39	1.46	-	-	-	-	-
MM	2.23	2.07	-	1.41	-	-	-	-	-
ACSS	2.17	2.18	1.42	-	2.37	2.38	1.98	2.39	2.10
ESP	-	-	-	1.13	-	1.14	1.04	1.13	1.14
SSP	-	-	-	2.29	2.30	-	1.77	2.28	2.22
ENP	-	-	-	2.60	2.85	2.40	-	3.14	3.08
FP	-	-	-	1.04	1.03	1.03	1.04	-	1.04
IC	-	-	-	1.69	1.92	1.85	1.88	1.92	-

ST = External Stakeholder Pressure, IP = Institutional Pressure, MM = Managerial Motive , ACSS = Adoption of Corporate Sustainability Strategy, ESP = Economic Sustainability Performance, SSP = Social Sustainability Performance, ENP = Environmental Sustainability Performance, FP = Financial Performance, IC = Integration Capability

5.6 Confirmatory Factor Analysis (CFA)

As specified in SEM literature, the first step is to perform the confirmatory factory analysis (Anderson and Gerbing 1988; McDonald and Ho 2002). The purpose of CFA is to test the fit of theoretical or empirical models to data (Thompson 1997). At first, one-factor congeneric measurement model of each construct in the proposed research model was examined. Congeneric measurement models assumes unidimensionality and random measurement error (Cote and Greenberg 1990). To identify the congeneric measurement model, Graham (2006) proposed to set the path from the latent variable to one of the measurement items to 1 and remaining measures of the construct to be freely estimated. Next, the measurement model for research question one and two were separately examined. As demonstrated in the research model (see Figure 3.1 in Chapter 3), the antecedent part of the research model was based on the first research question and outcome part of the research model was based on the second research question. As mentioned above, the measurement models for each question were separately examined and were referred to as measurement model 1 and measurement model 2. Finally, a measurement model that includes all the constructs was also tested. The results of the measurement models are discussed in the following sections.

5.6.1 Institutional Pressure Construct

The latent construct institutional pressure consisted of eight items and was modelled as a first order reflective construct. The descriptive statistics for the construct is provided in Table 5-7. The mean values of the items in the constructs ranged from 4.46 to 4.65. The items IP4 and IP5 had the highest standard deviation of 0.95. Other than for the items IP7 and IP8, all other items skewness and kurtosis values were within the ± 1 range. Kurtosis values of items IP7 and IP8 were 1.26 and 1.09 respectively. Although the distribution statistics were not equal to zero (skewness $\neq 0$, kurtosis $\neq 0$), they were far below the moderate and severe non-normality values (Curran, West and Finch 1996). The measurement model had the fit statistics $\chi^2 = 26.46$ (d.f. = 20 p = .15), $\chi^2/df = 1.32$, CFI = 0.99, RMSEA = 0.05 (pclose = 0.45). The standardised regression weights of items other than for IP1 (SRW = 0.64) and IP7 (SRW = 0.69) were above the recommended level of 0.70 (Hair et al. 2010). The items IP1 and IP7 were retained as they were above the minimum recommended level of 0.5 (Hair et al. 2010). All the items were significant at 0.01 levels. Above evidence suggest that the one factor congeneric measurement model for institutional pressure had good fit. The institutional pressure construct is specified in Figure 5:1.

Table 5-7 Descriptive Statistics for Institutional Pressure Construct

Item Code	Mean	S.D.	Skewness	Kurtosis
IP1	4.61	0.78	-0.20	0.20
IP2	4.63	0.84	-0.01	0.12
IP3	4.57	0.88	-0.34	0.37
IP4	4.65	0.95	-0.03	0.23
IP5	4.54	0.95	-0.38	-0.37
IP6	4.46	0.81	0.03	-0.06
IP7	4.54	0.84	0.22	1.26
IP8	4.49	0.89	-0.30	1.09
Multivariate Kurtosis (C.R.) 8.43 (3.76)				

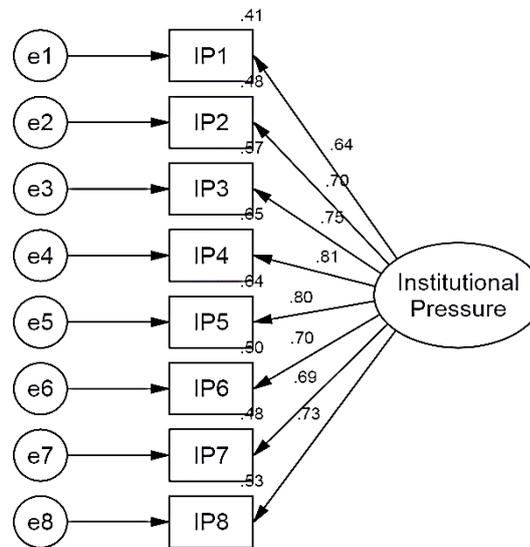


Figure 5:1 One Factor Congeneric Measurement Model for Institutional Pressure

5.6.2 External Stakeholder Pressure Construct

Stakeholder pressure was operationalized as a first order reflective construct and was measured using seven items. The descriptive statistics for the construct is provided in Table 5-8. The mean values of the items ranged from 3.58 for item ST5 to 3.83 for item ST1. Standard deviation values of items were from 0.89 for item ST2 to 1.14 for item ST5. The highest skewness value was 0.49 (ST3) and the lowest kurtosis value was -0.59 (ST4, ST7). The fit statistics of the model were $\chi^2 = 72.19$ (d.f. = 14 p = .00), $\chi^2/df = 5.16$ CFI = 0.93, RMSEA = 0.18 (pclose = 0.00). The standardised regression weights of the items were above the recommended level of 0.70 (Hair et al. 2010). All the items were significant at 0.01 level. The one factor congeneric measurement model for stakeholder pressure construct appears in Figure 5:2.

Table 5-8 Descriptive Statistics for External Stakeholder Pressure Construct

Item Code	Mean	S.D.	Skewness	Kurtosis
ST1	3.83	0.96	0.23	-0.07
ST2	3.74	0.89	0.13	0.12
ST3	3.79	0.97	0.49	-0.35
ST4	3.67	1.03	0.30	-0.59
ST5	3.58	1.14	0.32	-0.36
ST6	3.61	0.98	0.42	-0.38
ST7	3.61	1.04	0.48	-0.59
Multivariate Kurtosis (C.R.) 14.03 (7.04)				

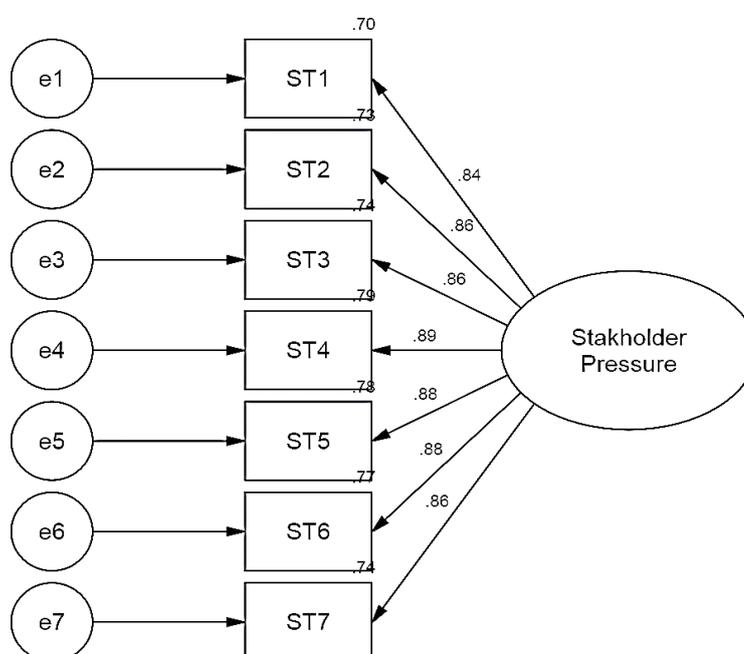


Figure 5:2 One Factor Congeneric Measurement Model for External Stakeholder Pressure

Since some of the fit statistics were beyond the recommended guidelines, a look at the modification indices and the standardized residual covariance was prompted. This revealed that ST4 - ST5 and ST6 – ST7 had modification indices (ST4 ↔ ST5, M.I. = 23.19, ST6 ↔ ST7, M.I. =16.62) and error terms ($\epsilon_{ST4} \leftrightarrow \epsilon_{ST5} = 0.70$, $\epsilon_{ST6} \leftrightarrow \epsilon_{ST7} = 0.71$) larger than other items in the construct. Although the standardized residual covariance values were within the acceptable level ($SRC < 2.5$) (Hair et al. 2010), it was decided to covary the items because there was theoretical basis. The item ST4 and ST5 correspondingly represented media and NGO/ENGOS. Both the

stakeholders are external secondary stakeholders. They have no direct transactions with organizations; hence, their roles are similar in many ways with regard to corporate sustainability. Therefore, the items were covaried. The item ST6 represented policy makers and regulators and item ST7 represented the government. These stakeholders are external secondary stakeholders and have no direct transactions with organizations. Yet, they influence each other in many ways. Government is responsible for legislation and the policy makers and regulators plays the dual role of providing government with necessary legislation inputs and implementing the imposed regulation. Thus, there was adequate reason to covary the items. All the items were significant at 0.01 levels. The respecified one factor congeneric measurement model produced the fit statistics $\chi^2 = 30.09$ (d.f. = 12 p = .00), $\chi^2/df = 2.51$, CFI = 0.98, RMSEA = 0.11 (pclose = 0.03) (SRMR .02.). Since the respecified measurement model showed better fit, it was accepted as the final version of the measurement model for the stakeholder construct. The respecified one factor congeneric measurement model for stakeholder construct is presented in Figure 5:3.

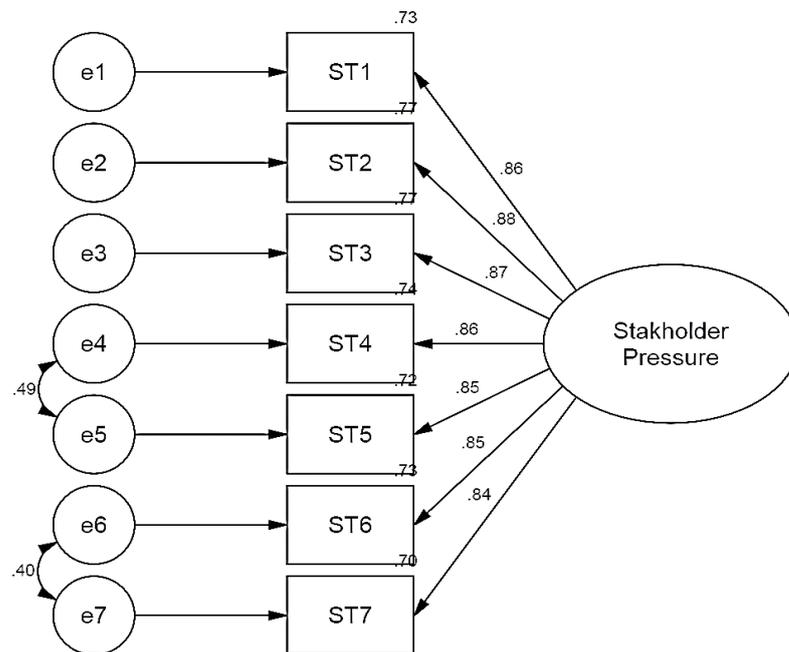


Figure 5:3 One Factor Congeneric Measurement Model (Respecified) for External Stakeholder Pressure

5.6.3 Managerial Motive Construct

The managerial motive construct was conceptualized as a first order reflective construct comprising three items. Table 5-9 gives the descriptive statistics of each item

in the construct. Although the univariate skewness and kurtosis values were not equal to zero, they were far below the levels considered for moderate and severe non-normality (Curran, West and Finch 1996). Latent constructs with three items are considered saturated or just-identified in the SEM literature and satisfies the call for a minimum of three indicators per latent construct when applying full information estimation methods (Hair et al. 2010). Three indicator latent constructs produces $\chi^2 = 0$ because the degree of freedom is zero. Similarly, three indicator latent constructs produces some fit indices equal to one (GFI = 1, CFI = 1). The items MM1 (0.75) and MM2 (0.88) in the construct had standardised regression weights above 0.70. The item MM3 had a standardised regression weight of 0.68 and was retained in the construct as it was above the minimum threshold level of 0.5 (Hair et al. 2010). See Figure 5:4 for the three indicator first order reflective measurement model for managerial motive construct.

Table 5-9 Descriptive Statistics for Managerial Motive Construct

Item Code	Mean	S.D.	Skewness	Kurtosis
MM1	4.63	0.81	0.24	0.16
MM2	4.59	0.88	0.75	0.60
MM3	4.48	0.84	0.18	-0.19
Multivariate Kurtosis (C.R.) -1.29 (-1.33)				

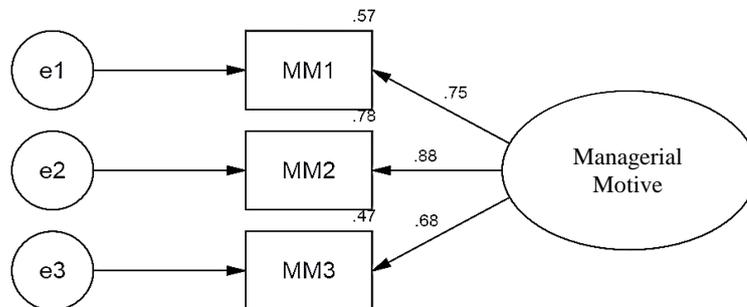


Figure 5:4 One Factor Congeneric Measurement Model for Management Motive

5.6.4 Adoption of Corporate Sustainability Strategy Construct

Adoption of corporate sustainability strategy construct included seven items. It was operationalized as a first order reflective construct. The descriptive statistics for the construct items are given in Table 5-10. Item CS7 had the highest mean and the lowest standard deviation values and item CS1 had the lowest mean and the highest standard deviation values. The distribution statistics for the construct's items ranged from -0.36 to 0.54. The one factor congeneric measurement model with seven items produced the fit statistics $\chi^2 = 17.27$ (d.f. = 14 $p = 0.24$), $\chi^2/df = 1.23$, CFI = 0.99, RMSEA = 0.04 (pclose = 0.52). The standardized regression weights of items CS1 and CS4 was 0.68 and 0.69 respectively and the standardized regression weights of all other items were above 0.70. It was assumed that the items CS1 and CS7 were unlikely to cause convergent validity concerns and their standardized regression weights were also above the minimum threshold level of 0.50 (Hair et al. 2010), the items were not removed. Since the one factor measurement model indicated good fit, it was accepted without any changes. Figure 5:5 shows the one factor congeneric measurement model for the construct.

Table 5-10 Descriptive Statistics for Adoption for Corporate Sustainability Strategy Performance Construct

Item Code	Mean	S.D.	Skewness	Kurtosis
CSS1	4.52	0.88	-0.24	-0.36
CSS2	4.61	0.81	0.11	-0.13
CSS3	4.59	0.82	0.36	0.15
CSS4	4.61	0.81	0.54	0.53
CSS5	4.65	0.78	0.29	0.33
CSS6	4.57	0.79	0.07	0.01
CSS7	4.70	0.76	0.12	-0.02
Multivariate Kurtosis (C.R.) -1.01 (-0.51)				

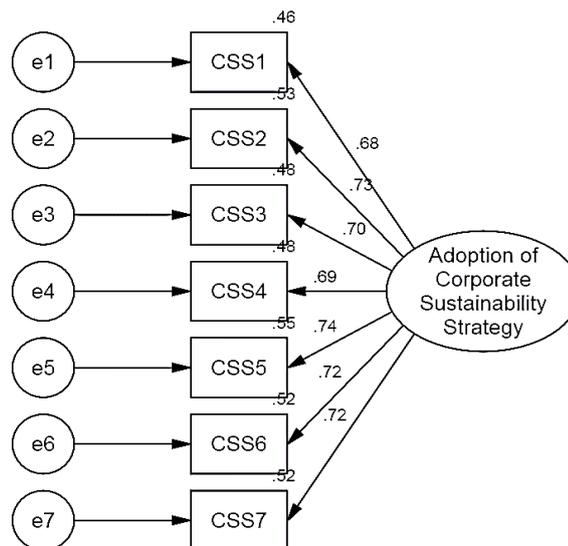


Figure 5:5 One Factor Congeneric Measurement Model for Adoption of Corporate Sustainability Strategy

5.6.5 Sustainability Performance Construct

Sustainability performance was conceptualized as a multi-dimensional construct that consisted of economic sustainability performance, social sustainability performance, and environmental sustainability performance dimensions. Although prior studies have operationalized sustainability performance as either single dimension or multi-dimensional construct, this study applied sustainability performance as a second order

reflective construct with reflective first order dimensions. Prior to establishing the higher order construct of sustainability performance, each dimension of the construct was examined independently.

First, the economic sustainability performance construct comprising four items was examined. The descriptive statistics pertaining to the construct are given in Table 5-11. The mean values and standard deviation of the construct items ranged from 4.26 - 4.63 and 0.92 - 1.19 respectively. The one factor congeneric measurement model fit statistics of the construct were $\chi^2 = 80.17$ (d.f. = 2 p = .00), $\chi^2/df = 40.09$ CFI = 0.36, RMSEA = 0.56 (pclose = 0.00). The standardized regression weights of items and model fit statistics revealed poor fit. See Figure 5.6.

Table 5-11 Descriptive Statistics for Economic Sustainability Performance

Item Code	Mean	S.D.	Skewness	Kurtosis
ES1	4.26	1.19	-1.33	1.45
ES2	4.42	0.98	-1.17	1.92
ES3	4.63	0.92	0.11	0.44
ES4	4.43	1.04	0.07	0.03
Multivariate Kurtosis (C.R.) 19.37 (15.75)				

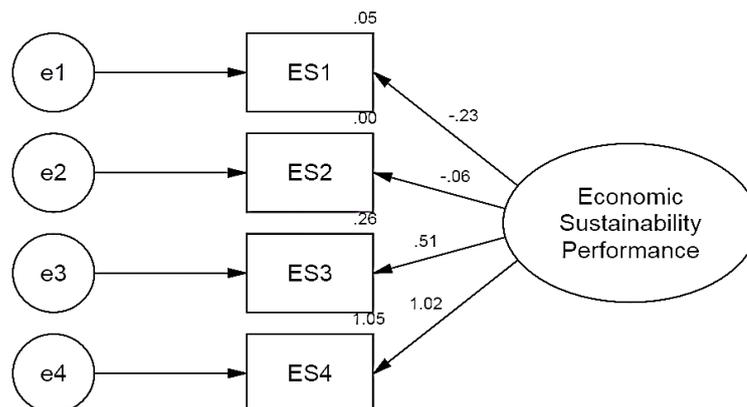


Figure 5:6 One Factor Congeneric Measurement Model for Economic Sustainability Performance

Items ES1 and ES2 of the economic sustainability performance construct had very low standardized regression weights ($SRW < 0.5$). In addition, the two items also had standardized regression covariance values above 2.5. Furthermore, both the items had negative skewness statistics -1.33 and -1.17. The kurtosis statistics of the items were 1.45 and 1.92. Although the skewness and kurtosis statistics were not in the range of moderate and severe non-normality (Curran, West and Finch 1996), it can be assumed that they have played a role in negative standardized regression weights of each item. Hence, the two items were removed from the construct as it could lead to construct reliability issues. As a result, the number of items in the construct was reduced to two. A single factor latent construct with two items leads to a negative chi-square (-1) and results in unidentified or under-identified measurement model. In order to generate a just-identified measurement model ($\chi^2 = 0$) for single factor latent constructs with two items an additional constraint is recommended to be imposed (Kline 2011). This was done by constraining the regression weights of the two items (ES3, ES4) in the construct to equal to one. A just-identified measurement model was generated ($\chi^2 = 0$, GFI = 1, CFI = 1) and the standardized regression weights of the items were 0.77 and 0.68. The respecified measurement model for the construct is shown in Figure 5:7.

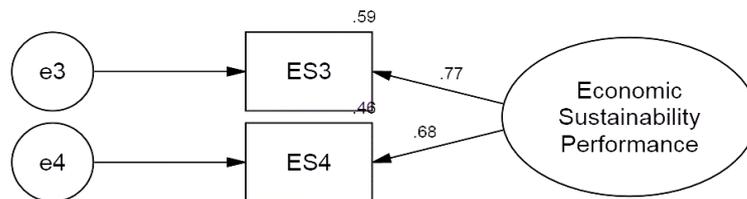


Figure 5:7 One Factor Congeneric Measurement Model (Respecified) for Economic Sustainability Performance

Next, measurement model for the three item social sustainability performance construct was examined. The descriptive statistics of the construct items are given in Table 5-12. The mean values of the items ranged from 4.33 to 4.77 and the standard deviation values ranged from 0.87 to 1.06. The distribution statistics of the construct ranged from -0.27 to 0.91. The three item one factor congeneric measurement model for social sustainability performance was just-identified because $\chi^2 = 0$ ($df = 0$) and CFI = 1.00. The standardised regression weights of all three items were above the recommended level of 0.70. See Figure 5:8 for the measurement model of social sustainability performance construct.

Table 5-12 Descriptive Statistics for Social Sustainability Performance Construct Items

Item Code	Mean	S.D.	Skewness	Kurtosis
SS1	4.70	0.95	0.23	0.51
SS2	4.77	0.87	0.24	0.91
SS3	4.33	1.06	0.39	-0.27
Multivariate Kurtosis (C.R.) 0.74 (0.76)				

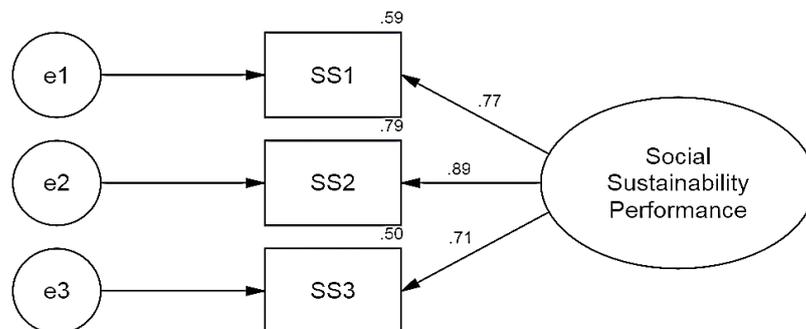


Figure 5:8 One Factor Congeneric Measurement Model for Social Sustainability Performance

Next, the environmental sustainability performance dimension of the sustainability performance construct was examined. The construct consisted of six items. The descriptive statistics of the construct items are given in Table 5-13. The fit statistics and standardized regression weights of the one factor congeneric

measurement model for environmental sustainability performance indicated good fit. The fit statistics of the one factor congeneric measurement model were $\chi^2 = 9.89$ (d.f. = 9 p = .36), $\chi^2/df = 1.10$, CFI = 0.99, RMSEA = 0.03 (pclose = 0.59). Although, the standardized regression weight of items EN4 (SRW = 0.67) and EN6 (SRW = 0.68) were below 0.70, the items were retained because: the values were above the minimum recommended level of 0.5 (Hair et al. 2010), the items were unlikely to cause reliability concerns, and the items enhanced construct validity. The standardized regression weight of all other items in the construct was above 0.70. Furthermore, all the items were significant at 0.01 level. Figure 5:9 presents the congeneric measurement model for environment sustainability performance.

Table 5-13 Descriptive Statistics for Environment Sustainability Performance Construct

Item Code	Mean	S.D.	Skewness	Kurtosis
EN1	4.64	0.90	0.25	0.22
EN2	4.71	0.86	0.37	-0.06
EN3	4.72	0.83	0.48	0.04
EN4	4.50	0.88	0.05	0.26
EN5	4.64	0.87	0.19	-0.19
EN6	4.50	0.99	0.04	-0.23
Multivariate Kurtosis (C.R.) 0.64 (0.37)				

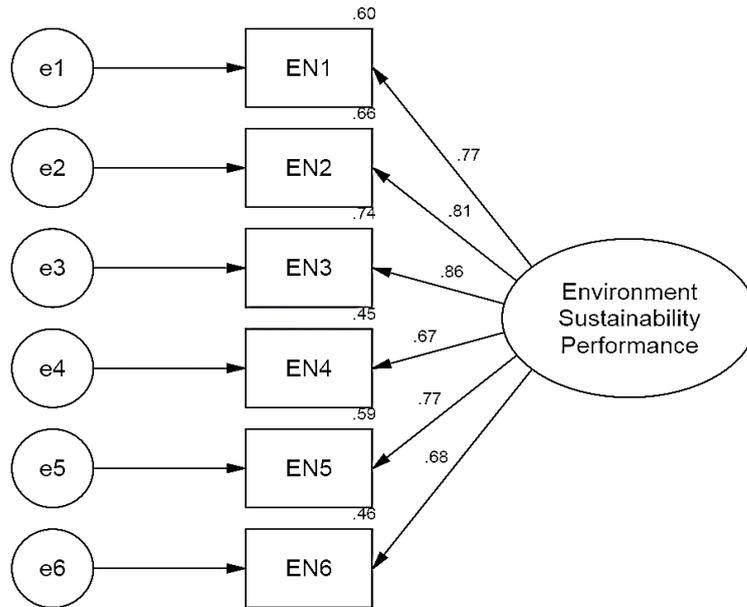


Figure 5:9 One Factor Congeneric Measurement Model for Environment Sustainability Performance

Finally, the second order sustainability performance construct was examined. The multivariate kurtosis statistic of the measurement model was 14.94 (C.R. = 4.98). The second order sustainability performance construct meets Kline's (2011) recommendation that to identify a second measurement model there must be at least three first order factors with each factor having at least two items. The fit statistics of the second order measurement model were $\chi^2 = 65.81$ (d.f. = 41 p = .01), $\chi^2/df = 1.61$ CFI = 0.97, and RMSEA = 0.07 (pclose = 0.15). Items ES3 and EN4 had the lowest standardized regression weight of 0.67 in the second order measurement model. The standardized regression weight of all other items in the sub dimensions of the second order measurement model was above 0.70. All the items were significant at 0.01 level. Additionally, MacKenzie, Podsakoff, and Podsakoff (2011) recommends to examine whether the squared multiple correlations of the paths originating from the second order construct to its sub dimensions were above 0.50. Results of the second order measurement model revealed that the squared multiple correlations for each of the sub dimensions were 0.73 (economic sustainability performance), 0.72 (social sustainability performance), and 0.97 (environmental sustainability performance). Based on the above evidences, the second order sustainability performance

measurement model was deemed to demonstrate good fit and acceptable. The second order sustainability performance measurement model is shown in Figure 5:10.

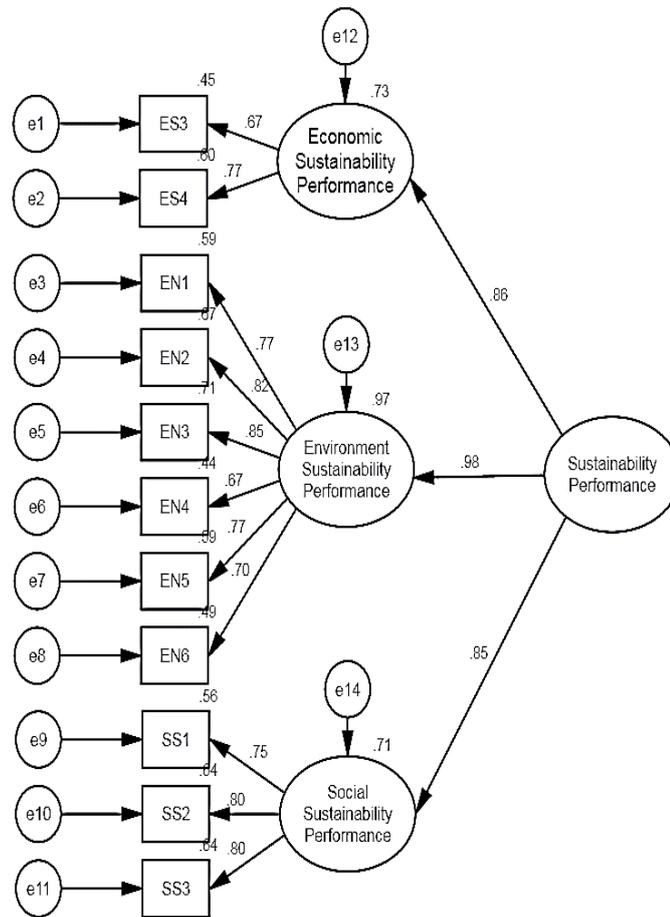


Figure 5:10 Second Order Measurement Model for Sustainability Performance

5.6.6 Financial Performance Construct

Financial performance was measured using three items and was modeled as a first order reflective construct. The descriptive statistics for the items in the construct are given in Table 5-14. RoA had the highest mean value and the mean values of RoE and RoS had a difference of 0.01. RoA and RoS had the same standard deviation of 0.77 and RoE had a standard deviation of 0.83. The distribution statistics of the items were within -0.05 and -0.55 range. Since the construct only consisted of three items, the congeneric measurement model is just-identified or becomes saturated ($\chi^2 = 0$, $df = 0$, $CFI = 1.00$). The standard regression weight of all three items were above 0.70. The

one factor congeneric measurement model for financial performance is presented in Figure 5:11.

Table 5-14 Descriptive Statistics for Financial Performance Construct

Item Code	Mean	S.D.	Skewness	Kurtosis
RoA	5.31	0.77	-0.38	-0.33
RoE	5.20	0.83	-0.06	-0.54
RoS	5.19	0.77	-0.34	-0.18
Multivariate Kurtosis (C.R.) 0.44 (0.45)				

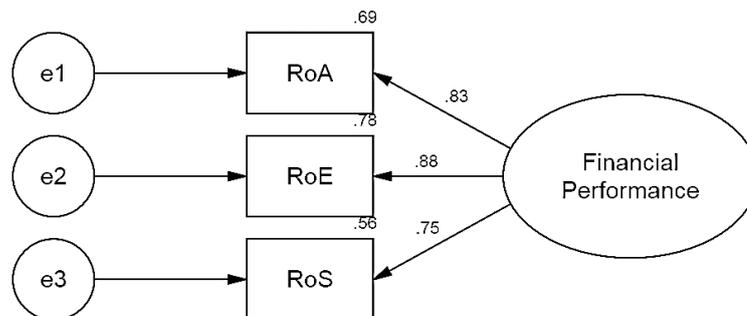


Figure 5:11 One Factor Congeneric Measurement Model for Financial Performance

5.6.7 Integration Capability Construct

The construct was modelled as a first order reflective construct and was measured using seven items. The descriptive statistics of the items are provided in Table 5-15. The mean values of items fell within 4.53 and 4.74. The standard deviation values of the items fell within 0.77 – 0.94. The fit statistics of the congeneric measurement model was $\chi^2 = 17.66$ (d.f. = 14 p = .22), $\chi^2/df = 1.26$ CFI = 0.99, RMSEA = 0.05 (pclose = 0.50). Other than for the item IC5 (SRW = 0.68), all other items' standardized regression weight were above 0.70. All the items were significant at 0.01 level. Since the congeneric measurement model indicates good fit, the item IC5 was retained. The congeneric measurement model for the construct is shown in Figure 5:12.

Table 5-15 Descriptive Statistics for Integration Capability Construct

Item Code	Mean	S.D.	Skewness	Kurtosis
IC1	4.61	0.93	-0.10	-0.11
IC2	4.65	0.76	0.13	0.63
IC3	4.73	0.87	-0.48	1.69
IC4	4.71	0.88	-0.16	0.24
IC5	4.67	0.82	-0.29	0.50
IC6	4.64	0.90	-0.15	-0.13
IC7	4.54	0.90	-0.01	1.31
Multivariate Kurtosis (C.R.) -0.25 (-0.12)				

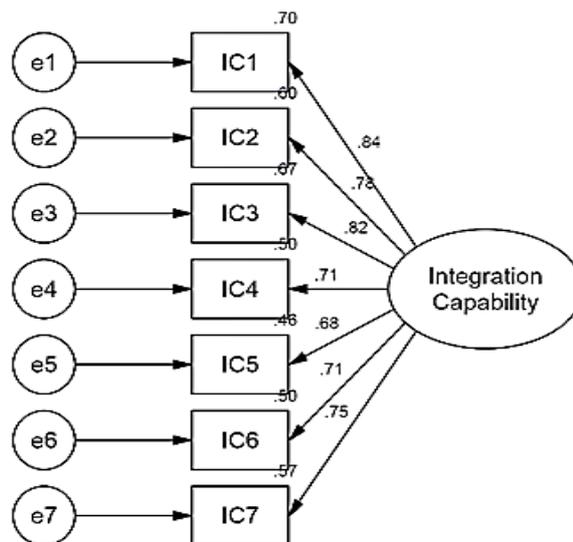


Figure 5:12 One Factor Congeneric Measurement Model for Integration Capability

5.6.8 Overall Measurement Models

First, the overall measurement model relevant to the first research question is examined. This addresses the antecedent part of the research model proposed in chapter 4. This measurement model shall be referred to as measurement model 1 hereinafter. This comprised the latent constructs institutional pressure, stakeholder pressure, managerial motive, and adoption of corporate sustainability strategy. Each of these factors congeneric measurement models were discussed previously. Three

items (IP1, IP2, CS3) in the measurement model 1 had standardised regression weights below 0.70, whereas all other items had standardised regression weights above the stipulated threshold level. The chi-square distribution ($\chi^2 = 388.61$, d.f. = 267) of the measurement model 1 was significant at 0.01($p = .00$). The normed chi-square (χ^2/df) for the measurement model was 1.46 and CFI was 0.94. RMSEA = 0.06 ($p_{close} = 0.10$). Bollen-Stine (B-S) p value was 0.08. Measurement model 1 is showed in Figure 5:13.

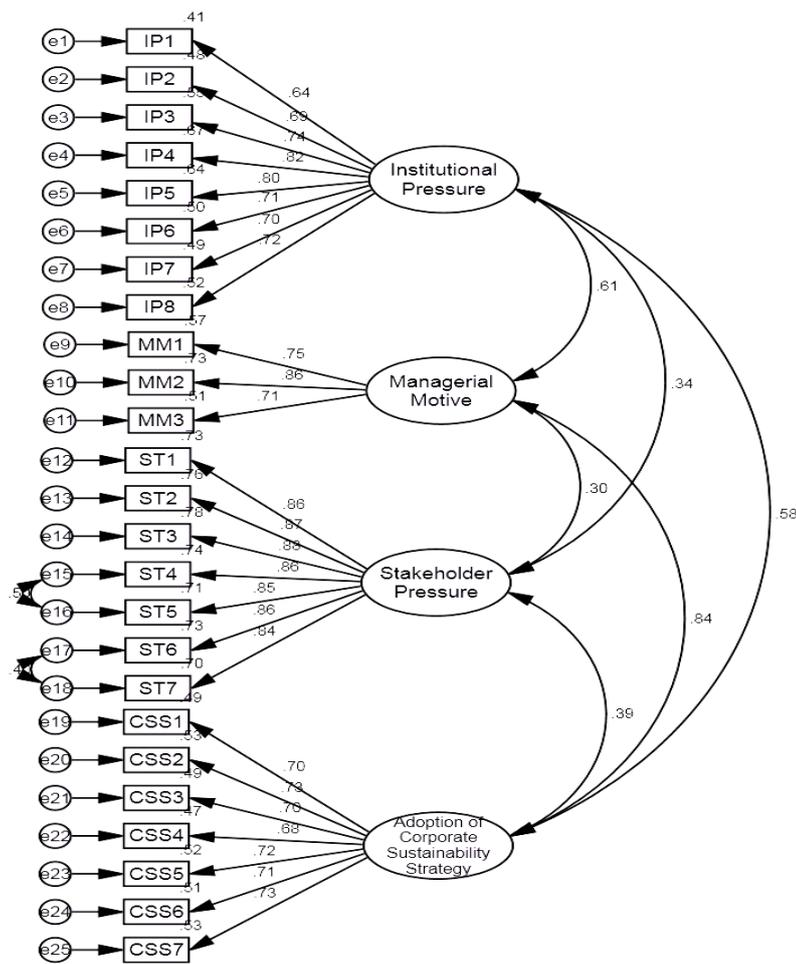


Figure 5:13 Measurement Model 1

Although the model fit statics of the measurement model was confirming to propose rules of thumbs in SEM literature, standardised residual covariances and modification indices were examined as an addition step. The highest modification index was 8.72 (Parameter change -0.10) between the error terms of IP3 and CS3. The standardised residual between the two items was -2.08. However, the item was not

covaried or removed as it was below the recommended level of |2.5| (Hair et al. 2010). Further check of the standardised residual covariances showed that items ST3 and CS1 had standardised residuals covaried with several other items and both the items had

The two items were removed one at a time starting with ST3. The respecified measurement model 1 resulted in a chi-square (χ^2) of 299.61 (d.f. = 222) significant at 0.01 ($p = .00$). The normed chi-square (χ^2/df) of the model was 1.35. The respecified measurement model 1 improved CFI to 0.96 and RMSEA was 0.05 ($p_{close} = 0.38$). Since the chi-square value was significant, Bollen-Stine (B-S) p value was generated with a bootstrapping procedure of 1000 samples (Cheung and Lau 2007). The B-S p value for respecified measurement model 1 was 0.18. Because the respecified measurement model 1 shows lower chi-square with lower degrees of freedom and improved fit statistics, it was considered as the final model. The multivariate kurtosis value of the respecified measurement model 1 was 33.98 (5.65). The respecified measurement model 1 is exhibited in Figure 5:14.

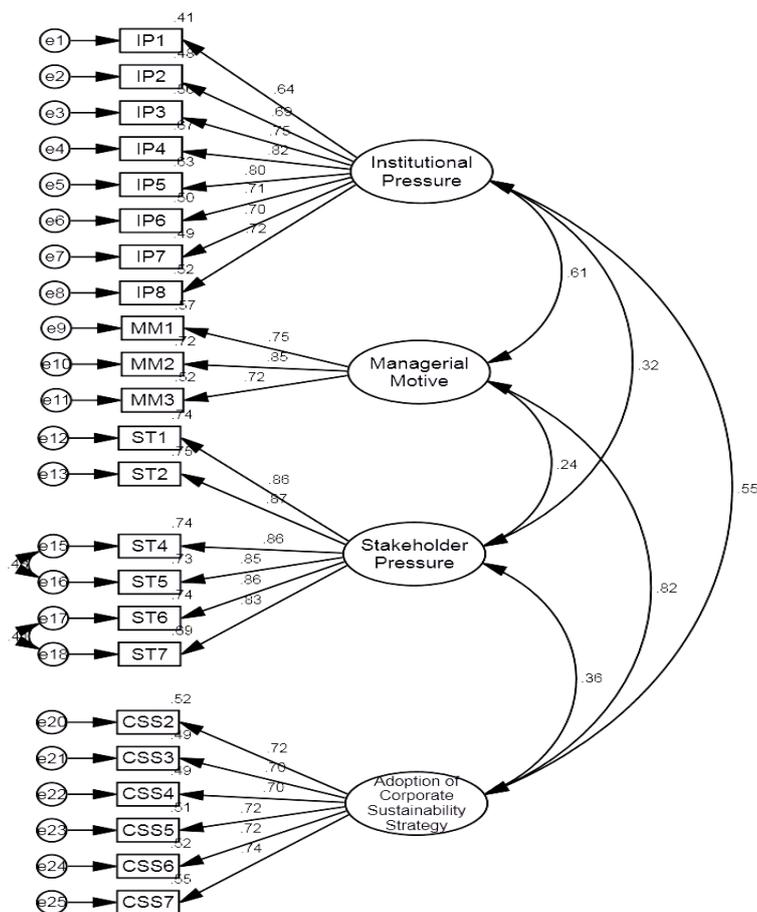


Figure 5:14 Measurement Model 1 (Respecified)

Next, the confirmatory factor analysis for the outcome part of the research model was tested. This part of the research model comprised sustainability performance, financial performance, and integration capability. As explained in section 5.5.5, the sustainability performance construct was operationalized as a second order reflective construct comprising first order reflective construct. The measurement model (measurement model 2) is showed in Figure 5.15. The measurement model resulted in a significant ($p < 0.01$) χ^2 of 242.08 with 183 d.f. The normed chi-square (χ^2/df) was 1.32. CFI was 0.96 and RMSEA was 0.05 ($pclose = 0.46$). The fit statistics suggest there is good fit between the measurement model 2 and the data. Items ES3, EN4, and IC5 had standardized regression weights below 0.70. However, these values were well above the minimum threshold level of 0.50 (Hair et al. 2010). Since there was good model fit and the items were unlikely to cause validity concerns they were retained. As an additional step, the modification indices and standardized residual covariances were also examined. It was found that the error terms of items SS1 and SS2 had the largest modification index of 12.44, whereas all other modification indices were below 10. The standardised residual for the SS1-SS2 relationship was 1.12. Because the standardized residual was below the stipulated levels, the items were not covaried. The largest standardized residual was -2.3 for items EN6-ROE. This was the only standardized residual above $|2|$ and yet, it was below the recommended level of $|2.5|$. Furthermore, the items belonged to different constructs, hence covarying the error terms of different constructs were not permissible. The above observations were taken note off and were further investigated during the testing of the structural model. The multivariate kurtosis value of the respecified measurement model 2 was 16.06 (2.91).

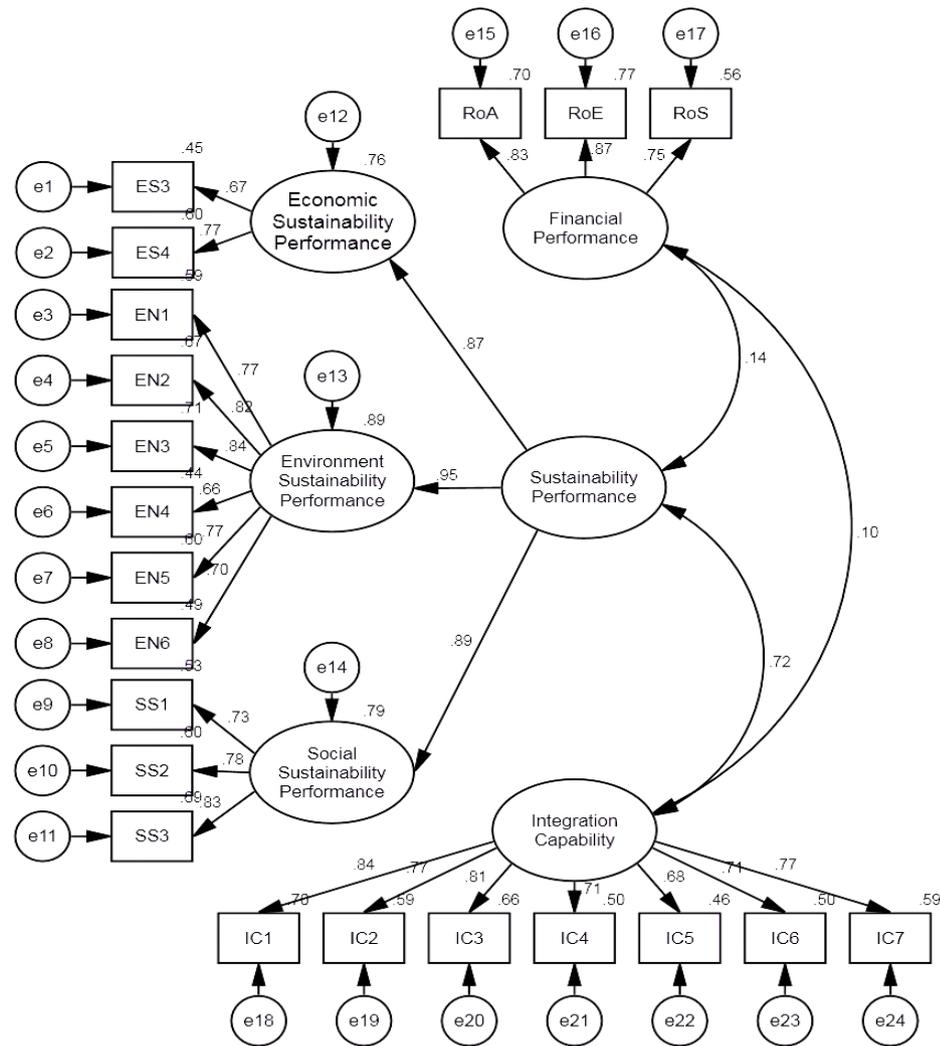


Figure 5:15 Measurement Model 2

Finally, an overall measurement model comprising all the constructs was tested (figure not shown). Similar to the measurement model 2, sustainability performance was included as a second-order construct. The fit statistics of the overall measurement model was as follows. $\chi^2 = 1222.94$ (876, .00), $\chi^2/df = 1.40$, CFI = 0.91, RMSEA = 0.06 (pclose = 0.09). Other than for CFI, all other fit statistics met recommended level. Although the CFI is below the recommended level of 0.95, it is within the recommended level for small samples. Hair et al. (2010) had proposed a CFI value of 0.92 for samples below 250 and variables above 30. Hence, it can be stated that the overall measurement model fits the data. The multivariate kurtosis value of the overall measurement model was 36.33 (3.22). A comparison of the fit statistics of the measurement models discussed above is given in Table 5-16.

Table 5-16 CFA Model Fit Statistics Comparison

CFA Models	Fit Statistics			
	χ^2 (df, p)	χ^2/df	CFI	RMSEA (PCLOSE)
Measurement Model 1	388.61 (267, .00)	1.46	0.94	0.06 (0.10)
Measurement Model 1 (Respecified)	299.61 (222, .00)	1.35	0.96	0.05 (0.38)
Measurement Model 2	242.08 (183, .00)	1.32	0.96	0.05 (0.46)
Measurement Model 3 (Overall Measurement Model)	1222.94 (876, .00)	1.40	0.91	0.06 (0.09)

5.7 Construct Reliability and Validity

All information on construct reliability and validity can be found in Table 5.14.

5.7.1 Reliability and Convergent Validity

Convergent validity refers to the relationship between the measures of a latent construct (Carlson and Herdman 2012). Convergent validity is considered established if the measured indicators load significantly on their intended latent construct (Slater and Atuahene-Gima 2004). Convergent validity depends on the correlations between the measures of a construct, such that larger correlation between measures of construct lead to higher convergent validity and vice versa (Fornell and Larcker 1981).

Table 5-17 provides information relevant for convergent validity. The information in the table is based on the measurement model (respecified) 1 and measurement model 2. The average variance extracted for the entire construct in the measurement models are above the threshold level of 0.50 (Hair et al. 2010). Composite reliability for each latent construct was generated from AMOS output. A minimum value of 0.7 has been recommended for composite reliability (Hair et al. 2010). The lowest composite reliability is 0.82 for managerial motive construct and

the largest composite reliability is 0.94 for stakeholder pressure construct. Hair et al. (2010) insists on three criteria for establishing convergent validity. First, the standardized regression weights (factor loadings) are above 0.70. Second, average variance extracted (AVE) is above 0.50. Third, construct reliability is above 0.70. AVE is the average amount of variation of a latent construct.

Table 5-17 Convergent Validity

Latent Construct	Item Code	Standardised Regression Weights	Average Variance Extracted (AVE)	Composite Reliability (CR)
External Stakeholder Pressure	SP1	0.86	0.73	0.94
	SP2	0.87		
	SP3	removed		
	SP4	0.86		
	SP5	0.85		
	SP6	0.86		
	SP7	0.83		
Institutional Pressure	IP1	0.64	0.53	0.90
	IP2	0.69		
	IP3	0.75		
	IP4	0.82		
	IP5	0.80		
	IP6	0.71		
	IP7	0.70		
	IP8	0.72		
Managerial Motive	MM1	0.75	0.60	0.82
	MM2	0.85		
	MM3	0.72		
Adoption of Corporate Sustainability Strategy	CSS1	removed	0.51	0.86
	CSS2	0.72		
	CSS3	0.70		
	CSS4	0.70		

		CSS5	0.72		
		CSS6	0.72		
		CSS7	0.74		
Sustainability Performance	Economic	ES1	removed	0.83	0.93
		ES2	removed		
		ES3	0.66		
		ES4	0.79		
	Social	SS1	0.65		
		SS2	0.71		
		SS3	0.87		
	Environmental	EN1	0.76		
		EN2	0.82		
		EN3	0.85		
		EN4	0.66		
		EN5	0.77		
		EN6	0.70		
Financial Performance	RoA	0.83	0.67	0.86	
	RoE	0.87			
	RoS	0.75			
Integration Capability	IC1	0.84	0.57	0.90	
	IC2	0.77			
	IC3	0.81			
	IC4	0.71			
	IC5	0.68			
	IC6	0.71			
	IC7	0.77			

5.7.2 Discriminant Validity

Discriminant validity is explained as the distinctiveness between constructs. Higher discriminant validity between constructs suggests that each construct consist of measures that are distinct from the measures of other constructs. Anderson and Gerbing (1988) proposed to test the discriminant validity of two estimated constructs

by constraining the correlation parameter between the two constructs to 1.0 and performing a Chi-square (χ^2) difference test between the constrained and the unconstrained model. According to Bagozzi and Phillips (1982) the Chi-square (χ^2) value of the unconstrained model has to be significantly lower compared to the Chi-square (χ^2) value of the constrained model if discriminant validity between the two constructs were to be achieved. Establishing discriminant validity between the two constructs would indicate that the two constructs are not perfectly correlated. Discriminant validity between the constructs of this study was tested using the above approach. The results of the discriminant validity tests are given in table 5.13. Since the conceptual model developed for the study consist of two parts with one focal variable ‘adoption of corporate sustainability strategy’, discriminant validity of the antecedent constructs were not checked with the outcome constructs because these constructs have not been linked in the model.

The comparison of chi-squares (χ^2) of unconstrained model and constrained model showed that there was adequate discriminant validity between the tested constructs. In order to establish discriminant validity between two constructs, the unconstrained model had to produce a minimum chi-square difference ($\Delta\chi^2$) of 3.84 when the degrees of freedom is reduced by 1 ($\Delta df = 1$). In addition to the chi-square, two important fit statistics namely CFI and RMSEA are also provided in the Table 5.15.

Table 5-18 Discriminant Validity

Latent Constructs	Unconstrained Model - χ^2 (df, CFI, RMSEA)	Constrained Model - χ^2 (df, CFI, RMSEA)	$\Delta \chi^2$ ($\Delta df = 1$)
Institutional Pressure ↔ Stakeholder Pressure	63.08 (62, 1.00, 0.01)	309.68 (63, 0.77, 0.18)	-246.60
Institutional Pressure ↔ Managerial Motive	47.77 (43, 0.99, 0.03)	123.25 (44, 0.88, 0.12)	-75.48
Institutional Pressure ↔ Adoption of Corporate Sustainability Strategy	108.47 (76, 0.96, 0.06)	281.53 (77, 0.75, 0.15)	-173.06

Stakeholder Pressure ↔ Managerial Motive	123.58 (34, 0.92, 0.14)	245.00 (35, 0.80, 0.22)	-121.42
Stakeholder Pressure ↔ Adoption of Corporate Sustainability Strategy	174.09 (76, 0.92, 0.10)	470.73 (77, 0.69, 0.20)	-296.64
Managerial Motive ↔ Adoption of Corporate Sustainability Strategy	46.38 (34, 0.98, 0.05)	69.70 (35, 0.94, 0.09)	-23.32
Adoption of Corporate Sustainability Strategy ↔ Sustainability Performance	148.84 (115, 0.97, 0.05)	193.40 (116, 0.93, 0.07)	-44.56
Adoption of Corporate Sustainability Strategy ↔ Financial Performance	33.13 (26, 0.98, 0.05)	204.57 (27, 0.62, 0.23)	-171.44
Adoption of Corporate Sustainability Strategy ↔ Integration Capability	72.11 (64, 0.99, 0.03)	181.64 (65, 0.86, 0.12)	-109.53
Sustainability Performance ↔ Financial Performance	110.19 (73, 0.96, 0.06)	263.66 (74, 0.80, 0.14)	-153.47
Sustainability Performance ↔ Integration Capability	170.81 (131, 0.97, 0.05)	242.14 (132, 0.91, 0.08)	-71.33
Financial Performance ↔ Integration Capability	47.02 (34, 0.98, 0.06)	219.90 (35, 0.71, 0.20)	-172.88

5.7.3 Method Bias

Common method bias (CMB) also known as common method variance (CMV) is defined as systemic variance caused by the measurement method and has been identified as a potential problem in organizational and behavioural research (Podsakoff et al. 2003; Simmering et al. 2014). Method bias is mainly attributed to the collection of data from a single source using a single method at a single point of time. Richardson, Simmering, and Sturman (2009) informs that method bias is unobservable and requires methodological evaluations to identify any threat of method bias. The extent of method

bias is argued to be below average in the field of business and it differs between disciplines (Wagner 2007).

Several post hoc statistical techniques have been proposed to detect method bias. Merits and demerits of each of these statistical techniques have been discussed in literature. Harman's single factor approach is probably the most frequently applied post hoc statistical technique to detect method bias in strategy and management research. Podsakoff et al. (2003) critiques this technique stating that it is unlikely to generate one-factor model that will fit the data and does nothing to control method bias. An alternate version of the Harman's single factor has been applied in studies using CFA. In this alternate version, all manifest variables are linked to a single latent factor and the model fit statistics are compared with the CFA of the research model. Method bias is detected if the single latent factor CFA model fits the data better than the CFA of the research model. This study applies this alternate version of Harman's single factor technique as it provides statistical evidence of model fit. In addition, this study also applies the 'unmeasured latent methods factor' approach proposed by Podsakoff et al. (2003) among other post hoc statistical techniques to detect method bias. In this approach, manifest variables are allowed load on their respective latent construct and on a common latent factor (CLF). To check for method bias, it is recommended to examine the standardised regression weights of manifest variables in the CFAs with and without the CLF. The advantage of this technique is that it can partition the variance of the response to trait, method, and random error components.

First, as mentioned above, the model fit of the single latent factor CFA was compared with the baseline CFA model (overall measurement model). The results showed that the baseline CFA [$\chi^2 = 1222.94$ (df= 876), $\chi^2/df = 1.40$, CFI = 0.91, RMSEA = 0.06 (pclose = 0.09)] had better model fit in comparison to the single latent factor CFA [$\chi^2 = 1769.29$ (df = 627), CFI = 0.62, RMSEA = 0.12 (pclose .00)]. This is an indication that method bias was unlikely to pose a threat. Subsequently, the unmeasured latent methods factor technique was performed and the standardised regression weights of the overall CFA model was compared with the standardised regression weights of the common latent factor CFA model. The differences between the standardised regression weights were very small. This again provides support that method bias was unlikely. Even if method bias exist, it is reported that a method bias

of 20% to 40% is not large enough to invalidate research findings and conclusions (Doty and Glick 1998).

5.8 Structural Models and Hypotheses Testing

5.8.1 Structural Models for Testing Hypotheses 1-5

First, the hypotheses that come under the first research question are tested. These set of hypotheses comprises the antecedent part of the research model. This also includes the testing of mediation. Initially, the direct effect structural model related to the research question 1 was investigated. This also satisfies the mediation testing requirement that direct effects must be established first before testing mediating effect. Under the first research question three direct hypotheses were proposed. The structural model for testing the direct effects is presented in the figure 5.16. The structural model comprised independent variables institutional pressure, external stakeholder pressure, and managerial motive. The structural model tested the influence of these variables on the dependent variable adoption of corporate sustainability strategy. The chi-square of the structural model was 340.96 (d.f. = 224). Since the chi-square was significant ($p = .00$), other fit indices were examined as recommended in SEM literature. The χ^2/df of the structural model was 1.52, CFI was 0.94, and RMSEA was 0.06 with a pclose value of 0.05. A Bollen-Stine (B-S) p value was obtained by employing the bootstrapping procedure. Following the recommendation of Cheung and Lau (2007), bootstrapping was performed with 1000 samples. The direct effects structural model produced a B-S p value of 0.06. Accordingly, it was concluded that the model fits the data.

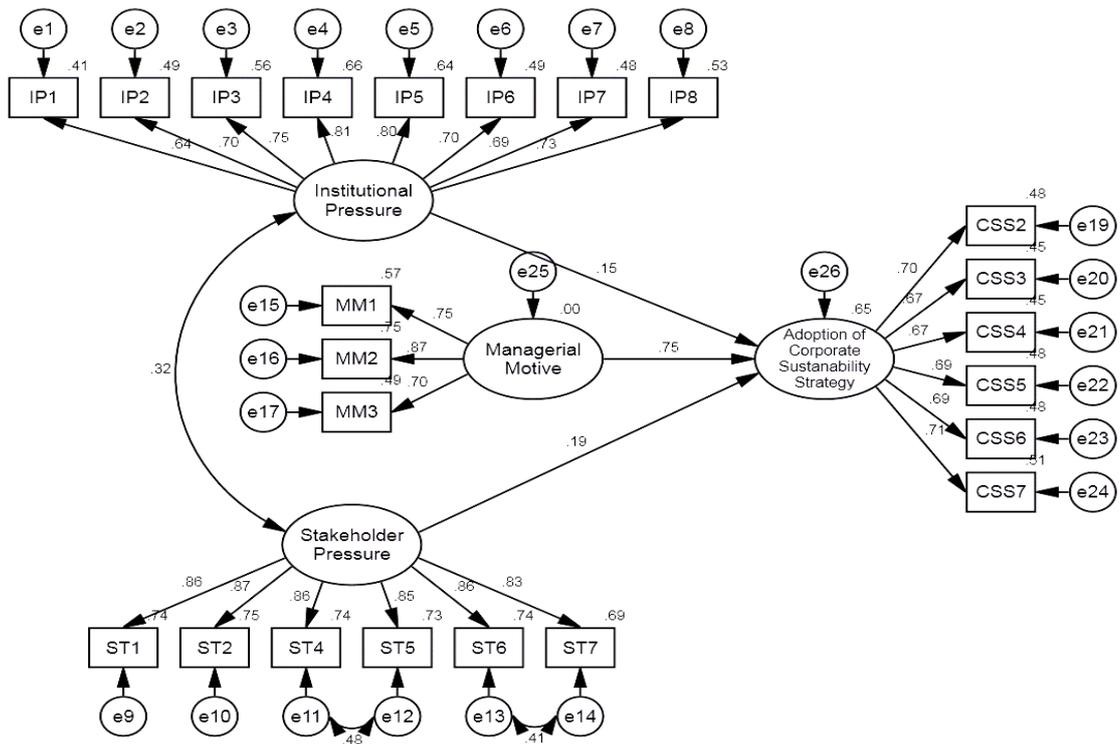


Figure 5:16 Structural Model I

Next, the degree of influence of each direct path from the independent variables to the dependent variable was examined. The unstandardized regression estimate for the path between institutional pressure and adoption of corporate sustainability strategy was 0.17. The path was not significant as the p value was 0.06. The path from stakeholder pressure to adoption of corporate sustainability strategy had an unstandardized regression estimate of 0.12 and its p value was 0.02. Since the significance value was below 0.05 it can be asserted that external stakeholder pressure has a significant positive effect on adoption of corporate sustainability strategy. Managerial motive had the strongest relationship with the dependent variable ($B = 0.69$) was significant at 0.001. As a result, the third hypothesis is supported. The predictive accuracy (R^2) of the direct effects model was 0.65. See table 5.16.

Table 5-19 Direct Effects Structural Model

Variables	Unstandardized Regression Estimate	Standardized Regression Estimate	S.E.	t statistic	P value
Institutional pressure → Adoption of corporate sustainability strategy	0.17	0.15	0.09	1.87	0.06
Stakeholder Pressure → Adoption of corporate sustainability strategy	0.12	0.19	0.05	2.38	0.02
Managerial Motive → Adoption of corporate sustainability strategy	0.69	0.75	0.12	5.99	***
$R^2 = 0.65$					

Next the structural model that included the managerial motive as a mediator was executed (See Figure 5.17). The structural model produced the fit statistics $\chi^2 = 299.61$ (d.f. = 222 p = .00), $\chi^2/df = 1.35$, CFI = 0.96, RMSEA = 0.05 (pclose = 0.38). Since the chi-square value was significant, a bootstrapping procedure with 1000 replicating samples was performed to obtain a B-S p value. The B-S p value for the model was 0.18. Since the model fit statistics were within the recommended guidelines, the structural model with managerial motive was deemed to demonstrate good fit. The results of the structural model with indirect paths are provided in the Table 5.17. First, the paths in the structural model were examined. The direct paths from institutional pressure and stakeholder pressure to adoption of corporate sustainability strategy had unstandardized coefficients 0.04 and 0.11 and both the direct paths were non-significant in the structural model. The paths from institutional pressure to managerial motive had an unstandardized coefficient of 0.72, which was significant at 0.01. However, the path from the stakeholder pressure to managerial motive was non-significant and its unstandardized coefficient was 0.04. The path from managerial motive to adoption of corporate sustainability strategy had significant

unstandardized coefficients ($\beta = 0.73$, $p < 0.01$). However, Fairchild et al. (2009) cautions that the concept of effect size was developed based on ordinary least square estimation.

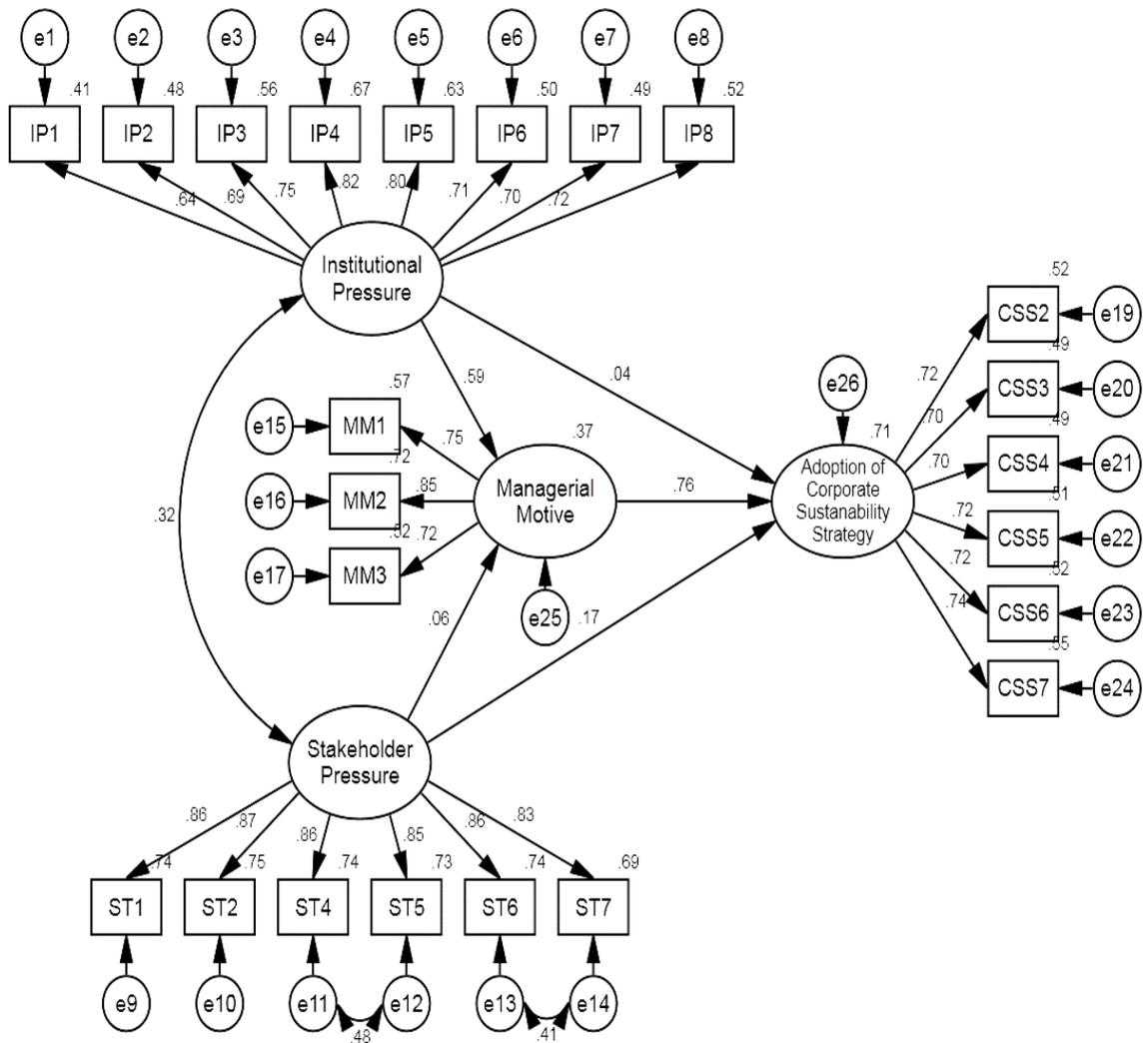


Figure 5:17 Structural Model I with Mediation Effect

Table 5-20 Structural Model Results for Mediation Effect

Variables	Unstandardized Regression Estimate	Standardized Regression Estimate	S.E.	C.R.	P
Institutional pressure → Managerial Motive	0.72	0.59	0.15	4.77	***
Stakeholder Pressure → Managerial Motive	0.04	0.06	0.06	0.61	0.54
Institutional pressure → Adoption of corporate sustainability strategy	0.05	0.04	0.12	0.39	0.70
Stakeholder Pressure → Adoption of corporate sustainability strategy	0.11	0.17	0.05	2.19	0.03
Managerial Motive → Adoption of corporate sustainability strategy	0.73	0.76	0.13	5.54	***
$R^2 = 0.71$					

***p < 0.001

Next, evidence was sought regarding the mediating hypotheses proposed in the study. As explained above, the paths from institutional pressure to adoption of corporate sustainability strategy through the mediator managerial motive was significant. This was an indication that the managerial motive was mediating the influence of institutional pressure on the adoption of corporate sustainability strategy. However, before accepting the above hypothesis, further evidence was sought as recommended in mediation analysis literature. Accordingly, the joint test significance was conducted as proposed by MacKinnon et al. (2002). First, the path between institutional pressure and managerial motive, and then, the path between managerial

motive and adoption of corporate sustainability strategy was tested. Both the tests showed that each path was significant at 0.01. This provided further evidence on the existence of mediating effect. Importantly, coefficients of both the paths were positive (+), thus avoiding any concern of inconsistent mediation (MacKinnon, Fairchild and Fritz 2007).

As a final test of mediation analysis, confidence intervals were produced for the mediating paths using bootstrapping method with 1000 samples (Cheung and Lau 2007). This was done to examine whether there was ‘zero’ between lower and upper confidence interval levels. To establish the significance of the indirect path, a zero value should not be within the lower and upper confidence interval in the path. The bootstrapping produced bias-corrected confidence interval at 95% showed that the lower bound of the confidence interval was well above zero. Given all the above evidence, finally it can be claimed that institutional pressure has a significant indirect effect on adoption of corporate sustainability strategy through managerial motive. The size of unstandardized effect of institutional pressure on adoption of corporate sustainability strategy was 0.52 with a standard error of 0.16. Results on the above discussion are included in Table 5.18.

However, there was no evidence to suggest that managerial motive mediates the influence of external stakeholder pressure on adoption of corporate sustainability strategy. This is because the path from external stakeholder pressure to managerial motive was non-significant. This was further supported by the results produced by the bootstrapping procedure for testing significance of indirect paths. As seen in the Table 5.18, the confidence interval of indirect effect of stakeholder pressure on adoption of corporate sustainability strategy has a zero within the lower and upper levels of confidence interval. Hence, the proposed hypothesis was rejected.

Table 5-21 Indirect Effect with Confidence Interval

	Unstandardized Indirect Effect (s.e.)	B-C C.I. 95%	Standardized Indirect Effect (s.e.)	B-C C.I. 95%
Institutional pressure	0.52 (0.16)	0.28 - 0.93	0.45 (0.11)	0.28 - 0.78
Stakeholder Pressure	0.03 (0.05)	-0.05 - 0.14	0.04 (0.07)	-0.08 - 0.19

5.8.2 Structural Models for Testing Hypotheses 6-8

The structural model for testing hypotheses 6-8 is related to the second research question. The structural model tests the outcome part of the proposed conceptual model. First, the two direct hypotheses that proposed adoption of corporate sustainability strategy has a significant positive effect on sustainability performance and adoption of corporate sustainability strategy has a significant positive effect on sustainability performance was tested. The structural model is shown in figure 5.18. The fit statistics of the structural model were, $\chi^2 = 210.18$ (d.f. = 165 $p = .01$), $\chi^2/df = 1.27$ CFI = 0.97, RMSEA = 0.05 (pclose = 0.60). All the fit statistics were meeting the threshold level recommended in SEM literature. Since, chi-square was significant, B-S significance value was obtained by following a bootstrapping procedure with a 1000 sample replication. This yielded a B-S p value of 0.20.

Since the structural model was considered to have ‘good fit’, the significance of direct paths from adoption of corporate sustainability strategy to sustainability performance and financial performance was examined. Results showed that the path from adoption of corporate sustainability strategy to financial performance was non-significant ($\beta = 0.16$, $p > 0.05$). This suggested that there was no relationship between the variables; hence the proposed hypothesis had to be rejected. However, the path between adoption of corporate sustainability strategy and sustainability performance was significant ($\beta = 0.96$, $p < 0.01$). This provides statistical evidence for the hypotheses that adoption of corporate sustainability strategy has a significant positive effect on sustainability performance. Statistics of direct paths are presented in Table 5.19.

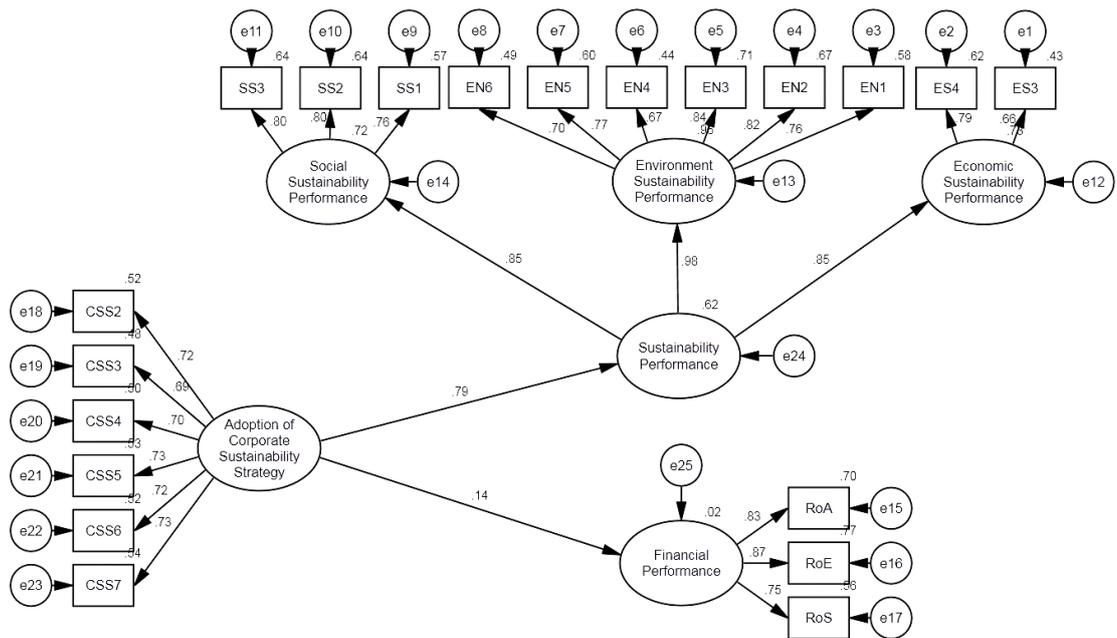


Figure 5:18 Structural Model II

Table 5-22 Results of Structural Model

Variables	Unstandardized Regression Estimate	Standardized Regression Estimate	S.E.	C.R.	P
Adoption of corporate sustainability strategy → Financial Performance	0.163	0.14	0.118	1.383	0.167
Adoption of corporate sustainability strategy → Sustainability Performance	0.964	0.79	0.15	6.433	***
$R^2 = 0.02$					

***p < 0.001

Next, the structural model that includes sustainability performance as an intervening variable was tested (See figure 5.19). The model fit statistics yielded a χ^2 value of 210.07 (d.f. = 164 p =.01), χ^2/df was 1.28, CFI was 0.96, RMSEA = 0.05

($p_{close} = 0.58$). The bootstrapping procedure produced a B-S p value of 0.19. Comparing the model fit statistics of the direct model and mediating model suggest that the differences in the fit statistics were very low. Alternatively, this suggests that models were not significantly different from each other. This was further confirmed by the fact that the $\Delta \chi^2 = 0.11$ ($\Delta df = 1, \chi^2 < 3.84$). This is an indication that the newly added path between sustainability performance and financial performance is non-significant. Figure 5:19 shows that the path added between sustainability performance and financial performance is non-significant ($\beta = 0.06, p > 0.05$). Similar to the results of the paths from the direct structural model, the path from adoption of corporate sustainability strategy to financial performance was non-significant and the path from adoption of corporate sustainability strategy to sustainability performance was significant. Furthermore, the results on the indirect effect of adoption of corporate sustainability strategy on financial performance through sustainability performance showed that the effect is non-significant. Importantly, the non-significance of the path between sustainability performance and financial performance also indicate that a joint test significance test is most likely to fail. As seen in the Table 5.22 the bias corrected lower bound confidence interval was negative, indicating the existence of a zero between lower and upper levels of bias corrected confidence interval at 95%. Hence, the hypothesis that sustainability performance mediates the effect of adoption of corporate sustainability strategy on financial performance is rejected.

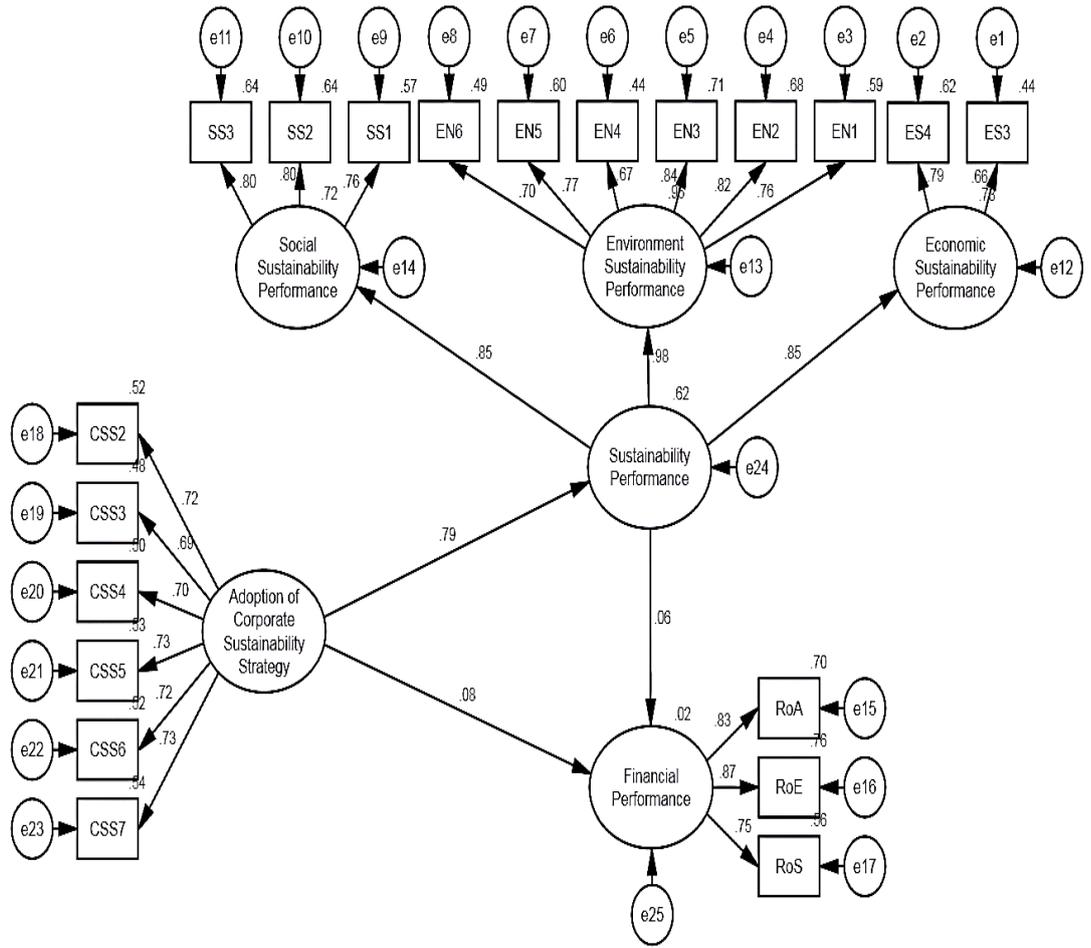


Figure 5:19 Structural Model II with Mediating Effect

Table 5-23 Results for Structural Model with Mediator

Variables	Unstandardized Regression Estimate	Standardized Regression Estimate	S.E.	C.R.	P
Adoption of corporate sustainability strategy → Financial Performance	0.10	0.09	0.22	0.43	0.66
Adoption of corporate sustainability strategy → Sustainability Performance	0.96	0.79	0.15	6.42	***
Sustainability Performance → Financial Performance	0.06	0.06	0.18	0.34	0.74
$R^2 = 0.02$					

***p < 0.001

Table 5-24 Results of Indirect Effect of Sustainability Performance

	Unstandardized Indirect Effect	B-C C.I. 95%	Standardized Indirect Effect	B-C C.I. 95%
Adoption of Corporate Sustainability Strategy	0.06	-0.31 - 0.49	0.05	-0.27 - 0.43

Following Table provides a summary of CB-SEM results of studies that falls within the corporate sustainability domain. Model fit statistics for the measurement models and structural models are included. The model fit statistics provided in the table are similar to the results produced by this study.

Table 5-25 Summary of SEM Model Fit Statistics from Empirical Studies

<p>Aragon-Correa et al. (2008)</p> <p>Structural Model: $\chi^2_{(60)} = 86.25$, AGFI = .89, CFI = .92, TLI = .89, IFI = .91, RMSEA = .08</p>
<p>Colwell and Joshi (2013)</p> <p>Measurement Model: $\chi^2_{(295)} = 326.88$ (p = .09), CFI = .98, TLI = .98, RMSEA = .02, SRMR = .04</p>
<p>Chan (2005)</p> <p>Structural Model: $\chi^2_{(427)} = 973.276$ (p < .05), CFI = .944, NFI = .925, RMSEA = .060</p>
<p>Delmas and Toffel (2008)</p> <p>Structural Model: $\chi^2_{(204)} = 394.8$, CFI = .955, TLI = .944, IFI = .956, RMSEA = .044 (.037 ≤ 90% C.I. ≥ .05)</p>
<p>Henri and Journeault (2010)</p> <p>Structural Model: $\chi^2_{(50)} = 242.45$, CFI = .95, TLI = .93, RMSEA = .011</p>
<p>Leonidou, Christodoulides, and Thwaites (2014)</p> <p>Measurement model: $\chi^2_{(362)} = 573.49$ (p < .01), $\chi^2/df = 1.58$, NFI = .90, CFI = .94, TLI = .94, RMSEA = .06</p> <p>Structural Model: $\chi^2_{(372)} = 642.10$, (p = .00), $\chi^2/df = 1.73$, NFI = .90, CFI = .94, TLI = .94, RMSEA = .07</p>
<p>Li (2014)</p> <p>Measurement model: $\chi^2_{(397)} = 738.93$ (p = .000), CFI = .91, TLI = .90, IFI = .92, RMSEA = .077</p> <p>Structural Model: $\chi^2_{(305)} = 578.93$, CFI = .92, TLI = .90, IFI = .92, RMSEA = .078</p>
<p>Ramanathan, Poomkaew, and Nath (2014)</p> <p>Measurement model: $\chi^2_{(188)} = 258$, $\chi^2/df = 1.37$, CFI = .94, IFI = .94, RMSEA = .05</p> <p>Structural Model: $\chi^2/df = 1.757$, CFI = .882, IFI = .888, RMSEA = .066</p>
<p>Rettab, Brik, and Mellahi (2009)</p> <p>Measurement model: $\chi^2_{(241)} = 657.7$, $\chi^2/df = 1.37$, CFI = .95, NFI = .91, GFI = .90, NNFI = .94, PNFI = .68, RFI = .89 RMSEA = .08</p>
<p>Sharma (2000)</p> <p>Measurement model: $\chi^2_{(149)} = 345.99$ (p < .001), CFI = .96</p> <p>Structural Model: $\chi^2_{(6)} = 11.18$, CFI = .96, NFI = .93, TLI = .87, AOSR = .04</p>
<p>Sharma, Aragón-Correa, and Rueda-Manzanares (2007)</p>

Measurement model: $\chi^2_{(98)} = 166.02$ ($p = .00$), GFI = .99, CFI = 1.0, RMSEA = .08
Wagner (2011) Measurement model: $\chi^2/df = 1.87$, GFI = .92, NFI = .87, CAIC = 1639.52, RMSEA = .04
Zailani et al. (2012) Measurement model: $\chi^2/df = 1.50$ ($\chi^2 p = .001$), CFI = .96, NFI = .91 TLI = .95, IFI = .96 Structural Model: $\chi^2/df = 1.304$ ($\chi^2 p = .001$), CFI = .97, TLI = .97, RMSEA = .048 ($p = .57$), SRMR = .068

5.9 Testing of Moderation Hypotheses 9-10

According to Preacher, Rucker, and Hayes (2007) moderation occurs when the strength of the relationship between two variables is dependent on a third variable. Baron and Kenny (1986) described a moderator as a qualitative or quantitative variable that affect the direction and/or strength of the relation between the predictor and criterion variable. It is recommended to empirically test the moderation or conditional hypotheses by including the product of the predictor and moderator variable, also referred to as the interaction term (Baron and Kenny 1986; Brambor, Clark and Golder 2006). Generally, the procedures for investigating the moderating effects can be classified into conventional approaches that uses moderated multiple regression analysis technique and latent interaction modelling approaches that applies SEM. The moderated multiple regression analysis technique has been widely applied to provide inference on the effect of moderating variable irrespective of variable types. Testing of moderating effects using multiple regression has been further enhanced by MODPROBE procedure developed by (Hayes 2015).

A popular way of finding the moderating effect that emerged from applying categorical moderator variables and has been extended to continuous moderator variable is the subgroup analysis technique. The sub group analysis technique is ideal for testing moderating effects of categorical variables, preferably naturally occurring dichotomous variables. However, this procedure is not recommended for a continuous moderator variable because the scores of the moderator variable will have to be split into qualitative subgroups arbitrarily (Chaplin 1991). It is reported that splitting the

continuous moderator variable into subgroups leads to information loss and lower statistical power (Edwards and Lambert 2007; Hartmann and Moers 1999).

As for studies that may wish to test the interaction between latent constructs, several procedures are available. The simplest method is to establish the reliability and validity of the latent constructs and produce a summated scale by taking the average of the items of the constructs (Hair et al. 2010) and then perform a moderated regression analysis. With the increased application of SEM, a family of latent interaction modelling procedures also have emerged. These procedures have also been classified as constrained, unconstrained, and residual centring approaches and originate from the works of Kenny and Judd and Joreskog and Yang (Marsh, Wen and Hau 2004; Little, Bovaird and Widaman 2006). Essentially, the procedures to deal with latent interactions remain true to the concept of interaction. For example, Kenny and Judd (1984) proposed to form the latent interaction variable by obtaining the products of indicators of the predictor and moderating latent variables. Alternative to the above techniques have been developed by Marsh, Wen, and Hau (2004) and Little, Bovaird, and Widaman (2006). Applying SEM to test moderation hypotheses is advantageous as it takes measurement error into account in determining the parameter estimates. However, the interest of latent construct modelling in SEM may be affected by factors such as the research model, number of indicators in latent constructs, sample size, and statistical assumptions.

In chapter 4, two hypotheses on moderation were proposed. The MODPROBE procedure developed by Hayes (2015) that uses the ordinary least square regression was chosen to test the moderating effects. The advantage of the MODPROBE procedure is that it can provide additional information using the pick a point method or Johnson-Neyman (J-N) technique regarding the region of significance. This information assists in specifying the region where the moderating effect is statistically significant or significantly different from zero. Next, summated scale for the four latent constructs namely, adoption of corporate sustainability strategy, financial performance, sustainability performance, and integration capability was generated by averaging the item scores under each construct. Before testing the moderation effect, the focal predictor and the moderator were mean centred to avoid multicollinearity as recommended literature.

First, the moderating effect of integration capability on the relationship between adoption of corporate sustainability strategy and financial performance was tested. The results of this test are provided under Model 1*i* in Table 5.20. The R^2 Adj. increased to 0.06 ($F = 4.84$) from 0.02 ($F = 0.97$) in model 1 and the increment of 0.04 ($F = 4.20$) in R^2 Adj. was significant at 0.05. The interaction term in the model 1*i* was significant at 0.05 and had a coefficient of 0.28 (s.e. = 0.14). Further, the confidence interval of the interaction variable did not include a zero (LLCI = 0.01, ULCI = 0.55). The other variables in the model 1*i* adoption of corporate sustainability strategy ($\beta = 0.02$, s.e. = 0.16) and integration capability ($\beta = 0.05$, s.e. = 0.12) were non-significant. The initial statistical evidence suggests that there is support for the proposed hypotheses. To seek further evidence, the interaction plot demonstrating the moderating effect of integration capability was examined (shown in Figure 5.16). Since the interaction plot does not clearly demonstrate when the positive impact occurs, a look at the conditional effect produced by the pick a point method and Johnson-Neyman (J-N) technique was warranted.

The conditional effect of the moderating variable generated by the pick a point method showed that the moderating effect was insignificant between standard deviation values $|1|$ of the moderator variable as confidence intervals included a zero. However, it was assumed that the moderating effect occurred above one standard deviation (s.d. $> +1$) from the mean value of the moderating variable, because the low-level confidence interval at $+1$ standard deviation was -0.04 and it would proceed to 0 and above at standard deviation values above $+1$. This notion was confirmed by the conditional effect results produced by the J-N technique as it indicated that at integration capability value of 0.81 the low-level confidence interval was zero. This again confirmed that integration capability does moderate the relationship between adoption of corporate sustainability strategy and financial performance. However, this occurred only at the higher values of the moderating variable and is not observed at lower levels of the moderating variable. This was confirmed by the fact that the significance region produced by the J-N technique was small. There were only 13.3% observations above the moderating variable value of 0.81 and the remaining observations (86.7%) were below that value. Bauer and Curran (2005) cautioned that there is little practical use if the significance region is a small portion of the study sample.

Table 5-26 Results of Moderation Hypothesis Tests

	Financial Performance		Sustainability Performance	
	Model 1	Model 1 <i>i</i>	Model 2	Model 2 <i>i</i>
R ² Adj.	0.02	0.06	0.57	0.63
ΔR ²	-	0.04*	-	0.06**
Cohen's <i>f</i> ²	-	0.04	-	0.16
Adoption of Corporate Sustainability Strategy	0.12	0.02	0.59**	0.47**
Integration Capability	0.03	0.05	0.30*	0.32**
Adoption of Corporate Sustainability Strategy X Integration Capability	-	0.28*	-	0.33**
* p < 0.05, ** p < 0.01				
Cohen's <i>f</i> ² = (R _{AB} ² - R _A ²)/(1 - R _{AB} ²) (Cohen 1988).				

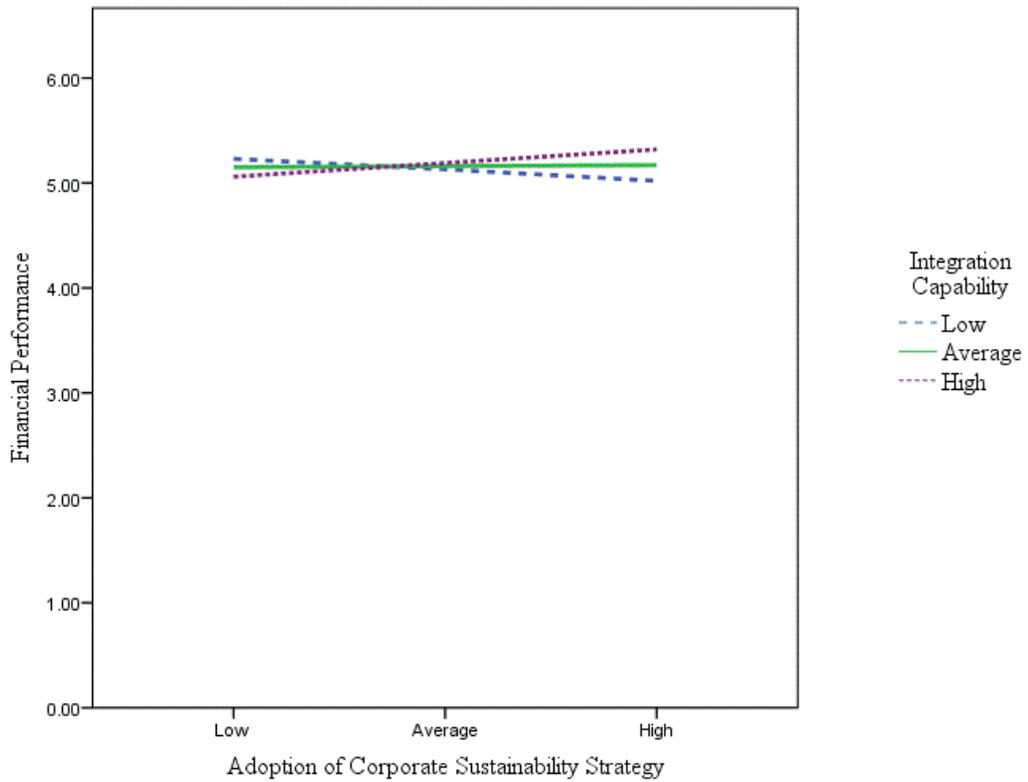


Figure 5:20 Interaction Plot Model 1*i*

Next, the moderation hypothesis that proposed integration capability has a significant positive effect on the relationship between adoption of corporate sustainability strategy and sustainability performance was tested. The results of the moderating effect are provided in Table 5-26 (refer to model 2*i*). Introducing integration capability as a moderating variable resulted in increase of the predictive accuracy ($\Delta R^2 = 0.06$, $F = 13.03$). Model 2 that does not include the interaction effect has a R^2 of 0.57 ($F = 85.64$). The two variables in the model 2, adoption of corporate sustainability strategy ($\beta = 0.59$, $s.e. = 0.09$) and integration capability ($\beta = 0.30$, $s.e. = 0.08$) were significant at 0.01 and 0.05 levels respectively. The regression model 2*i* that comprised the interaction effect between adoption of corporate sustainability strategy and integration capability, produced a R^2 of 0.63 ($F = 53.16$). More importantly the interaction effect was significant at 0.01 ($\beta = 0.33$). Furthermore, the confidence intervals of the moderating variable did not include a zero (LLCI = 0.15, ULCI = 0.51). The variables, adoption of corporate sustainability strategy and integration capability were also significant at 0.01 level and had the coefficients 0.47 ($s.e. = 0.09$) and 0.32 ($s.e. = 0.11$) respectively.

The moderating effect of integration capability on the relationship between adoption of corporate sustainability strategy and sustainability performance was also observed in the interaction plot (See figure 5.16). The interaction plot confirmed that with the increase in the values of moderating variable the relationship between adoption of corporate sustainability strategy and sustainability performance was correspondingly becoming stronger. The conditional effect produced by the pick a point method showed that the moderating effect was occurring from -1 standard deviation from the mean value of the moderating variable. Confirming this finding, J-N technique produced significant region revealed that there were 87.4% observations above the integration capability value of -0.71 ($s.d. = -1$). Based on the statistical evidence it can be concluded that there is adequate evidence to accept the proposed hypothesis (see Appendix D for conditional effects of the moderating variable).

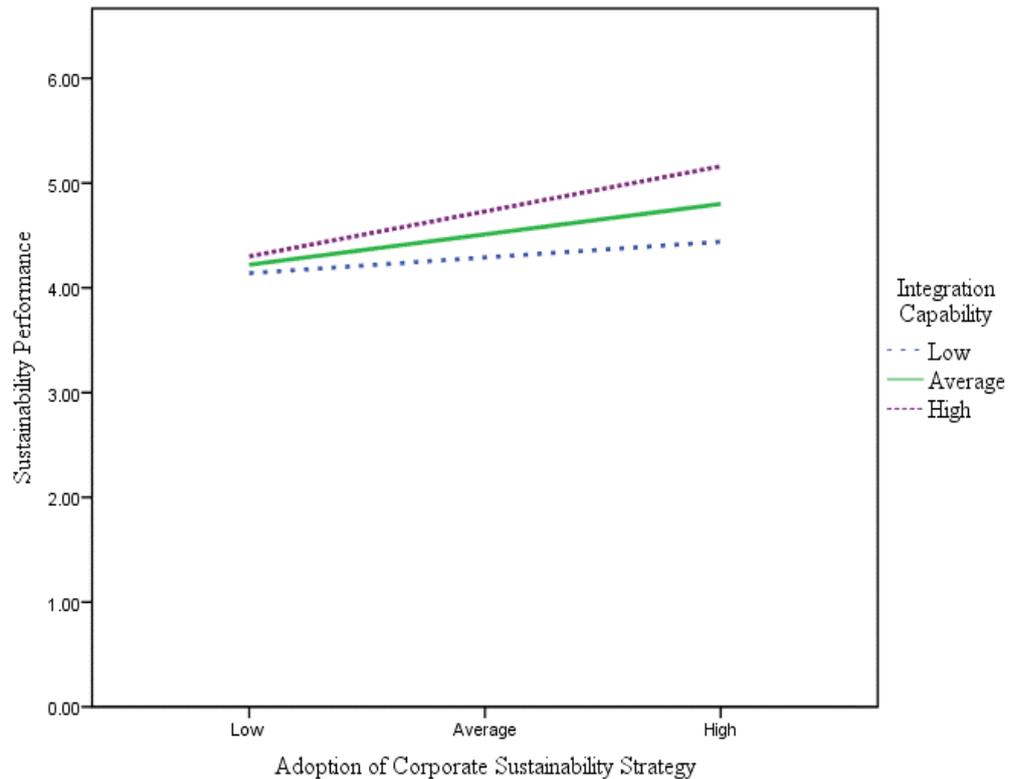


Figure 5:21 Interaction Plot Model 2i

Finally, the effect of the moderating variable on the R^2 was examined. For this, Cohen's f^2 was used (Cohen 1988). He proposed that an $f^2 \geq 0.02$ was small, $f^2 \geq 0.15$ was medium, and $f^2 \geq 0.35$ was large. Furthermore, presence of effect size should provide further validation on the impact of the moderating variable on R^2 . See Table 5.14 for the effect size. The effect size of integration capability as a moderator on the relationship between adoption of corporate sustainability strategy and financial performance was 0.04. As outlined above the, an effect size 0.04 is considered 'small'. The concern with small size effect is that it requires a large sample to detect small size effect with a significance test (Fairchild et al. 2009). The effect size of the second moderation analysis was 0.16 and this is considered a medium size effect. Above evidence, further confirms the importance of integration capability as a moderator between adoption of corporate sustainability strategy and firm performance.

5.10 Summary

This chapter reported the analysis and the results of the quantitative study. This study was undertaken to investigate the first and second research questions and their respective objectives. The outcome of the analysis is the state of acceptance or

rejection of proposed hypotheses. Table 5-25 lists whether the proposed hypotheses were accepted or rejected.

Table 5-27 Summary Results of Hypotheses Testing

H₁: Institutional pressure has a significant positive influence on the adoption of corporate sustainability strategy – Accepted (weak)

H₂: External stakeholder pressure has a significant positive influence on the adoption of corporate sustainability strategy - Accepted

H₃: Managerial motive has a significant positive influence on the adoption of corporate sustainability strategy - Accepted

H₄: Managerial motive mediates the influence of institutional pressure on the adoption of corporate sustainability strategy - Accepted

H₅: Managerial motive mediates the influence of external stakeholder pressure on the adoption of corporate sustainability strategy - Rejected

H₆: Adoption of corporate sustainability strategy has a significant positive effect on financial performance - Rejected

H₇: Adoption of corporate sustainability strategy has a significant positive effect on sustainability performance - Accepted

H₈: Sustainability performance mediates the effect of the adoption of corporate sustainability strategy on financial performance - Rejected

H₉: Integration capability moderates the relationship between the adoption of corporate sustainability strategy and sustainability performance, such that the positive relationship will be stronger when integration capability is high - Accepted

H₁₀: Integration capability moderates the relationship between the adoption of corporate sustainability strategy and financial performance, such that the positive relationship will be stronger when integration capability is high – Accepted (weak)

Chapter 6

Analysis and Results: Qualitative Study

Overview

This chapter contains the analysis and results of the qualitative study. The qualitative study was undertaken to seek answers to the third research question (RQ 3) proposed in chapter 1. A qualitative research design was applied to investigate the research question due to the nature of the research question. Given the research question, the intention was to identify the factors facilitating and impeding the implementation of corporate sustainability strategy in Sri Lankan firms.

6.1 Sample Profile

Profiles of organizations that participated in the qualitative study and the interviewees' designation are given in Table 6-1. To avoid direct identification of the participant organizations and the interviewees, the specific industry of each participating organization was identified at a higher level and the interviewees' specific job titles were not included. This was done to ensure confidentiality. All the participant organizations were given pseudo names from F1 to F6. Four of the organizations were in the manufacturing sector and two were in the plantation sector. The two organizations in the plantation sector were listed companies in the CSE. All four manufacturing companies' were non-listed companies, but all are large organizations in Sri Lanka. Other than the plantation companies, all the manufacturing companies have obtained ISO 14001 certifications. All the participating companies published sustainability reports. The sustainability reports of the two plantations companies had been published according to the GRI guidelines. Five of the participating organizations were signatories to the United Nations Global Compact initiative. Interviewees from organizations F1 to F5 were the managers dedicated for sustainability in their respective organization. Organization F6 had no manager dedicated for sustainability. Instead, the Group Head responsible for another key activity in the organization was handling issues relating to sustainability.

Table 6-1 Summary of Sample Profile

Pseudo Name	Industry	Owner-ship	ISO 14001	Sustainability Report	UNGC ²	Designation
F1	Manufacturing	Private	✓	✓	✓	Manager
F2	Manufacturing	Private	✓	✓	✓	Manager
F3	Manufacturing	Private	✓	✓	✓	Director
F4	Manufacturing	Private	✓	✓	✓	Group Head
F5	Plantation	Public	-	✓	✓	General Manager
F6	Plantation	Public	-	✓	-	Group Head

6.2 Enabling Factors

The research question intends to identify factors enabling and impeding the implementation of corporate sustainability strategy in large firms in Sri Lanka. Accordingly the first research objective is to identify factors enabling the implementation of corporate sustainability strategy.

Eight factors were derived from analysing and reviewing the transcripts of each interviewee. These enabling factors and their supporting sentences are included in table 6-2. Leadership, clearly defined sustainability program, top management commitment, impact on bottom line, culture, nature of business and operations, partnerships, and certifications were the factors that enable the implementation of corporate sustainability strategy.

It is clear from the quotes on leadership and top management commitment that successful implementation of corporate sustainability strategy in organizations requires leadership to envision a sustainable future for the organization and the involvement of the board and senior managers. Similarly, having a clearly defined sustainability program is also important according to the managers. The quotes from managers suggest that some of their organizations are attempting to integrate sustainability into their business strategy. Corporate sustainability or CSR in developing economies has a philanthropic tradition and implementing sustainability

² United Nations Global Compact

from strategic lens is a move away from the tradition. The strategic emphasis of implementing corporate sustainability is also observable from the quotes of managers that state that the end goal is to improve business. Therefore, the likely impact of implementing corporate sustainability strategy on bottom line is an important enabler. Another important factor that facilitates the implementation of corporate sustainability strategy is the culture of organization. It is evident from the quotes that organizations that participated in the study has taken the initiative to embed sustainability into their vision and mission, and business fundamentals. Explicitly stating their sustainability agenda helps to inculcate a culture of sustainability throughout the organization. Managers from organizations representing the plantation sector identified that their nature of business and operations are driving them to implement corporate sustainability strategy. This is because plantation firms are highly dependent on environment and climate. Managers of organizations have also identified opportunity to develop partnerships and certifications also enabling organizations to implement corporate sustainability strategy.

Table 6-2 Enabling Factors

First Order Theme	Supporting Quotes/Statements
Leadership	<p>“The company board is also active in the sustainability plan implementation process”</p> <p>“The Board will annually review the company environmental, health and safety compliances”</p> <p>“In 2011 / 2012 with the appointment of new CEO we have set up new sustainability plans for the next 10 year - till 2020”</p>
Clearly defined sustainability program	<p>“each company in the group is suggested to adopt a WBS”</p> <p>“.....team sets the activities and targets for each country”</p> <p>“the board will annually review environmental, health and safety compliances”</p> <p>“our sustainability plan has three main pillars: economy, society and environment”</p>

	<p>“there are four pillars: purity and food safety, ethical business, environment and society”</p> <p>“we have a sustainability department that identifies, plans and implements projects”</p> <p>“sustainability activities in all the countries are implemented within the three main pillars to improve our business”</p>
Top management commitment	<p>“top management defines activities/targets for each brand and each division etc.”</p> <p>“Our CEO, Directors and top managers will ensure the sustainability of the entire system, while adhering and complying with legitimate standards”</p> <p>“top management defines activities and targets for each brand and each division”</p>
Impact on bottom-line	<p>“Obviously..... the bottom line improvement”</p> <p>“sustainability activities in all the countries are implemented within the three main pillars to improve our business”</p> <p>“we have (global team) set up a sustainability plan while it allowing us to improve our business too”</p> <p>“each sustainability activity are implemented within our three main pillars, while planning the each activity to improve our business”</p> <p>Also this is not just an exercise on sustainability but it also improves our business.</p> <p>“We have 35 factories, so the responsibilities and a certain percentage of our revenue have to go into implementing sustainability”</p>

<p>Culture</p>	<p>“sustainability and innovation is a part of our mission, respect to humanity is part of our vision and all that is incorporated in the culture of the organization”</p> <p>“our company culture is to self-motivate employees.....then it becomes easy for us”</p> <p>“sustainability and innovation is a part of our mission..... is incorporated in the culture of the organization”</p> <p>“before we setup a comprehensive sustainability program, sustainability was not an explicit part of our culture”</p> <p>“sustainable development remains at the core of our business fundamentals”</p> <p>“As a value-oriented company, (name of the company removed) recognizes the importance of effective corporate governance in order to encourage corporate fairness, transparency and accountability to all stakeholders”</p>
<p>Nature of business and operations</p>	<p>“we are dependent on good environmental conditions, which also include climate conditions”</p> <p>“We have understood that at the rate of we use the environmental resources (for the manufacturing) that we won’t be able to continue the business for long time because at some point we might have stop our business due to lack of environmental resources for our products”</p> <p>“we have a high level of dependence on the natural environment”</p>
<p>Partnerships</p>	<p>“IUCN has a partnership with us”</p> <p>“implemented a program with the collaboration of UNICEF, Ministry of Health and Ministry of Education”</p>

Certification	<p>“we are certified by UTZ”</p> <p>“we are members of Ethical Tea Partnership...this gives confidence to the tea consumers that the tea in their cup has been produced in an environmentally and socially sustainable way”</p> <p>“best practices, standards and certification alone are not sufficient to become a truly responsible global player”</p> <p>“European countries encourages certified products.....have imposed specific targets”</p>
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6.3 Impeding Factors

The second objective of the qualitative study was to identify factors impeding the implementation of corporate sustainability strategy. Six factors impeding the implementation of corporate sustainability strategy was identified after analyzing the transcripts. These factors were financial limitations, investment, nature of ownership, skills and attitude of employees, and consumer awareness. These impeding factors and supporting texts are listed in table 6-3. Managers of participating organizations seems to be concerned about the financial aspect of implementing corporate sustainability strategy. An organization committing towards implementing corporate sustainability needs to make significant resource allocation which includes financial commitment. However, convincing other organizational members including the finance staff seems to be a difficult task due to higher costs and less impact on profit. Investments associated with corporate sustainability strategy is another factor hindering the implementation of corporate sustainability strategy. Larger amount of investment may lead to longer payback period which may discourage investment. Higher investments coupled with financial limitations can be identified as major hindrance to the implementation of corporate sustainability strategy. A manager of an organization which is not listed and is privately owned identifies the nature of ownership as a barrier to their corporate sustainability initiatives. Listed entities unlike non-listed entities or privately owned entities have more opportunities in the form of disclosures and reporting to share their corporate sustainability activities and this may lead to increased

visibility for the organization. This may also positively affect corporate reputation and image. Managers have also revealed that limited expertise and attitude of organizational members affect the implementation of corporate sustainability strategy. A scarcity of expertise is likely to affect the growing demand for implementing corporate sustainability in organizations. Low awareness of consumers on sustainability has also been identified by managers as a hindrance. Low consumer awareness would also suggest lack of market demand for sustainable products or low consumer pressure upon organizations to initiate corporate sustainability.

Table 6-3 Impeding Factors

First Order Theme	Supporting Quotes/Statements
Financial limitations	<p>“based on the budget they will assess and decide what projects should be carried out”</p> <p>“sometimes with the sustainability practices, it can be costly”</p> <p>“you will be questioned by the financial people.....where are the profits? why you spend so much?”</p> <p>“initially most of the people said that this was an unnecessary expense”</p> <p>“Mainly we will face financial limitations, apart from that the support given from the management and everyone is very satisfactory”</p>
Investment	<p>“one material change may require a huge amount of investment”</p> <p>“we have seen fairly decent payback within 4 to 5 years in some of the investments that we have done others are more long terms but we feel we are heading on the fact that certain energy cost will be much higher and availability of water will be restricted”</p> <p>“Some of them say cost saving have come already because the investment being made for 4, 5 years”</p>

Private ownership/non-listed company	“our company is not listed in CSE.....the reports are not publicly available, then transparency is not very visible..... public may not able to see what we do and how our money is being sent”
Skills and attitude of employees	“there is no expert in these areas, so we have to find people from universities, IUCN, NGOs and other places” “.....in Sri Lanka we are in lack of experts”
Consumer awareness	“Sri Lankan consumers are not much into this concept” “one thing that should be done is to spread awareness among Sri Lankan people regarding this sustainability matter” “some plans are carried out because of request from customers” “European countries and North America have more demand on sustainability”

6.4 Summary

This chapter presented and explained the findings from the qualitative data collected through the interviews. The objectives of the qualitative study was to identify enablers and impediments to the implementation of corporate sustainability strategy. Accordingly, a list of factors that facilitate and impede corporate sustainability implementation with quotes from the interviews are provided.

Chapter 7

Discussion and Conclusion

Overview

This is the final chapter of the thesis. The chapter begins with a discussion of the findings of the two studies in relation to the research questions and research objectives proposed in chapter 1. The second part of this chapter presents an overall conclusion to this thesis. The concluding section of this chapter discusses the contribution of the study, key implications arising out of the findings, limitations of the study, and directions for future research.

7.1 Discussion of Findings of the Quantitative Study

As outlined in chapter 1, three research questions were proposed at the beginning of this thesis for investigation. Since research questions 1 and 2 were of confirmatory nature, a quantitative study design was deemed most appropriate to investigate the research questions. In order to seek answers for the research questions, several objectives and hypotheses were proposed. Accordingly, a conceptual model depicting the paths was developed based on the research questions and objectives proposed for the quantitative study. The conceptual framework consisted of two parts: the antecedent part, and the outcome part. Each part of the conceptual model was addressing the research questions 1 and 2 respectively and was tested using CB-SEM.

RQ 1: Do external pressures and internal drivers influence the adoption of corporate sustainability strategy?

RO 1.1: To examine the influence of institutional pressures on the adoption of corporate sustainability strategy.

In align with the research objective, the hypothesis (H₁) “Institutional pressure has a significant positive influence on the adoption of corporate sustainability strategy” was proposed. The results generated using CB-SEM revealed that institutional pressure has a significant positive influence on the adoption of corporate sustainability strategy. Findings of this study support the claims of prior studies that there is indeed a positive relationship between institutional pressures and adoption of corporate

sustainability initiatives. The conclusion that can be drawn from this finding is that external pressures in the form of institutional pressures are playing pivotal role in encouraging large firms in developing economies to engage in corporate sustainability related initiatives. Importantly, the finding also reveals the applicability of institutional theory in developing economy context to explore business and society related issues.

Importantly, the finding that institutional pressure has a positive influence on the adoption of corporate sustainability strategy was also supported by the work of Beddewela and Fairbrass (2016). In their study, the authors reported the existence of institutional pressures on MNE subsidiaries operating in Sri Lanka to engage in CSR initiatives.

RO 1.2: To examine the influence of external stakeholder pressure on the adoption of corporate sustainability strategy.

The hypotheses (H₂) “external stakeholder pressure has a significant positive influence on the adoption of corporate sustainability strategy” was proposed with the intention of seeking the answer to the above mentioned research objective. The results generated using CB-SEM showed that external stakeholder pressure has a significant positive influence on the adoption of corporate sustainability strategy. This finding also confirms the findings of past studies that there is a positive relationship between external stakeholder pressure and adoption of corporate sustainability initiatives. Accordingly, it can be concluded that stakeholders have an important role to play in driving large firms in developing economies to engage in corporate sustainability related initiatives. The finding also confirms that stakeholder theory can be applied in developing economy contexts to explore initiatives and issues in the sphere of business and society.

RO 1.3: To examine the influence of managerial motive on the adoption of corporate sustainability strategy.

The hypotheses (H₃) “managerial motive has a significant positive influence on the adoption of corporate sustainability strategy” was proposed. Results obtained from the CB-SEM analysis revealed that management motive has a significant positive influence on the adoption of corporate sustainability strategy. Although the concept of managerial motive had been studied previously, it had been less explored from the top

management's perspective. However, it was assumed that managerial motive that conceptualizes the intention of top management towards adopting corporate sustainability strategy would have a positive impact and as mentioned above, was supported by the findings. This suggest that managerial motive as an internal driver is an important factor that drives large organizations in developing economy contexts to adopt corporate sustainability initiatives.

RO 1.4: To examine the mediating effect of managerial motive on the influences of external pressures on the adoption of corporate sustainability strategy.

As per the CB-SEM results, it was revealed that managerial motive does mediate the influence of institutional pressure on the adoption of corporate sustainability strategy (H₄). However, there was lack of evidence to support the hypothesis (H₅) that managerial motive mediates the influence of external stakeholder pressure on the adoption of corporate sustainability strategy. The inclusion of managerial motive as an internal driver and exploring its mediating role was important to ascertain the combinative effect of external pressures and internal drivers on the adoption of corporate sustainability strategy. Yet, the evidence only reflects that the mediating effect of managerial motive on the link between institutional pressure and adoption of corporate sustainability strategy. Furthermore, the evidence also suggests that managerial motive fully mediates the influence of institutional pressure on the adoption of corporate sustainability strategy. This suggests that managerial motive is most likely to mitigate institutional pressures towards corporate sustainability whereas managerial motive was unlikely to mitigate external stakeholder demands on organizations to adopt corporate sustainability initiatives. To ascertain the extent of failure of management motive to mitigate external stakeholder pressure can be attributed to weak management-stakeholder relationships or lack of stakeholder engagement in developing economy firms.

RQ 2: Does adoption of corporate sustainability strategy affect sustainability performance and financial performance and does integration capability moderates the above effects?

RO 2.1: To examine the effect of adoption of corporate sustainability strategy on financial performance.

The proposed hypotheses in align with the research objective was to test that “adoption of corporate sustainability strategy has a significant positive effect on financial performance” (H₆). CB-SEM analysis showed that although adoption of corporate sustainability strategy had a positive effect on financial performance, it was not significant. This finding is in contrast to prior studies that have established a positive relationship between corporate sustainability initiatives and financial performance. For example, studies by Chan (2005), Boiral, Henri, and Talbot (2012) have reported positive link between corporate sustainability initiatives and financial performance. However, the study by found that

RO 2.2: To examine the effect of adoption of corporate sustainability strategy on sustainability performance.

Accordingly, the hypothesis (H₇) that “adoption of corporate sustainability strategy has a significant positive effect on sustainability performance” was proposed. CB-SEM results indicated that there was adequate evidence to accept the hypotheses, hence it was concluded that adopting corporate sustainability strategy had a significant positive effect on sustainability performance. Similar findings had been reported by Chan (2005).

RO 2.3: To examine the indirect effect of adoption of corporate sustainability strategy on financial performance through sustainability performance.

The results indicated that there was no evidence to support the above claim (H₈), hence it was concluded that sustainability performance did not mediate the relationship between adoption of corporate sustainability strategy and financial performance. A similar finding had been reported by Chan (2005).

RO 2.4: To examine the moderating effect of integration capability on the relationship between adoption of corporate sustainability strategy and financial performance

RO 2.5: To examine the moderating effect of integration capability on the relationship between adoption of corporate sustainability strategy and sustainability performance

The moderated regression results indicated that integration capability moderates the effect of adoption of corporate sustainability strategy on financial performance (H₉) as well as integration capability moderates the effect of adoption of

corporate sustainability strategy on sustainability performance (H_{10}). However, the moderating role of integration capability in relation to the effect of adoption of corporate sustainability strategy on financial performance was only observed at higher levels of the relationship between adoption of corporate sustainability strategy and financial performance. The above evidence suggest that it is important for large organizations to develop integration capabilities as this would enable them improve firm performance. Furthermore, it is also likely that organizations with higher levels of integration capability can gain competitive advantage as per the findings.

7.2 Discussion of Findings of the Qualitative Study

RQ 3: What are the factors enabling and impeding the implementation of corporate sustainability strategy?

RO 3.1: To identify factors enabling the implementation of corporate sustainability strategy.

RO 3.2: To identify factors impeding the implementation of corporate sustainability strategy.

A qualitative research approach was carried out to investigate the research question and objectives stated above due to exploratory nature of the study. Eight organizations participated in the qualitative study. Face to face interviews were conducted using a questionnaire developed for this study. Findings on enabling and impeding factors are listed in Table 7-1.

Leadership and top management commitment are among the factors that enables the implementation of corporate sustainability strategy. Banerjee, Iyer, and Kashyap (2003) identified top management to be a strong internal force that fosters corporate environmentalism. The qualitative study by Uecker-Mercado and Walker (2012) to identify motives and perceived outcomes of environmental social responsibility (ESR) found that internal stakeholder pressure, culture, financial, competitiveness, and ethical motives were drivers of ESR in facility context. The authors claimed that managers who set goals, objectives, allocate resources and responsibilities play an important role in shaping organizational value towards corporate sustainability initiatives. The study also finds that having a clearly defines sustainability program facilitates the implementation of corporate sustainability

strategy. This finding was supported works of Morioka and Carvalho (2016). They found that corporate goals with sustainability indicators and periodic monitoring leads to increase integration of sustainability in organizational performance systems. The likely impact of implementing corporate sustainability strategy on the business as a whole is another facilitating factor. Uecker-Mercado and Walker (2012) claim that businesses can benefit from cost savings, government incentives, and reduction of expenses in the long run. Hence, impact on bottom line is an essential aspect for implementing corporate sustainability strategy. Next, organizational culture has been identified as an enabler. Culture as a facilitating factor that play an important role supporting the implementation of corporate sustainability strategy and this is consistent with previous studies (Linnenluecke, Russell and Griffiths 2009). Similarly, culture has the capacity to internalize philosophy and values of sustainability in organizations and its members (Uecker-Mercado and Walker 2012). Nature of business and operations has been identified as one of the enabling factors. This can be attributed to the fact that industrial organizations and plantation firms are highly dependent on environment and climate and supports the views of Hart (1995) that firm and the natural environment shares an important relationship. This study also identified that partnership with other organizations and international certifications fosters the implementation of corporate sustainability strategy. Deegan and Blomquist (2006) reports that collaboration between business entities and environmental NGOs leads to improvement in environmental performance.

Collins, Roper, and Lawrence (2010) found in their study that cost was the key barrier to adopting sustainability practices in New Zealand. Similarly, Williams and Schaefer (2013) also claimed that managers participating in their study identified cost associated with acquiring newer environmental technology was a discouragement. This supports the view of the managers participated in this study as they identified financial limitations as a barrier to the implementation of corporate sustainability strategy. Investment as a factor was found to be a barrier to implement corporate sustainability strategy. Glover et al. (2014) in their study of dairy supply chain in UK found that investment in green technologies were expensive with a long payback period. Employee attitude toward corporate sustainability related initiatives has been identified as instrumental for successful implementation of corporate sustainability related initiatives (Eva 2009). However, managers interviewed for this study identified

employees negative attitude toward corporate sustainability initiatives as an impediment. Delgado-Ceballos et al. (2012) also reported that lack of sustainability related awareness among employees may affect the development of pro-environmental strategy. This study found that low level of sustainability related awareness of Sri Lankan consumers is an impediment to the implementation of corporate sustainability strategy. Prior studies have suggested that consumers evaluate companies in terms of CSR and consumer purchase intention may be indirectly affected by CSR initiatives of organizations (Oberseder, Schlegelmilch and Murphy 2013).

Table 7-1 Summary of Factors Affecting Implementation of Corporate Sustainability Strategy

Enabling Factors	Impeding Factors
– Leadership	– Financial limitations
– Top management commitment	– Investment
– Nature of business and operations	– Private ownership/non-listed company
– Culture	– Skills and attitude of employees
– Partnerships	– Consumer awareness
– International standards and certifications	

7.3 Contributions of the Study

This thesis makes several important contributions to the corporate sustainability literature. The main contribution of the study is the empirical contribution to corporate sustainability literature by testing a conceptual research model that includes the antecedents and outcomes of corporate sustainability strategy. Although there are studies that have examined the drivers and outcomes of corporate sustainability initiatives, this study has contributed by linking external pressures with internal drivers and exploring the indirect effect of external pressures on the adoption of corporate sustainability strategy. Furthermore, this study has also distinguished the concepts of corporate sustainability strategy and sustainability performance. The separation of the concepts corporate sustainability strategy and sustainability

performance was to address one of the criticisms level against measures found in studies that incorporates strategy or management aspects of corporate sustainability with sustainability performance outcomes (Xie and Hayase 2007).

Another important contribution of the study is the collection of primary data with regard to the study. One of the key issues emerging in literature pertaining to firm responses on sustainability demands is whether firm responses are symbolic (ceremonial) or genuine (Colwell and Joshi 2013; Meyer and Rowan 1977). Furthermore, analysing sustainability reports does not provide state of actual implementation and a clear idea whether it is ceremonial or genuine to please external stakeholders. Prior studies have criticized the use of secondary data obtain from databases that are mainly ratings based on corporate disclosure to measure sustainability performance. Furthermore, there are calls to measure sustainability performance by directly obtaining information from the organizations. Hence, collection of primary data on firm initiatives on corporate sustainability from personnel involved in corporate sustainability activities provides actual state of implementation and its outcome. This study used survey to collect data.

Findings of this study also contribute to a contingency perspective that specifies how the presence of integration capability may affect the performance outcome of adopting corporate sustainability strategy. This is one of the first studies to apply and provide empirical evidence on the concept of integration capability in the corporate sustainability area. The inclusion of integration capability was also influenced by the fact that research scholars have called to review sustainability has been integrated into firm strategy. For example, Wagner (2007) advocated that integration is a precondition for performance. Therefore, exploring integration capability is of importance and this study has responded to this call.

The concept and the construct corporate sustainability are evolving. Many aspect of the concept has been operationalized in literature such as strategy, orientation, sustainability performance, sustainability management. As a result, different operationalization can be found. It is expected that research will contribute to understanding of the concept and its foundations leading to agreement among scholars on the construct of corporate sustainability.

7.4 Implications for Theory, Practice and Policy

Findings suggest that external pressures comprising institutional and external stakeholder pressures are likely to have direct influence on the adoption of corporate sustainability strategy. Previous studies have reported that stakeholder activism is weak in developing economies. Despite the weak nature of stakeholder activism in developing countries like Sri Lanka, it is important for businesses to engage with important stakeholder. Thus, it is recommended for companies to develop mechanisms that continuously engage with the stakeholder to identify their expectations and find ways to integrate their expectations into their business strategies and practices. Firms should disclose their stakeholder engagement process/framework in their annual report. Because this would demonstrate firm responsiveness towards stakeholder expectations. The case of dipped products shows that engagement/proximity to local community is very important.

Managers of companies need to pay attention to stakeholders. The hypotheses have shown that external stakeholder pressure has no effect on sustainability strategy. The qualitative findings also suggest consumer awareness and general public awareness on sustainability is low. Hence, managers need to develop mechanisms to continuously engage with stakeholders leading to stakeholder awareness as well as understanding stakeholder expectations.

The findings had revealed that adoption of corporate sustainability strategy and sustainability performance had no effect on financial performance. Prior studies have highlighted that it is likely that adoption of corporate sustainability strategy has negative effects on financial performance. There is the trade-off between economic performance and sustainability performance. In the short run, economic performance is less because of cost related to adopting sustainability practices.

From a government or policy makers view in developing economies, businesses need to adopt sustainability initiatives even though the benefits can't be quantified as it may have qualitative improvements. Therefore, financial incentives as well as tax incentives related to investment in sustainability can motivate organizations to adopt sustainability practices and improve financial gains at firm level. Financial incentives can include for example low interest loan (less than market rate) facilities

for investment on solar energy. Tax incentives in the form of qualified investments for sustainability. If investment incentives or tax incentives are provided, then government and public agency need to link such incentives to promote strategic behaviour of firms. Since prior studies have indicated that sustainability initiatives in developing economies tend to be philanthropic, it is important that these incentives influence firms towards strategic behaviour than philanthropy. This can be further promoted, if a white paper can be produced with the collaboration of key stakeholders (public officers, industry, chambers, universities, NGOs) to identify importance of sustainability to Sri Lanka and priorities them based on some criteria (national importance, global importance). Based on such a white paper a national plan on sustainability can be drawn. Hence, the incentives for firms can be linked to national sustainability priorities. This would enable firms to implement strategic sustainability initiatives.

Provide facilities to promote business ventures related to key sustainability practices (i.e. recycling plants, waste management plants). This will provide a market based solution for existing businesses to use the services from newly setup recycling and waste management plants. This could also include a request to the local universities especially in the field of engineering and sciences to train students on recycling and waste and sustainability performance. This will create a green workforce.

It is important to setup a national agency that traces sustainability management and performance for private as well as for public sectors. Such collection of data will help to establish future directions in sustainability. Based on the data new targets can be established. The data can be used to develop future directions. Alternatively, this can be done with the chambers in the country to setup sustainability intelligence unit. This will help future research and the data can be provided to researches on nominal fee future research. This would further help to understand the effect of sustainability practices on financial performance.

7.5 Limitations of the Study

As with any research study, this study is also subjected to several limitations. Therefore, it is recommended to interpret the findings of this study taking the limitations discussed below into consideration.

First, this study is cross-sectional in nature as it collects data at single point in time employing surveys. Saunders, Lewis, and Thornton (2009, 155) defines a cross-sectional study as “the study of a phenomenon at a particular time.” The choice of cross-sectional research design was prompted due to the non-availability of secondary or archival data in Sri Lanka with regard to the research questions of this study. It is also stated that some research questions in the field of strategic management is best addressed through a cross-sectional research design that employs surveys to collect primary data (Slater and Atuahene-Gima 2004). One of the issues that have been raised in the literature pertaining to cross-sectional research designs is the limitation in explaining causality (Rong and Wilkinson 2011). Furthermore, it is also argued that cross-sectional research that collects data from single respondents is prone to method bias. The issues raised above are considered threats to the validity of studies. However, Rindfleisch et al. (2008) have provided evidence that cross-sectional research designs are not necessarily affected by above concerns. In this particular study, the concern on method bias was addressed by conducting statistical tests to investigate the presence of method bias.

The second limitation of the study is the perceptual nature of data collected. Although the collection of perceptual data using surveys is widely adopted in strategic management and organizational research (Slater and Atuahene-Gima 2004), it is recommended to use objective data specially to measure performance outcomes (i.e. financial performance, organizational performance). Nonetheless, emerging performance outcome measures such as sustainability performance are in limited availability in the public domain and constructs like external pressures, management motive, corporate sustainability strategy, and integration capability cannot be measured using objective data. Furthermore, to increase the response rate and the quality of response, and to meet the ethical requirements, the respondents were assured of confidentiality and non-identification. Importantly, studies that have compared financial performance of organizations using objective and perceptual data also support the use of perceptual data as proxy measures (Dess and Robinson 1984; Venkatraman and Ramanujam 1986). Therefore, collection of perceptual measures was justified.

The third limitation of the study is the collection of data from single informant. It is argued that the collection of data from single informants can lead to single

respondent bias. Similarly, it has also been reported that surveys in the form of self-administered questionnaire can cause self-reporting bias. Since, reporting biases is a threat to the validity of the research necessary steps was taken to minimize or avoid single respondent bias and self-reporting bias. Accordingly, the respondents were informed that confidentiality would be maintained with regard to their identity and responses. Furthermore, none of the information that could be used to identify the respondents (i.e. personal information) was collected. It has also been reported in the literature that self-administered questionnaires or self-reporting can be affected by social desirability bias, which is the tendency of respondents to provide favourable responses. The social desirability of respondents were not examined during the survey because it would have added to the length of the questionnaire and increased the time of completion. Although, the impact of social desirability bias was not examined, the study was unlikely to be affected by socially desirable responses because confidentiality and non-identification of respondents were ensured.

The fourth limitation is associated with the generalizability of qualitative research. The issue of generalizability was further complicated by the fact that only six (06) companies agreed to participate in the interviews. Further attempts to gain access to companies failed as some of the companies were reluctant to participate. In addition to the above, some of the scheduled interviews were cancelled and had to be rescheduled due to interviewees' work related commitments. Despite this inherent limitation of the methodology and small sample, the findings provide some important insight with regard to the research question.

7.6 Directions for Future Research

Future research opportunities that emerged from this research study are discussed in the subsequent paragraphs.

First, this study provided empirical evidence on the influence of external pressures comprising institutional pressure and external stakeholder pressure on the adoption of corporate sustainability in a developing economy context. As mentioned before, these findings were in support of the findings reported in prior studies. One of the key aspects of external pressures is regulatory or coercive pressures and was included in the institutional pressure and external stakeholder pressure variables of this study. The view of regulatory or coercive pressures in this study like many other

corporate sustainability literature is grounded on a command and control approach. Zhao et al. (2015) refers command and control based regulations as administrative-based regulation. Since there is adequate evidence to support the link between administrative-based regulatory pressure and corporate sustainability adoption behaviour and with the emergence of market-based regulation such as the European Union's Emission Trading Scheme (European Commission 2013), it is of importance to investigate how market-based institutional frameworks in advanced economies causes corporate sustainability adoption behaviour in organizations.

Second, in this study management motive was operationalized as a single dimension construct that consist of three items. Although, the findings of this study provide evidence on the mediating role of management motive with regard to external pressures and the influence of management motive on the adoption of corporate sustainability strategy, it is unknown whether degree of adoption of corporate sustainability strategy will be different across different type of management motives. Management motive was operationalized as a single construct because it is understood that multiple motives or intentions are likely to exist among top level managers in a single given time or with regard to a particular strategic initiative (Maignan and Ralston 2002). Furthermore, the management motives identified in the business and society literature has its roots in different theoretical approaches. Hence, it is of importance to investigate whether management motives to adopt corporate sustainability initiatives are different across different economic and cultural contexts and whether the degree of adoption of corporate sustainability strategy differs across different type of management motives. This objective can be attained by formulating management motive as categorical moderating variable. Further attempt can also be made to examine whether the relationship between adoption of corporate sustainability strategy and firm performance is affected by management motive operationalized as a categorical moderating variable.

Third, there is scope to develop the concept and the construct of integration capability. Although there is significant literature on the concept of integration, little attempt has been made to explore the concept of integration as a capability. Furthermore, there is limited empirical evidence on integration as a capability. Thus, integration capability is an area for further research. Future studies can contribute by developing the construct of integration capability and providing empirical evidence on

the impact of integration capability on strategic activities (i.e. corporate sustainability strategy) of organizations and organizational performance.

Next, grounded on environmental configuration approach, Lee (2011) called for combining institutional and stakeholder demands and examining their effect on pro-sustainability behaviour. This study to certain extent addressed this call by including institutional and external stakeholder pressure in a single study. However, the interacting and complementary effect of institutions and stakeholders on the adoption of corporate sustainability behaviour was not tested. Hence, there ought to be studies that explore the combinative effect of institutional and stakeholder demands in future.

Next, there is further research opportunity to examine the effect of pro-sustainability behaviour on non-financial performance measures like customer satisfaction, employee satisfaction, and corporate image and reputation. As there has been significant debate on the operationalization of organizational performance construct (Combs, Crook and Christopher 2005; Hamann et al. 2013; Hult et al. 2008), future studies can either adopt non-financial performance as a single dimension separated from financial performance or adopt non-financial performance as a sub dimension of the organizational performance construct.

Lastly, this study had attempted to explore the factors affecting the implementation of corporate sustainability in large organizations in a developing economy. Insight from the findings reveals that there ought to be more qualitative studies to uncover the factors affecting the implementation. Such qualitative studies can be extended to compare the factors affecting corporate sustainability implementation between multi-national firms and domestic firms in emerging economies. A look at the annual reports or sustainability reports of listed companies in Sri Lanka and the interviews with top-level managers clearly shows that adoption of corporate sustainability initiatives varies widely. Hence, comparing the factors affecting the adoption and implementation of corporate sustainability initiatives between firms with advanced level of adoption and low level of adoption may provide significant contribution to literature. Finally, conducting qualitative longitudinal studies on adoption and implementation of corporate sustainability in organizations is another direction for future research.

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Appendix A:

Publications and Conference Proceedings

1. Mohamed M. Shamil, Junaid M. Shaikh, Ho, Poh-Ling, and Krishnan, Anbalagan. (2014) "The influence of board characteristics on sustainability reporting: Empirical evidence from Sri Lankan firms", *Asian Review of Accounting*, Vol. 22 Iss: 2, pp.78 – 97 (Scopus Indexed)
2. Shamil, M. M. M., Junaid M. Shaikh, Poh-Ling Ho and Anbalagan Krishnan. (2014). Factors Affecting the Adoption of Corporate Sustainability Initiatives: A qualitative analysis of multinational and domestic firms in Sri Lanka. International CSR, Sustainability, Governance & Ethics Conference, University of Surrey, Surrey. August 14 - 15, 2014.
3. Mohamed M. Shamil. (2014). Antecedents and Consequences of Corporate Sustainability Strategy, Annual HDR Colloquium, Curtin University, Malaysia.
4. Shamil, M. M. M., Junaid M. Shaikh, Poh-Ling Ho and Anbalagan Krishnan. (2014). Exploring the Relationship between Stakeholder Pressure, Corporate Sustainability, and Financial Performance: Preliminary evidence. 11th International Conference on Quality, Innovation and Knowledge (QIK): Sustainable Innovation and Research, organized by Monash University, and Universitas Padjadjaran, Bandung, Indonesia, 19-20 Feb 2014.
5. Shamil, M. M. M. (2013). Exploring the Relationship between Corporate Sustainability and Corporate Financial Performance. Doctoral Consortium of Journal of Contemporary Accounting and Economics, Hong Kong, January, 2013.
6. Shamil, M. M. M., Junaid M. Shaikh, Poh-Ling Ho & Anbalagan Krishnan. (2012). The Relationship between Corporate Sustainability and Corporate Financial Performance: A conceptual review. Proceedings of USM-AUT International Conference (UAIC), Sustainable Development: Policies and strategies, Universiti Sains Malaysia, Malaysia. (Indexed in ISI Thomson Reuters).

7. Shamil, M. M. M. and Junaid, M. Shaikh. (2012). Determinants of Corporate Sustainability Adoption in Firms. Proceedings of 2nd International Conference on Management, Malaysia, 2012.

Section 1: Respondent Profile Questions

1. Employment Position

Senior Manager/Manager Senior Executive/Executive

2. Work experience

0-5 years 5-10 years Above 10 year

3. Work Division/Section

Accounting & Finance <input type="checkbox"/>	Corporate Planning <input type="checkbox"/>
Marketing <input type="checkbox"/>	Supply Chain <input type="checkbox"/>
Operations & Facilities <input type="checkbox"/>	Manufacturing <input type="checkbox"/>
Human Resources <input type="checkbox"/>	Other

4. Gender

Male Female

5. Educational Qualifications

Post Graduate Bachelor Degree Professional

Section 2: Questionnaire

Section 2a																		
Please circle the degree of pressure exerted by the following stakeholders to adopt corporate sustainability in your organization.																		
Degree of Pressure 'Very Low =1' and 'Very High = 7'.																		
		Very Low			Somewhat Low			Neither			Somewhat High			High			Very High	
1	Customer/Buyer	1	2	3	4	5	6	7										
2	Suppliers	1	2	3	4	5	6	7										
3	Competitors	1	2	3	4	5	6	7										
4	Media	1	2	3	4	5	6	7										
5	NGOs/ENGOS	1	2	3	4	5	6	7										
6	Policy makers and regulators	1	2	3	4	5	6	7										
7	Government	1	2	3	4	5	6	7										

Section 2b								
Please circle your level of agreement with the following statements. Strongly Disagree =1' and 'Strongly Agree = 7'.		Strongly Disagree	Disagree	Somewhat Disagree	Neither	Somewhat Agree	Agree	Strongly Agree
My organization engages in corporate sustainability because:								
1	It is the right thing to do.	1	2	3	4	5	6	7
2	It is beneficial to adopt international standards on sustainability (ISO, GRI).	1	2	3	4	5	6	7
3	Organizations want to be recognized as a responsible corporate citizen.	1	2	3	4	5	6	7
4	Most organizations today are engaging in corporate sustainability.	1	2	3	4	5	6	7
5	Influence from laws, regulations, international agreements and protocols.	1	2	3	4	5	6	7
6	Fines & penalties are imposed for violating laws on social justice & environment.	1	2	3	4	5	6	7
7	Non-compliance to laws on social justice & environment leads to legal action.	1	2	3	4	5	6	7
8	Non-adoption may affect organization's future prospects and value.	1	2	3	4	5	6	7

Section 2c								
Please circle your level of agreement with the following statements. Strongly Disagree =1 and Strongly Agree = 7.		Strongly Disagree	Disagree	Somewhat Disagree	Neither	Somewhat Agree	Agree	Strongly Agree
1	Sustainability is part of my organization's culture and core values.	1	2	3	4	5	6	7
2	Sustainability improves my organization's financial performance and competitive posture.	1	2	3	4	5	6	7
3	Sustainability in my organization is in response to pressures and scrutiny of one or more stakeholder groups.	1	2	3	4	5	6	7

Section 2d								
Please circle your level of agreement with the following statements with respect to your organization. Strongly Disagree =1 and Strongly Agree = 7.		Strongly Disagree	Disagree	Somewhat	Neither	Somewhat Agree	Agree	Strongly Agree
1	Developed explicit policies & guidelines on sustainability	1	2	3	4	5	6	7
2	Organizational mission reflects commitment to sustainable development	1	2	3	4	5	6	7
3	Engages with stakeholders to identify their sustainability concerns & issues	1	2	3	4	5	6	7
4	Established indicators and targets for sustainability	1	2	3	4	5	6	7
5	Established sustainability criteria towards suppliers & sourcing	1	2	3	4	5	6	7
6	Set up a management team/unit to implement & monitor sustainability activities	1	2	3	4	5	6	7
7	Reports sustainability initiatives and performance	1	2	3	4	5	6	7

Section 2e								
Please circle your level agreement with the following statements. 'Strongly Disagree = 1' and 'Strongly Agree = 7'.		Strongly Disagree	Disagree	Somewhat Disagree	Neither	Somewhat Agree	Agree	Strongly Agree
In my organization:								
1	Top management initiates and implements new strategic initiatives.	1	2	3	4	5	6	7
2	Existing structure and culture supports new strategic initiatives.	1	2	3	4	5	6	7
3	Cross functional teams implement new strategic initiatives.	1	2	3	4	5	6	7
4	All organizational units coordinate to implement new strategic initiatives.	1	2	3	4	5	6	7
5	Employees share knowledge when implementing new strategic initiatives.	1	2	3	4	5	6	7
6	Training is provided to implement new strategic initiatives.	1	2	3	4	5	6	7
7	Employees are rewarded for implementing new strategic initiatives.	1	2	3	4	5	6	7

Section 2f								
Please state the extent of the impact of following sustainability performance measures in your organization. If the impact is very low then select “Very Small Extent = 1”, if the impact is very high then select “Very Large Extent = 7” and if the impact is between either extreme, then select a value range between “1 - 7”.								
		Very Small Extent	Small Extent	Fairly Small Extent	Moderate Extent	Fairly large Extent	Large Extent	Very Large Extent
Economic Sustainability								
1	Generated income by selling waste product	1	2	3	4	5	6	7
2	Reduced cost of inputs	1	2	3	4	5	6	7
3	Reduced the cost for waste management	1	2	3	4	5	6	7
4	Differentiated products/processes based on the products/processes environmental performance	1	2	3	4	5	6	7
Environmental Sustainability								
5	Reduced energy consumption	1	2	3	4	5	6	7
6	Reduced wastes and emissions	1	2	3	4	5	6	7
7	reduced impact on animal species and natural habitats	1	2	3	4	5	6	7
8	Reduced the environmental impact of products and services offered	1	2	3	4	5	6	7
9	Reduced the risk of environmental accidents (e.g. spills, releases)	1	2	3	4	5	6	7
10	Reduced the purchase of non-renewable resources	1	2	3	4	5	6	7
Social Sustainability								
11	Improved employee/community health and safety	1	2	3	4	5	6	7
12	Increase funds for local community initiatives	1	2	3	4	5	6	7
13	Increased steps to protect rights of differently-abled and local community	1	2	3	4	5	6	7

Section 2g								
Please circle the most suitable response for each of the following indicators with respect to your organization. ‘Very Low = 1’ and ‘Very High = 7’.								
		Very Low	Low	Somewhat Low	Neither	Somewhat High	High	Very High
1	Return on Assets (RoA) in last three years compared to competitors	1	2	3	4	5	6	7
2	Return on Equity (RoE) in last three years compared to competitors	1	2	3	4	5	6	7
3	Return on Sales/Revenue (RoS) in last three years compared to competitors	1	2	3	4	5	6	7

Appendix C: Qualitative Study – Participant Information Sheet, Interview Protocol and Questions



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PARTICIPANT INFORMATION SHEET

Title of Project

"Exploring the relationship between Corporate Sustainability and Corporate Financial Performance".

Research Team

I am M. M. M. Shamil, pursuing my PhD at Curtin University. My research supervisors are Assoc. Prof. Dr. Junaid M. Shaikh, Dr. Poh-Ling Ho and Dr. Krishnan, A.

Purpose of Research

The study investigates what factors facilitate and restrict effective implementation of corporate sustainability in organizations. Hence, interview sessions are conducted using open ended questions to obtain relevant information regarding the above mentioned research question. The interview session shall be recorded or written down with your consent and shall be analyzed using software and the findings are reported in the thesis.

Consent to Participate

I am inviting you to participate in the interview. I assume you have given the consent to participate in the interview and use your data when you provide responses for the open ended questions. Further for the purpose of analysis, the interview session is either recorded on tape or is written down with your consent.

Confidentiality

This study doesn't need you to give personal details. Also the interview doesn't require you to provide any confidential data or information about your organization. The interview records shall be kept by me safely under my supervision for five years and its non identifiable.

Further Information

This study has been approved under Curtin University's process for lower-risk Studies (Approval Number (CSFA 200813). This process complies with the National Statement on Ethical Conduct in Human Research (Chapter 5.1.7 and Chapters 5.1.18-5.1.21). For further information on this study contact the researchers named below or the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University, GPO Box U1987, Perth 6845 or by telephoning 9266 9223 or by emailing hrec@curtin.edu.au.

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Protocol for Interviews

Interviewer Protocol

1. Provide the interviewee with a brief introduction of the project.
2. Inform the interviewee that:
 - a. Participation is voluntary and can withdraw at any given time.
 - b. Full completion of the interview is assumed as consent to participate and the use of information.
 - c. The information shared is solely used for the purpose of this research project.
 - d. Personal information (i.e. name) are neither collected nor recorded during or after the interview to ensure confidentiality and non-identification.
3. Obtain consent from the interviewee to the use of a tape recorder or taking of notes.
4. Inquire whether the interviewee wants to review the interview transcript.

Interviewee Protocol

1. Interviewee is informed to refrain from stating his/her name and the name of the organization during the interview.
2. Interviewee is informed to refrain from stating the name(s) of any employee or name(s) of any organization, which is owned or managed by the interviewee's organization during the interview.
3. Interviewee is allowed to state the designation of an employee(s) (i.e. CEO, Deputy General Manager, Senior Manager, Marketing Manager, or Executive) and the name of department(s) or unit(s) (i.e. Production Department, Marketing Division, Corporate Planning Unit) if required during the interview.

Interview Questions

1. What sustainable business practices are implemented in your organization?
2. What motivated your organization to implement sustainable business strategies and practices?
3. What are the benefits of implementing sustainable business strategies and practices?
 - a. What are the expected outcomes of your sustainability practices?
4. How did your organization plan and implement sustainable business strategies and practices?
5. Who are involved in implementing sustainable business practices in your organization?
 - a. How do the Board of Directors, CEO and Senior Management contribute?
6. What factors contributed to the successful implementation of sustainable business strategies and practices in your organization?
7. What are the problems/challenges you faced when implementing sustainable business strategies and practices?
8. How did your organization integrate corporate sustainability into planning, strategies, processes, products, performance and facilities in the organization?
 - a. What are the issues your organization experienced when integrating sustainability into corporate planning, strategies, processes, products, performance and facilities in the organization?

Appendix D:

Conditional Effects for Moderating Variable

1. DV = Financial Performance, IV = ACSS, Mo = IC

Pick a Point Method Conditional effect of IV on DV at values of the moderator

Integration Capability	Effect	s.e.	t	p	LLCI	ULCI
-0.69	-0.17	0.24	-0.73	0.47	-0.64	0.29
0	0.02	0.16	0.13	0.9	-0.3	0.35
0.69	0.21	0.13	1.7	0.09	-0.04	0.46
Note: values for quantitative moderators are the mean and plus/minus one SD from mean.						

Moderator value(s) defining Johnson-Neyman significance region(s):

Value	% below	% above
.81	86.61	13.39

Avg_IC	Effect	se	t	p	LLCI	ULCI
-2.94	-0.8	0.52	-1.54	0.13	-1.84	0.23
-2.69	-0.74	0.49	-1.5	0.14	-1.71	0.24
-2.45	-0.67	0.46	-1.46	0.15	-1.57	0.24
-2.21	-0.6	0.43	-1.4	0.16	-1.44	0.25
-1.96	-0.53	0.39	-1.34	0.18	-1.31	0.25
-1.72	-0.46	0.36	-1.27	0.21	-1.18	0.26
-1.48	-0.39	0.33	-1.19	0.24	-1.05	0.26
-1.24	-0.33	0.3	-1.08	0.28	-0.92	0.27
-0.99	-0.26	0.27	-0.95	0.35	-0.8	0.28
-0.75	-0.19	0.24	-0.78	0.44	-0.67	0.29
-0.51	-0.12	0.22	-0.56	0.57	-0.55	0.3
-0.26	-0.05	0.19	-0.28	0.78	-0.43	0.32
-0.02	0.02	0.17	0.09	0.93	-0.31	0.34

0.22	0.08	0.15	0.57	0.57	-0.21	0.37
0.46	0.15	0.13	1.15	0.25	-0.11	0.41
0.71	0.22	0.13	1.75	0.08	-0.03	0.47
0.81	0.25	0.13	1.98	0.05	0	0.5
0.95	0.29	0.13	2.25	0.03	0.03	0.54
1.19	0.36	0.14	2.57	0.01	0.08	0.63
1.44	0.42	0.16	2.73	0.01	0.12	0.73
1.68	0.49	0.18	2.78	0.01	0.14	0.84
1.92	0.56	0.2	2.77	0.01	0.16	0.96

2. DV = Sustainability Performance, IV= ACSS, MO = IC

Pick a Point Method Conditional effect of IV on DV at values of the moderator

Integration Capability	Effect	s.e.	t	p	LLCI	ULCI
-0.69	0.25	0.12	2.06	0.04	0.01	0.48
0	0.47	0.09	5.14	0.00	0.29	0.65
0.69	0.7	0.1	6.86	0.00	0.5	0.9

Moderator value(s) defining Johnson-Neyman significance region(s):

Value	% below	% above
-0.71	12.60	87.40

Avg_IC	Effect	s.e.	t	p	LLCI	ULCI
-2.94	-0.49	0.3	-1.66	0.1	-1.08	0.1
-2.69	-0.41	0.28	-1.5	0.14	-0.96	0.13
-2.45	-0.33	0.26	-1.3	0.19	-0.84	0.17
-2.21	-0.25	0.24	-1.08	0.28	-0.72	0.21
-1.96	-0.17	0.21	-0.81	0.42	-0.6	0.25
-1.72	-0.09	0.19	-0.48	0.63	-0.48	0.29
-1.48	-0.01	0.18	-0.08	0.94	-0.36	0.33
-1.24	0.07	0.16	0.42	0.67	-0.24	0.38
-0.99	0.15	0.14	1.05	0.3	-0.13	0.42

-0.75	0.23	0.12	1.83	0.07	-0.02	0.47
-0.71	0.24	0.12	1.98	0.05	0	0.48
-0.51	0.31	0.11	2.79	0.01	0.09	0.52
-0.26	0.39	0.1	3.9	0.00	0.19	0.58
-0.02	0.47	0.09	5.05	0.00	0.28	0.65
0.22	0.55	0.09	6.02	0.00	0.37	0.72
0.46	0.63	0.09	6.63	0.00	0.44	0.81
0.71	0.71	0.1	6.86	0.00	0.5	0.91
0.95	0.79	0.11	6.83	0.00	0.56	1.01
1.19	0.87	0.13	6.67	0.00	0.61	1.12
1.44	0.95	0.15	6.46	0.00	0.66	1.24
1.68	1.03	0.16	6.24	0.00	0.7	1.35
1.92	1.11	0.18	6.03	0.00	0.74	1.47